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Organisation:	Global Renewables
Title of document:	Fire safety guideline – Fire safety in waste facilities – Version 01 (Issued 19/11/2018)

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4	Application	It is unclear if these proposals would be made to existing operations of waste facilities. If it does, the implementation of many of these would significantly disrupt, hinder or prevent many current operations.
FRNSW comment: The applicability of FRNSW guidelines is to be determined by the relevant authority having jurisdiction. FRNSW is an advisory agency providing guidance for the relevant authority. The application section of the guideline has been clarified by adding pathways appropriate to the assessment by determining authorities.		
7.5.1	Automatic fire sprinklers	200m^3 is a relatively small volume of material for many waste facilities, and to automatically dictate that a site wide automatic sprinkler system be installed may not necessarily be the most effective. Similarly, there should greater weight given to whether or not a site is continuously manned, or if other stockpile monitoring and suppression systems are proposed.
FRNSW comment: The pile size criteria of 200 m^2 has been removed from the requirements.		
7.5.4	Automatic fire sprinklers	We think that targeting high risk areas/machines is a much better solution than sprinkling an entire building. This would then allow the detection method to be tailored to the risk.
FRNSW comment: The primary function of a fire sprinkler system under the Building Code of Australia is to control development and spread of fire. FRNSW therefore considers the provision of fire sprinklers to be necessary.		
8.3.1	Maximum stockpile size	Stockpile height should be assessed based on the type of stockpile or method used to clear stockpiles. For example, a pit may be used to store material and be loaded/unloaded using cranes or grapples at a height of greater than 4m in order to reduce foot prints.
FRNSW comment: The stockpile height may be varied by the appropriate pathways nominated in the revised application section.		

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8.3.3	Maximum stockpile size	The 450m^3 internal stockpile size is extremely prohibitive for large scale composting facilities. This would make many facility operations unfeasible. Our current operation has well managed and monitored stockpiles many magnitudes higher than this limit. The stockpile size limit should be based on, monitoring (e.g. smoke or heat), frequency of turning and or temperature/moisture control management as well as proposed fire fighting solution. Many composting facilities have managed piles in controlled environments far exceeding this capacity.
FRNSW comment: The maximum stockpile size has been increased to 1000 m^3. This can be further increased through appropriate pathways. Additionally, individual piles can be adjoined when they are separated by a masonry wall.		
8.3.4	Maximum stockpile size	Maturing composts may be considered a waste. Some facilities have long maturation time requirements. The stockpile widths and access paths would increase the land size required to manage these requirements. These stockpile size limits again should be individually assessed by the material size, material type, management method of monitoring temperature and moisture etc.
FRNSW comment: The application of this guideline to green waste has been reconsidered.		
8.4.1	Separation distances	We believe that separation distances listed would make many existing operations unfeasible, or the land space to adhere to these recommendations too costly. We believe that the sizing and spacing of stockpiles be evaluated based on the frequency of the stockpile turnaround, the monitoring of the stockpiles and the onsite incident response plan in the event of a detected fire. This is particularly important on unmanned sites, where as a manned site with appropriate surveillance or monitoring would have a reduced risk and therefore could manage larger or more closely spaced stockpiles. Similarly, baled products would generally not be stored in great heights (for our operation baled products would not be stored greater than 2.4m high, so floor area would be increased when storing in bales. Baled products such as RDF, although have a High HRR, generally these products would be shipped quickly from site and the distances should be based on monitoring and time onsite.
FRNSW comment: The separation distances given are based on actual trial burns by WISH. Surveillance and monitoring does allow rapid intervention, however if first attack fails only active or passive fire safety measures meet performance requirement to prevent fire spread. This separation distance may be reduced through appropriate pathways (e.g. fire separating masonry wall, sprinkler system or other alternative solution).		

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8.6.2	Internal Stockpiles	In general, most waste handlers will have a fire suppression system in built which should be deemed to enough to protect against unnecessary ignition risks. Plus heat shields etc. We believe that managing the risks of ignition sources and monitoring stockpiles for fast response time is better than a blanket site wide sprinkler approach. Similarly, each site should be assessed based on whether the site is manned or unmanned and how quickly stockpile are processed.
FRNSW comment: Noted; waste handlers are typically construction machines modified for the high hazard waste environment. However, unless all externally introduced potential ignition sources can be eliminated (e.g. as per mining sector), then the worst-case fire scenario must be considered (i.e. fire occurs in the middle of the day when sorting occurs).		

General comments or suggestions
Stockpile limits are important to managing an effective waste management site. We believe that the limit of the stockpile should be based around how frequently the pile is processed and whether or not stockpiles are continually monitored or the environment is well controlled. The way in which a stockpile is managed is of far greater importance than the size alone. Similarly, large processing plants will invariably have large piles of material being processed or matured ready to be sent off site. Provided these are managed an monitored we don't believe a strict size limit should be set. We believe that early detection is more important that stipulating that a site wide water sprinkler system be installed. In some instances, we believe a sprinkler system may be ineffective. We think that a specific solution for each site and stockpile type is more appropriate. Similarly, if a site is continually monitored and manned the requirements would be different to an unmanned site. We agree training and management plans play a vital role in controlling stockpile fires and believe that the focus should be on early detection and intervention from the operations teams. Auditing such controls should be considered on a far greater frequency than 12 months for high risk facilities. We would suggest every quarter with housekeeping, stockpile management and rotation of these stockpiles could be considered as well.
FRNSW comment: FRNSW does not intend to curtail the operations of any waste facility through stockpile size limits – the limits are intended to constrain any fire to a size that can be contained and extinguished without total building/facility loss and demonstrable impact to the surrounding community. FRNSW agrees that waste facilities need greater auditing of controls implemented to mitigate fire risks.

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Title of document:	Fire Safety in Waste Facilities

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Page 4 / Section 2	Scope Guideline or Requirement?	There is confusion over the application of the Guidelines as in section 2 it states: **This guideline details Fire and Rescue NSW (FRNSW) requirements for:** Is the intent that FSWF is a guideline or a requirement? We are somewhat confused if the requirements such as presented in sections 7, 8 and 9 can be interpreted as mandatory. FSWF should be a guideline covering the issues to be considered in a fire study with a default set of conditions to be used in the lack of a proper fire study.
FRNSW comment: The fire safety guidelines produced by FRNSW are intended for a range of stakeholders and written generically for interpretation by each stakeholder as it applies to them. This is not a guideline just for the waste industry; this is a guideline for the regulators, planners, certifiers, engineers and consultants etc. A fire safety study is not always required, hence why FRNSW provides prescriptive requirements guiding the relevant authority in their determination. However, the use of language has been revised.		
Page 4 / Section 2	Scope Combining the Effectiveness of Control Measures	The scope also outlines an issue with FSWF in it requires a set of combined controls; fire safety systems, ignition detection, storage and stockpiling controls etc. Together these combined controls are an effective method to best manage fire risk and are used by most Australian Standards dealing with the storage and handling of flammable and combustible material. However, FSWF deals with each major control method in isolation and appears not to consider the fire risk reduction when they are combined.
FRNSW comment: The FRNSW guideline addresses control measures such as fire safety systems in terms of meeting National Construction Code objectives, and with consideration to the 'special problems of firefighting' that warrant classification as a special hazard.		

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Page 4 / Section 3	Application Application to Existing Waste Facilities	Application of the FSWF requirements to existing operating waste facilities again requires clarification. In the scope section (a) it discusses planning, design, assessment and operation of the facility. This along with other similar vague reference will be interpreted by Councils, EPA and other agencies as need to be applied to existing sites. Most existing Liberty Recycling facilities storing combustible materials will struggle to meet the proposed standards (as well as the majority of the industry) with the prescriptive default requirements of the FSWF. Enforcement will simply close our sites in NSW, which should not be the intent of the document. Additionally, application to existing sites breaches the common law provision on the presumption against retrospective legislation. Consequently, affected Liberty Recycling facilities should not be subject to the FSWF without appropriate forewarning and reasonable time period to review our fire safety requirements. To do otherwise can be considered a retrospective application. As the FSWF is a policy document, it should not be made retrospective. As a consequence, the FSWF should only apply to proposes sites and then only during the development process. Application of even parts of the FSWF could be challenged as retrospective. So to improve the fire safety at existing sites it would appear that either a new document is required or that a reasonable set of desirable improvements are provided along with a reasonable time frame in which to comply. As a consequence, a fire study required on an existing site would need to take into consideration the area and location of the site when considering the types of control methods, which can be reasonably installed. Use of the terms ***reasonably and economically feasible*** would need to be included into such new policy documentation. Finally, Liberty Recycling is often subject to new rules being retrospectively applied. While there are legal processes for this, many times these are imposed, usually by other agencies interpreting such documents. To prevent the misuse of FSWFs being retrospectively applied, it must clearly state it's to be only applied at the planning approval stage of an affected waste facilities. Application to existing facilities should be subject to additional public consultation processes and if required a new policy developed based on risk assessment.
FRNSW comment: The application of existing statutory provisions as detailed in section 6 are not subject to interpretation. Current statutory provisions do allow for any existing waste facility to be upgraded to the current National Construction Code and standards as determined by the relevant authority. This guideline outlines FRNSW requirements for when such waste facilities are being considered.		

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Page 5 / Section 4	Definitions What is Combustible Waste Material?	Within in the FSWF the scope definition is loose making it difficult to judge materials where the standard may or may not be applicable.— 'any solid waste material that can ignite and burn… and (e) any other waste material which may pose a fire risk…' There is a considerable difference between combustible solid and flammable and combustible liquids under the Australian Dangerous Goods Code 7.6ed. Fire risk of a flammable (solid, liquid or gas) and a combustible liquid is based on its ease of ignition. Flammable and combustible liquids use the flash point test method. Flammable solids uses a laboratory test method outlined in section 2.4.2.2.1 Definitions and properties. The closest Dangerous Good classification class to combustible waste is 4.2 Flammable Solid – Spontaneously combustible, though Class 4.1 could apply. Nevertheless, the combustible waste material referred to in FSWF falls far short of the Dangerous Goods classifications. Use of Standard HRR and High HRR, may make it simple for fire-fighting issues, but over simplifies the risks of a large variety of combustible waste materials used across the waste sectors. Also it only considers the fire risk during combustion and not the ease of ignition, which is the focus of Dangerous Goods risk management for fire.
FRNSW comment: The *Australian Dangerous Goods Code* only applies to the transportation of goods and does not relate directly to the application of this guideline. Paper and cardboard are not volatile and considered to be 'flammable' thus are not dangerous to transport, but paper and cardboard are easily ignited, especially in a loose piled waste condition, and will readily burn within the waste facility. It is not intended to relate waste to the *Australian Dangerous Goods Code.*		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Page 5 / Section 4	Definitions Sources of Waste Ignition	The issue then becomes if combustible waste material has become a recent high risk storage issue why recently? Changes to the domestic waste composition and the market forces in the waste sector are the main culprits including: - Disposal of Li-ion batteries are identified by the waste sector as a major risk as one cell can caused a significant ignition source. Also Li-ion batteries, within goods or alone were recently listed as a dangerous good with UN Nos. 3090, 3091, 3480 or 3481. - Aerosol cans are commonly disposed of in domestic and commercial waste and recycling streams. Aerosols are Dangerous Goods class 2.1 flammable gases, charged with LPG. Puncturing of cans in waste management equipment releases LPG which can be easily ignited. Risk associated with these ignition sources is greatest at the unloading of the vehicles at our Recycling facility. At the tipping point there are many proprietary and in-house developed ignition detection and extinguishing processes available. Punching of containers in a mixed waste stream (e.g. a Li-ion battery would catch on fire) is where the fire risk is the highest due to this ignition source. The further the waste progresses through a waste processing or disposal operation generally the lower the fire risk. This common risk profile is not considered in FSWF, but would be picked up in a fire study for such a site. Market forces also play a role, as the cost of disposal increases and the demand from both the customers and government agencies require a higher quality and standards, margins are squeezed. Additionally market fluctuations can make a stockpile worth a few million dollars to be a multi-million dollar liability in less than a few days. Liberty Recycling is embarking on a national program where the removal of fuel tanks from vehicles prior to delivery on site is being deployed (currently being trailed in Queensland). Hopefully this will be considered as risk mitigation when applying stockpile sizes to the industry. Something that will need to be considered for the department is once Liberty Recycling stops the acceptance of such items where do they go?
FRNSW comment: Noted as comment. Fires in waste facilities have been an ongoing occurrence and is not considered a ‘recent high-risk storage issue’ by FRNSW. However, the formal publishing of FRNSW requirements normally provided by stakeholder consultation is recent and intended to address increasing risks that may arise from China National Sword. The definitions have been revised, although ‘ignition sources’ has not been defined as this is generally understood.		

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Page 10 / Section 7.2	Existing Waste Facilities	**7.2.1 The owner or PCBU should undertake an assessment of the design and performance of their existing waste facility against the requirements specified within this guideline and provide to the relevant consent or regulatory authority for determination.** Application to existing sites to the requirements of these guidelines is clearly retrospective and suggests the default provisions are mandatory. Most existing affected Recycling facilities cannot comply due to lack of land and extremely high costs especially for: - Separation - Fire water capture - Dedicated quarantined spread areas Compliance with NSW's Better Regulations conditions requires the application of FSWF be outcome based. Feasible and reasonable upgrades to existing facilities should be the basis for this approach. Expecting all affected waste facilities to be upgraded is inconsistent with a risk-based approach. Here the NSW Government needs to develop a risk assessment process, developed with public consultation, which identifies fire risks of waste facilities based on a clear set of criteria including facility types, combustible waste materials used, process methods, history and existing fire controls. Liberty Recycling is already taking direction from the Victorian department where the methodology is around risk based not direct measures as per this guideline.
FRNSW comment: This subsection of '*7 Development considerations*' applies only in the case of development, where current statutory provisions require an existing facility be assessed and upgraded to current *National Construction Code* as part of the development. This is a guideline addressing 'special hazards' considerations of the NCC.		
Page 10 / Section 7.2	Existing waste Facilities Orders to Upgrade	**7.2.2 If the assessment determines that an upgrade is required to address a deficiency in the design or performance, the relevant authority should impose an appropriate condition (e.g. licensing) or direction (e.g. issue an Order) on the owner.** Such orders may render such sites unviable due to high cost and or insurance rates will either not be able to be obtained or excessively costly. Sites with large stores of wastes will become subject to clean up notices, but may then not be able to afford the waste disposal costs. This can increase the risk of arson. This can increase the risk of becoming an orphan contaminated site. Consequently, EPA, Fire and Rescue and SafeWork NSW need to coordinate activities to avoid such outcomes. Consideration should also be placed on the unlicensed scrap metal operators.
FRNSW comment: FRNSW has a statutory responsibility to protect life and property. An Order or Condition should only be imposed if the facility does not meet minimum fire safety requirements.		

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Page 10 / Section 7.3	Existing waste Facilities Emergency Vehicle Access	**7.3.3 Enhanced emergency vehicle access is to be provided for the special hazards of the facility, including a perimeter ring road around buildings and access roads between external storage stockpiles.** This may not be possible for existing sites. This is a prescriptive requirement and should be put in a performance based requirement which can consider a range of approaches. **7.3.4 The facility should cater for a large emergency service response (e.g. multiple alarm and multiple agency) if the potential hazard may result in a large emergency.** **Note: This includes from any pollution event requiring a protracted hazardous materials response (e.g. contain and remove fire water run-off).** The scale of the emergency can be determined by an appropriate fire study. The outcomes of this study can determine the likely needed response scale and design accordingly.
FRNSW comment: The wording of clause 7.3.3 has been revised. FRNSW acknowledges existing sites may not be able to provide enhanced emergency vehicle access but expects consideration of alternative measures to assist with access and firefighting intervention of combustible stockpiles.		
Page 10 / Section 7.3	Existing waste Facilities Quarantine Area	**7.3.5 A dedicated external quarantine area is to be provided to extinguish the largest sized internal stockpile of combustible waste material stored within any building.** **Note: A very large surface area will be required to receive, breakdown and extinguish a large stockpile.** To make a dedicated very large surface area for such indoor sites is only achievable where there is ample land on which to make available. This may apply to landfill sites which have recycling facilities at the same site, but not achievable at many other recycling sites.
FRNSW comment: When planning a new waste facility, the quarantine area can be integrated into the design of external spaces (e.g. truck apron). For existing waste facilities, consideration is to be given to equivalent strategies for firefighting intervention (i.e. break up and extinguish burning stockpiles). The quarantine area requirement has been changed to apply only to buildings not fitted with an automatic fire sprinkler system.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Page 12 / Section 7.6	Fire detection and alarm systems	Use of appropriate fire and alarm detection systems requires that a fire study and installation of its recommendations be used. Again there is much confusion within FSWF as to if a fire study plus the mandatory control measures are required together or should be separate actions. Give the highly conservative nature of the prescriptive control measures these should not be mandatory, but as a default alternative to the lack of a proper fire study.
FRNSW comment: Section 7.6 intends to satisfy performance requirement EP2.2 of the *National Construction Code* while considering Clause E2.3 as would be applicable to waste facilities.		
Page 13 / Section 7.7	Smoke Hazard Management	**7.7.3 Natural low-level venting, either permanent or readily openable, is to be provided on not less than two opposing walls so that de-stratified (i.e. cooled) obscuring smoke can be vented and minimum visibility be maintained** This is likely to conflict with EPA requirements to control odour and dust from indoor waste facilities. Making a ventilation system which complied with minimising the emission of odour, noise and dust, but permitting smoke ventilation during a fire appears contrary in operation. While engineering solutions are available these will be of high cost. As such the smoke control requirements need to be assessed and balanced with environmental air emissions issues using the principle of reasonable and feasible.
FRNSW comment: Provisions for smoke hazard management as prescribed by Part E2 of the *National Construction Code* are provided for the life safety of occupants in the case of fire; Life safety must take priority over secondary considerations such as odour/dust control. The clause has been changed to reflect supplying air for smoke venting or exhausting.		

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Page 13 / Section 7.8	Fire water run-off containment	**7.8.1 The waste facility is to have effective and automatic means of containing fire water run-off, with primary containment having a net capacity not less than the total hydraulic discharge of the worst-case scenario.** **Note: The total hydraulic discharge is the discharge from both the fire hydrant system and automatic fire sprinkler system for duration of four hours. Failure to contain fire water run-off can result in pollution of the environment and require a protracted hazardous materials response.** Making a large storage area to capture four hours of fire water creates its own issues: - To be effective it must remain empty, but will fill with stormwater and requires management of such contaminated waters formed from normal operations. - Such stormwater requires careful testing and potentially treating before it can be released off site or to sewer. - EPA's approach is to require placing roofing over the catchment area, but this can lead to fire-fighting difficulties as then the areas will become indoors. Need for worst case scenario assumes all waste facilities have the same fire risk. AS1940 requires capture of 20 min of fire water, not 4 hours, which is used for steel/structural cooling. This is added to the maximum bund capacity, which for flammable liquid dangerous goods, not solids. Australian standards also list multiple methods for secondary containment. With risk assessment work this can include the use of pits, pumps and other storage systems some distance from the pit. This is considered acceptable if the pit, pump and piping are suitably insulated/protected from fire. Section 7.8 is overly prescriptive and should be re-written as outcome based or used only as a default example where no fire safety assessment has been performed. It appears as an environmental ad hoc addition with little consideration of how such capture volumes with be achieved. Also to minimise the capture of stormwater in such systems adds to the complexity and cost. NSW EPA's common approach to minimising bund waters is to roof the area. In practice this is neither reasonable nor feasible, as well being potentially contrary to quarantine areas. Roofing also adds complexities to the ability to fight fires, with roofing getting in the way of fire combat methods. Additionally, it will be very costly be applied to most existing sites due to lack of land to install such a large piece of infrastructure, such as underground capture tanks.
FRNSW comment: Fire water run-off stemming from leachate through burning waste is different to flammable liquids, hence the requirements do not mirror AS 1940—2017 (e.g. bunding, foam, liquid burn-off etc). However, the four-hour requirement has been removed due to variation in hydraulic requirements between sprinklered vs non-sprinklered buildings.		

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Page 14 / Section 8.2	Facility Operation and Management Stockpile Movement	**8.1.2 The storage method and arrangement of stockpiles is to minimises the likelihood of fire spread and provide separation which permits access for fire fighting intervention.** **Note: Fire separating masonry walls (e.g. bunkers) and automatic fire sprinkler systems may allow larger stockpile sizes and/or shorter separation distances.** This section should be re-written allowing more flexibly and based on outcomes using the risk-based approach as per the Guidance for Regulators to Implement Outcomes and Risk-based Regulation. While Australian Standards on Dangerous Goods are referred to they are considered generic control methods, which in many cases cannot be complied with due to site limitations or other reasons including costs and practicability. To permit flexibility SafeWork NSW and its Hazardous Chemicals legislation permit variations to the AS DG requirements, provided they provide a similar or better level of risk management. While the use of fire walls is a common method to permit closer storages of DGs, there are other methods. For example the use of thermal cameras, increased fire suppression systems in higher risk areas etc. However, FSWF does not consider these approaches in its requirements, breaking the flexible approach used by SafeWork NSW. In fact if the requirements for storage and separation were used for other combustible materials, there would be considerable push back and disquiet. Coal, plastic, wood, furniture, many hardware types, even many Dangerous Goods would be far from compliant under the requirements in FSWF. Overall FSWF represents a major shift in fire control methods, which can set an extremely costly and largely unnecessary set of far tighter controls across most industry sectors. Such a scenario would undermine Australian Standards covering flammable and combustible substances and drive up insurance premiums and the minimum required controls.
FRNSW comment: Prescriptive requirements on facility operation and management have been revised (i.e. reduced) in line with greater emphasis being placed on minimum fire safety measures installed in the waste facility. FRNSW does not intend to restrict operational flexibility; only ensure that facility operations are safe for occupants and surrounding community. The application of the guideline has been clarified by adding pathways appropriate to the assessment by determining authorities. The guideline does allow for alternative solutions which support bespoke performance-based outcomes.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Page 14 / Sectio 8.2.1	Spontaneously Combustible Wastes	**8.2.1 Stockpiles of combustible waste material are to be rotated to dissipate any generated heat and minimise risk of auto-ignition. The maximum duration of idle storage should not exceed six months, unless determined otherwise through risk assessment.** **Note: Combustible waste material may oxidize and generate heat, which when confined, can cause a material to auto-ignite and combust.** This section reflects what appears as an overall definition of combustible waste materials: It is erroneous to assume all combustible wastes act the same. While two levels are used (Standards and High HRR) this is considered too simply as there are vast differences in waste combustible material. FSWF uses the worst case scenario combustible waste and applies it across all sites. This is not a risk based approach. Also the worst case scenario seems to treat combustible wastes as if they have the same or similar properties to Class 4.2 Flammable Solids – Spontaneously Combustible. This is not the case, as apart from some Hazardous Waste with Dangerous Goods classifications, all other combustible wastes are not classed as DG 4.2. Placing a maximum storage time will interfere with many recycling processes as the market they supply will require the large volumes very quickly. Requiring a 6 month maximum assumes a smooth material flow through the facilities, which are the exception and not normal market operation. Requiring the turning over of a stockpile of combustible waste material seems to assume all combustible waste materials must be treated as if it were compost. This is clearly not the case and overly simplifies the issue, assuming the worst case scenario applies for all combustible waste type. This is poor guidance, costly, blunt and from a fire risk perspective unnecessary in many cases. Again the individual fire risks of each type of combustible waste, of which there are many, should be considered based on their properties. Temperature controls should only apply to combustible wastes that may be subject to self-heating and spontaneous combustion. There are many standards and protocols for managing compost and similar waste types. These should be referred to and considered when undertaking a fire risk study or generic standards that apply to that type of process. Such controls should be considered on either a process-by-process basis. Process-by-process basis can, for example, capture standard green waste composting. But the site operator should have the choice of either compliance with this process standard or undertaking a case-by-case risk assessment by a fire risk or equivalent professional. Liberty Recycling turn over stockpiles faster than maybe a normal land waste facility due to the value of the pile.
FRNSW comment: The clause has been changed and the 6 month maximum requirement removed.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Page 14 / Section 8.3	Stockpile Size	**8.3.3 The maximum internal stockpile size is to be limited to 450 m3** Again this section assumes that all combustible waste are the same and at the worst case scenario. And again it sets a limit based on virtually no other control methods other than those in section 8. 450 m3 is also extremely limiting when the density of waste materials are considered, which represents a stockpile of about 20 x 17 x 4 m.
FRNSW comment: Stockpile sizes are applied to limit the available quantity of combustible material to burn. The maximum internal stockpile size has been increased for sprinklered buildings and reduced for non-sprinklered buildings. Multiple stockpiles are allowed internally (e.g. piles separated by a masonry wall, multiple pen arrangement), however fire sprinklers should be installed if the building has a floor area exceeding 1,000 m^2.		
Page 15 / Section 8.4	Minimum separation distance	**8.4.1 Minimum separation distances are to be maintained between external stockpiles, depending on pile method and HRR, as given in Table 1.** **Note: If two separation distances apply between different stockpiles (i.e. due to different lengths of stockpiles), the greatest distance is to be used.** Liberty Recycling recommends the FSWF clarifies the separation distances in section 8.4 is used as guidance only where no other control methods are used and that a fire study be preferably used to ascertain appropriate separation distances when considered in combination with other fire control methods.
FRNSW comment: The application of the guideline has been clarified by adding pathways. The guideline allows for alternative solutions which support bespoke performance-based outcomes.		

General comments or suggestions
Liberty Recycling strongly recommends that the FSWF review the Victorian standards in support of Level of Risks instead of prescriptive clauses around certain criteria.
FRNSW comment: FRNSW has reviewed the Victorian EPA document *Management and storage of combustible recyclable and waste materials – guideline* published October 2018. This document takes a holistic risk management approach applicable to the waste facility operator and does not provide specific guidance or fire service interpretation to other stakeholders engaged in the assessment and determination process, especially with respect to planning and development.

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Title of document:	Fire safety in waste facilities

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9	7.1.5	The paragraph should refer to section 8.4 as well: The maximum sizes and minimum separations of all stockpile of combustible materials are to comply with section 8.3 and section 8.4
FRNSW comment: Agreed. The additional reference has been added.		
9	6.4	It not clear what is the classification of a waste facility under BCA Clause A3.2, as the paragraph states that a waste facility should not be considered as a warehouse. I suggest adding the classification of the building.
FRNSW comment: Agreed. The building classification has been added and the clause changed.		
9	7.1.6	It is not clear what 1000 °C temperature represents. Is it the ignition temperature? or the temperature of the burning fire? Ignition temperatures for most materials are much lower than 1000 °C. In fire dynamics, there is no relation between the heat release rate (HRR) for the materials and the ignition temperature or the temperature of the burning fire. The classification should be based on the heat of combustion of the materials.
FRNSW comment: Agreed. An incorrect interpretation of HRR was being applied from the WISH document and for over-simplification to non-technical audience; the clause has been changed.		
11	7.4.5	It is recommended to require the fire monitor and the fire hydrant to have enough pressure to reach the top of the stockpile. The standard does not have this requirement as the area at the top of the stockpile is not covered by the definition of the floor area.
FRNSW comment: The 10 m hose stream within *AS 2419.1-2005* is used to define fire hydrant locations; the actual hose stream achieved at 700 kPa can easily reach the top of a stockpile.		

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12	7.5.5	It is recommended to require the sprinkler booster to be located next to or close to the hydrant booster to facilitate the fire brigade operation. There is no such requirement under the standards.
FRNSW comment: Section 4.14.1 of AS 2118.1—2017 requires the fire brigade booster assembly to conform to the requirements of AS 2419.1 including section 7.3 which details the location of all fire brigade booster assemblies.		
15	Table 1	The table does not explain how to calculate the minimum separation distances for lengths that are not listed in the table. e.g.: what is the minimum separation distances for a 40 m stockpile? Is interpolation accepted? The same comment applies to Table 2.
FRNSW comment: The separation distance tables have been replaced with graphs.		
16	Figure 2	There is no referral to the figure in the report. The text inside the rectangle on the right-hand side should be (loose) and not (pile) to be consistent with the others.
FRNSW comment: Fixed.		
16	8.4.2	It is not clear what is the meaning of combustible building is? is it a building with combustible external wall? or a building with combustible content? or any building? I suggest deleting the word “combustible”. The same comment applies to 8.4.3.
FRNSW comment: Wording to be changed to ‘fire-source feature’ and new definition added.		
16	Figure 3	There is no referral to the figure in the report. The same comment applies to Figure 4.
FRNSW comment: Fixed.		
18	8.7.9	The first sentence refers to section 9.2.6. It should refer to section 9.3.
FRNSW comment: Fixed.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
21	References	The latest BCA should be referenced: BCA volume 1 Amendment 1 (ABCB 2018) Reference to the latest version of these standards: AS 1670.1-2018 and AS 3745-2010/Amdt 2-2018 may be considered. Is the fire safety guideline: Access for emergency vehicles, 2018 the same one that is on the website? https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/vehicle_access.pdf The one on the website has a different name and date.
FRNSW comment: Fixed. The guideline *Access for emergency vehicles and emergency service personnel* is being concurrently published.		
22	The second row of the table: Guideline reference for Performance requirement CP9	Section 7.1 is not the right reference for CP9 (Vehicular access). It should be Section 7.3
FRNSW comment: Fixed.		

General comments or suggestions
Insert more real photos of the internal and external parts of waste facilities to give the reader a visual impression of a typical waste facility as it is not a facility that is normally open to the public.
FRNSW comment: Noted.

Name:	Anonymous
Organisation:	Anonymous
Title of document:	Fire safety guideline – Fire safety in waste facilities – Version 01 (Issued 19/11/2018)

Page or section no.	Section title / subject of section	Specific comments or suggestions
Pg 12, Cl. 7.5.6	Fire sprinkler minimum duration for four hours.	AS2118.1-2017 allows for 120 minute duration for control of fire for worst case commodities like, garment storage, rolled paper, tyre storage, carpet storage, aerosols, distilled spirits. If these commodities were present in a waste facility, then a 2-hr duration should also apply. Suggestion: Change sprinkler duration to two (2) hours.
FRNSW comment: Agreed. This clause has been changed.		
Pg. 11 Cl. 7.4.7 Note	FRNSW consultation should be sought to determine flow rates required for firefighting operations	FRNSW should provide a clear guideline base on data from fighting fires of similar nature to provide a straightforward flow rate requirement, i.e. dependent on stockpile volumes will have specific flow rates required for hydrants.
FRNSW comment: Agreed. Flow rates are to be based on 2419.1 design with exception of open yards, where one additional hydrant is required for external stockpiles of waste.		
Pg 13 Cl. 7.8.1 Note	Fire Sprinkler System for a duration of four hours for calculation of fire water run-off	As per above, suggestion to allow sprinkler duration for 2-hours also limits the excessive storage requirement of fire water runoff
FRNSW comment: Agreed. This clause has been changed.		
Pg 22 Sect 11	The fire hydrant delivers not less than 50 L/s	What will be the basis of 50 L/s flow for hydrants? The number of flowing hydrants should be dependent on the greatest volume of stockpile in the facility, a guideline of volumes of stockpile based on FRNSW attended fires of similar nature should be added as a guide for designers similar to protection for open yards dependent on areas.
FRNSW comment: This requirement has been revised in line with previous change made to Cl.7.4.7.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Pg 22 Sect 11	Fire sprinkler minimum duration for four hours.	Same as above. Suggestion: Change sprinkler duration to two (2) hours.
FRNSW comment: Agreed. This clause has been changed.		

General comments or suggestions
The document is helpful to guide fire designers in designing the fire systems in special hazards such as waste facilities. It would be ideal and more helpful if Historical data (as noted in Section 5, would support the requirements such as determination of number of hydrants required for a facility. The requirement for sprinklers to run for four hours also seem to be excessive as sprinkler standards (based on actual fire tests as we understand) allows for a maximum of 2 hours operation of highly combustible commodities. If these commodities were dumped into a stockpile (as opposed to a storage racking) should it then have an equivalent duration of sprinkler water required?
FRNSW comment: Noted.

Note: If you need more rows, please use the Plus button or insert your cursor in the last cell and hit tab on your keyboard.

Name:	Kristy Cosier
Organisation:	NetWaste
Title of document:	Fire Safety in Waste Facilities

Page or section no.	Section title / subject of section	Specific comments or suggestions
Page 4	Section 3 - Application	Some small rural waste facilities are within 50 km's to a fire station (either NSWFR or RFS). The note on page 4 explains that requirements of this guide may only apply to a facility within 50kms of a fire station that is equipped with equipment capable of utilising a fire hydrant. We question whether there is any intention for a fire hydrant system to be required at sites where none currently exist. There is concern that the matter could potentially provide option for EPA to serve a Prevention Notice under the POEO Act to require the installation of hydrant systems in locations where the Brigades with hydrant connection capabilities exist within 50kms distance to our facilities. This concern is validated by clause 7.2.2 of the guideline.
FRNSW comment: If the site requires a fire hydrant system, but is not currently served by one, then the responsible consent or regulatory authority being DPE or Council may serve an Order to have the fire safety systems brought to the required minimum level. However, a Prevention notice under the POEO Act only applies to activity deemed to be conducted in an environmentally unsatisfactory manner and cannot be served based on deficient fire safety measures.		
Section 7.2	Existing waste facilities	Concerning for operators/owners of existing facilities, particularly the first clause particularly the number of waste facilities that are operated by many regional Councils
FRNSW comment: Local Councils are also both consent and regulatory authorities under the EP&A Act and responsible for ensuring buildings within their jurisdiction meet the required building code and/or make adequate provision for fire safety; this includes any Council owned waste facility.		
Section 7.3	Firefighting intervention	These requirements will be difficult to achieve for a lot of regional waste site operators as the roads/tracks used to access areas are unsealed, have gradients unsuitable for some types of fire vehicle appliances and the ground would be unsuitable to support the weight of these trucks.
FRNSW comment: Vehicle access requirements may be varied through appropriate pathways as nominated in the revised application section. A general fire appliance has parameters not unlike most trucks used to collect/transport waste, thus it is conceived that some level of access will inherently be provided.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.8.3	Fire-water run-off containment	There is a requirement for waste stockpile areas to be 'sealed' to contain fire runoff water. This is not practical when heavy machinery (including tracked machinery) manage the piles.
FRNSW comment: Other than for landfills, a sealed surface is a commonly applied means of providing a leachate barrier system to prevent contaminated surface water permeating into the ground and ground water system.		
Section 8.2.2	Stockpile movement	Unless green waste is processed monthly (which is not a common practice for majority of regional Council sites) then the stockpile requires rotation or automatic temperature monitoring is required. This is not practical. The clause should have other options for preventing fires where self-heating is a concern.
FRNSW comment: The clause has been changed.		
Section 10	References	Environmental Guidelines Solid Waste Landfills (EPA, 2016) not referenced – was this document (that includes fire prevention measures) not considered when developing the fire safety guideline?
FRNSW comment: No, this guideline was not intended for landfills. This has been clarified in the application.		

General comments or suggestions
NetWaste is a voluntary regional waste group, with 26 member Councils across central and western NSW and in the majority of cases are the manager of the local waste facilities. - The guideline appears to mainly focus on the scenario where a brigades truck will turn up to a waste fire, connect to a hydrant and commence suppression and extinguishment activities. The use of water is historically seen by EPA as an undesirable way of attacking a fire. Whilst water may be suitable to wet down surrounding areas to stop a fire from moving from its original location by embers or heat flux, it is not the best way of attacking a fire. - There doesn't appear to be any discussion about using soil stockpiles to cover waste fires. This method is far quicker and environmentally responsible that using fire fighting water. Fire fighting water will attempt to cool a fire, which slowly removes heat out of the combustion process, while soil dumped over a fire will cut oxygen getting to a fire which will cease the combustion process far quicker and also reduce lagging black smoke. - There is no consideration of alternative products like liquid sprayed capping options, which will act in a similar way to soil capping, yet would not require use of earthmoving equipment and can be done more remote from the fire.
FRNSW comment: Water is recognised throughout the world as being the most efficient and readily available medium for fire extinguishment, and unquestionably supported by historical use. Capping by soil may result in a ventilation controlled subterranean fire (e.g. similar to peat fire) as heat of combustion is not removed from the burning fuel.

Name:	Hugo Montagne
Organisation:	SUEZ Australia & New Zealand
Title of document:	Fire Safety Guideline – Fire Safety in Waste Facilities

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 4 Page 5	Definition of Combustible waste material	Definition is broad, pre-treatment and pre-refining of Municipal Solid Waste (MSW) is combustible waste but refining and compost is not, due to high moisture content Is asbestos included in the guideline?
FRNSW comment: The definition of combustible waste material is quite specific – can the material ignite and burn? However, the range of combustible waste materials is quite broad. Asbestos is non-combustible but does need to be handled in a specific manner and eradicated by disposal at a licensed landfill.		
Section 4 Page 5	Emergency Services Information Packages (ESIP)	What information is required? A table of content would be required As the emergency Services provider, this should be linked to a central database that is available to FRNSW and Rural FB controllers to allow standardisation and visibility across all stakeholders Does this document need to be a standalone document or can it be included with the Emergency Response Plan or the PRIMP?
FRNSW comment: The requirements for the ESIP are detailed in section 9.3. The emergency plan (including emergency response procedures) and the PRIMP are documents intended for use by employees/occupants of the facility – the ESIP is intended for emergency service personnel.		
Section 4 Page 6	Hazardous Material	As SUEZ (and none of the waste operator) does not control the input of the material composition, it will likely require that all general solid waste (both putrescible and non-putrescible) are classified as combustible and dangerous based on this definition.
FRNSW comment: FRNSW acknowledge that some hazardous materials may indeed be disposed of though recycled waste collection and expect waste facility operators to implement appropriate controls accordingly. EPA to determine through licensing.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 5 Page 7	d) poor emergency vehicle and/or firefighter access for firefighter intervention	Fire crew to visit at least once a year can reduce the confusion and help improve the recognition on the location of fire service utilities and access to site.
FRNSW comment: Noted. Firefighters routinely undertake visits of premises posing greatest life safety risks within their station area.		
Section 6.2 Page 8	When assessing development, whether during the planning or approval stage, the consent or approval authority may stipulate the condition that FRNSW be consulted as a stakeholder	It would be beneficial to involve FRNSW to consult and review the plan for suggestions and if possible invite to visit the site to familiarize with the site and the site-specific plan
FRNSW comment: Noted. This will likely be implemented from China national sword and the Key Agency Liaison Group (KALG).		
Section 6.4 Page 9	National Construction Code	This will result in Consent and Certifying authorities deferring to FRNSW due to a lack of expertise within their organisation. There is a potential for planning conflict to occur at this point and undue costs sorting out the confusion will likely eventuate. Extended timeframe for development and opening of new facility to be expected.
FRNSW comment: Noted. The purpose of the guidelines is to provide consent and certifying authorities with our requirements so that can assess and determine applications without necessarily needing referral to FRNSW.		
Section 7.1.5 Page 9	[…] The operations plan should be made a condition of consent by the relevant authority.	Making the operational plan a condition of consent is not feasible. If the plan forms part of the regulating instrument it cannot be easily changed or improved. If it is necessary to tie into a regulatory instrument then it should be tied into the Environment Protection Licence (EPL), and then only a s a requirement to have rather than a defined limitation. This way it can be checked and updated from time to time as it may be required to further improve operations and reduce risks through the natural course of continuous improvements as is the spirit of the regulation.
FRNSW comment: The intent of capped maximum stockpiles and locations being tied to consent is to ensure the maximum fire load remains commensurate to the building design and it's installed fire safety systems. Any notable change in operations should include reassessment of the adequacy of the provision for fire safety (e.g. upgrades or enhancements of systems).		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.1.6 Page 9	Any combustible waste including any plastics, rubber, synthetic polymers and other petrochemical based compounds is deemed to have a high HRR	Definition needs to be finetuned, there is plastic in every type of waste (even in the green waste). A percentage of composition could be a good solution (e.g. more than 30%)
FRNSW comment: The application of HRR has been changed and a new table added.		
Section 7.2.2 Page 10	If the assessment determines that an upgrade is required to address a deficiency in the design or performance, the relevant authority should impose an appropriate condition (e.g. licensing) or direction (e.g. issue and order) on the owner.	This is retrospective and not applicable. This would mean that all the existing facilities would receive a direction from the authority to do upgrades where ever deficiency in design or performance is reported? This could potentially have a big impact on existing facilities.
FRNSW comment: Current statutory provisions under the EP&A Act empowers relevant enforcement authorities to issue development control orders on any existing premises, including a fire safety order being imposed on any waste facility deemed to not have adequate provision for fire safety.		
Section 7.2.4 Page 10	When the design of an existing waste facility necessitates performance restrictions on operations, such as maximum stockpile sizes to maintain separations, appropriate control measures should be defined and implemented.	Give example of appropriate control measures
FRNSW comment: Clause has been reworded for clarity.		
Section 7.3.3 Page 10	Enhanced emergency vehicle access is to be provided for the special hazards of the facility, including a perimeter ring road around buildings and access roads between external storage stockpiles.	Not all transfer stations have a ring around the site. Cannot be achieved as most of the sites are in urban areas Organics facilities do not have the real estate to establish vehicle access roads between external storage stockpiles.
FRNSW comment: Clause has been changed – ring road only required for non-sprinklered building. Organic facilities are excluded from application.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.3.5 Page 10	A dedicated external quarantine area is to be provided to extinguish the largest sized internal stockpile of combustible waste material stored within any building.	Cannot be achieved in some sites due to a lack of space (urban areas)
FRNSW comment: The external quarantine area is only required if a building is not protected by an automatic fire sprinkler system. If an existing waste facility has lack of available space, then a sprinkler system should be installed for firefighting intervention.		
Section 7.5.1 Page 11	The waste facility is to have an automatic fire sprinkler system installed if the building has a floor area greater than 1000 m² or contains 200 m³ or more of combustible waste material.	Height of some buildings would make the use of sprinkler ineffective Promote the use of dedicated deluge system or water cannon
FRNSW comment: Clause 7.5.2 states the sprinkler system is to be appropriate to the risks and hazards for the building; this can include ESFR sprinkler heads or deluge type system as required.		
Section 7.5.6 Page 11	The fire sprinkler system design performance is to satisfy the hydraulic demand (i.e. flow rate) of the worst-case fire scenario for a minimum duration of four hours.	Non-sense 4 hours water supply is over sized and would also pose issues containing it. In addition to this, if the fire is not controlled within 1 or 2 hours, the facility is lost This would lead to over designed systems with high requirements (pumps and water storage)
FRNSW comment: The clause has been changed to two hours as per AS 2118.1-2017. Containment of fire-water run-off from waste facility fire is a very significant problem for FRNSW to manage.		
Section 7.6 Page 12	FRNSW recommends a fire detection and alarm system installed to Australian Standard AS 1670.1-2015 Fire detection, warning, control and intercom systems system design, installation and commissioning	Need to allow for new systems (e.g. thermal and analytic cameras) Current detection systems are often not fitted for waste activities (large buildings, atmosphere pollution, constant change in operational conditions…)
FRNSW comment: The AS 1670 standards specify FDAS requirements including the type of detection unit being appropriate to the environment and nature of hazard being identified and for integration with the system to achieve the required functionality (i.e. alert occupants, notify fire brigades, activate systems etc.). This can be varied through appropriate pathways.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.6.2 Page 12	The fire detection and alarm system is to warn all occupants of fire and to evacuate the facility, with each system component being appropriate to fire scenarios and environment (e.g. visual flame detector or infrared detector in dusty sorting area, aspirating system in storage areas, visual alarm devices around noisy machinery)	Aspirating Systems (VESDA) to be banned from the waste industry. Originally designed for clean environment (white rooms). Based on return of experience within SUEZ Group.
FRNSW comment: The owner should have the most appropriate detection system installed for the situation; reference to aspirating system has been removed for simplicity.		
Section 7.7.1 Page 13	Buildings containing combustible waste material are to have an automatic smoke hazard management system appropriate to the potential fire load and smoke production rate installed within the building.	Transfer stations are designed to control the release to the atmosphere (dust and odour management). For future development, would recommend the use of textile fabric roof. Lower cost, allow 100% or roof surface for smoke extraction
FRNSW comment: The building must first and foremost satisfy NCC performance requirements. A textile fabric roof must not impact on the operation of an automatic fire sprinkler system.		
Section 7.7.3 Page 13	Natural low-level venting, either permanent or readily openable, is to be provided on not less than two opposing walls so that de-stratified (i.e. cooled) obscuring smoke can be vented and minimum visibility be maintained.	Would not fit with dust and odour management
FRNSW comment: The clause has been reworded. Roller doors with override are openable and assist with dust and odour management.		
Section 7.8 Page 13	Fire Water run-off containment	How can we manage the drainage system when we are unable to enter the site when the emergency is occurring?
FRNSW comment: Firefighters will manage the drainage system for fire water containment as necessary by the fire emergency, including any pollution control, and in accordance with the procedures outlined within the emergency services information package (ESIP).		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.8.1 Page 13	Note: The total hydraulic discharge is the discharge from both the fire hydrant system and automatic fire sprinkler system for a duration of four hours. Failure to contain fire water run-off can result in pollution of the environment and require a protracted hazardous materials response.	This requirement is not achievable on most sites, especially in urban area
FRNSW comment: The note has been changed. This requirement should be achievable with any new waste facility; if being considered in regard to development of an existing facility an alternative means of fire water run-off containment should be proposed, including being validated by a hydrological engineering assessment report as appropriate.		
Section 8 Page 14	Facility Operation and Management	Some of the stockpile size and separation distances requirements cannot apply to composting activities
FRNSW comment: Composting activities are excluded from this guideline.		
Section 11 Appendix A Page 22	EP1.5 An automatic fire sprinkler system is installed to Australian Standard AS 2118.1 and designed for the excessive hazard ('high hazard' class) as a minimum	What is the reason for high hazard class? Would recommend Ordinary hazard 3
FRNSW comment: Waste paper and recycling waste plastics, both present in mixed co-mingled recycled waste, are both commodities identified as being in the high hazard class.		

General comments or suggestions
It is not clear at all if this document is a guideline or a requirement Would propose to use the Victoria Management and Storage of combustible recyclable and waste materials – Guideline. Agree with the submission done by the Australian Sustainable Business Group's (ASBG) on January 2019
FRNSW comment: Noted. The application has been amended and appropriate pathways added. The use of language has also been reviewed.

Name:	N/A
Organisation:	Northern Sydney Regional Organisation of Councils
Title of document:	NSROC Submission on Fire safety Guideline – Fire safety in waste facilities

Page or section no.	Section title / subject of section	Specific comments or suggestions
All	Whole Document	• The guideline provides a useful summary of the legislative and operational requirements to be considered in establishing a waste facility; • The document should be limited to guidance and not made mandatory because mandatory requirements are better left with legislative approvals such as development consents and environment protection licences. • The document lacks clarity on when it is intended to apply to a facility and includes reference to both new and existing facilities. The guideline should not apply to existing facilities which have already complied with the relevant legislation unless they are undertaking a significant redevelopment. • Prior to finalising the document, Fire Safety NSW should consult with the Waste Resource and Recovery branch of the NSW EPA in regard to Community Recycling Centres (CRCs) which have specific storage limits and requirements that could be referenced in the guideline
FRNSW comment: Noted. The use of language has been revised. Appropriate pathways have been added for application to new and existing waste facilities.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
4	Definitions	The definition of waste facility is very broad and would include all facilities. However, the document also cites the United Kingdom's Health and Safety Executive Report 28 which, specifically excludes landfill sites and others where relevant issues or existing guidance takes precedence. It also excludes sites with less than 50 m^3 of solid combustible waste unless there are significant risks to human health or the environment in case of a fire. A similar set of exclusions should apply to this document because otherwise valuable community facilities would become uneconomic and new ones would not be built.
FRNSW comment: Noted. The application has been revised in line with the WISH document and now excludes landfill and less than 50 m^2.		
Section 6 page 7 ff	Legislated requirements	This summary of applicable legislation is helpful information, but the document fails to consider that existing facilities have already been individually assessed against the legislative requirements in a way that has allowed consideration of individual site constraints or facility character.
FRNSW comment: Existing facilities have been assessed in respect of the PEOA Act and licensing. However, some facilities have not been properly determined by a consent authority in respect of the special hazard premises having adequate provision for fire safety. An audit identified several waste facilities were operating out of buildings not originally designed or intended for use as a waste facility (e.g. wrong building class, insufficient fire safety systems).		
Section 7 page 9 ff	Development considerations.	CRCs collect and temporarily store small quantities of materials that are hazardous materials and dangerous goods. Accordingly, they are designed and operated to meet the requirements of the WHS Act and Regulation, SafeWork NSW guidelines, and relevant Australian Standards in relation to these materials, which include provisions for emergency planning and response (fire amongst others). For this reason, CRCs should be excluded from the guideline or the guideline adjusted to reflect the requirements which pertain to CRCs such as storage in fire proof steel containers.
FRNSW comment: The application section clarifies that requirements from other documents are not to be overruled (e.g. SafeWork guidelines) as well as excludes waste facilities having less than 50 m^3 of combustible waste material.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.5	Automatic fire sprinkler systems	This section is an example where the Guideline becomes prescriptive rather than performance based and this would create significant issues for a number of CRCs and possibly other facilities. The criteria used are 1000 m^2 or containing 200 m^3 of combustible waste. CRCs typically have less than 10 m^3 of combustible waste on site (ie less than 5% of the hazardous waste volume), but a number have more than 1000 m^2 of floor area. The cost of installing an automatic fire sprinkler system would make those facilities uneconomic and lose a valuable community resource.
FRNSW comment: The prescriptive requirement mirrors that set by the NCC as applicable to the special hazard waste facility. The 1,000 m^2 threshold was determined due to the high propensity of introduced ignition risks and the high hazard of mixed waste stockpiling, which is more difficult to extinguish than other goods/products.		

Name:	Anonymous
Organisation:	Anonymous
Title of document:	Fire safety guideline – Fire safety in waste facilities – Version 01 (Issued 19/11/2018)

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 2	Scope	• Section 2 states that the Guideline details FRNSW's requirements. Clarification is sought as to whether the Guideline is legally binding and enforceable, given the of the word "requirement". If so, further clarification is also sought as to source of the legal authority for imposing mandatory requirements.
FRNSW comment: The scope has been clarified by being reworded and context added.		
Section 3	Application	• Again, clarification is sought as to which sections of the Guideline are mandatory and which are optional or indicative only. For example, Section 3 states that some requirements may only apply to a waste facility when a fire brigade station is within 50km but it is not clear which requirements are being referred to here. • Section 3 also states that a responsible regulatory authority may impose requirements from the Guideline on any person conducting a business or undertaking a waste facility as either a condition of consent or licensing or issuing an Order. Clarification is sought as to the specific agencies/authorities that will apply and enforce the Guideline and how the Guideline will be utilised by the EPA in connection with the current licensing regime for Environment Protection Licences. Please refer to our comments below in relation to Section 6
FRNSW comment: The note has been moved to the fire hydrant system section. The application of each section has been clarified.		
Section 4	Definitions	• The scope of the definition of "waste facility" in the Guideline is too broad, particularly as it extends to unlicensed facilities. Is the intention to capture waste facilities that do not currently require a licence? The definition should exclude exceptions provided for by regulations, as per the definition of waste facility in the Protection of Environment and Operations Act 1997 (NSW).
FRNSW comment: This guideline addresses fire safety in waste facilities, particularly in respect of fire safety provisions of the *National Construction Code*. It does not purport to relate to licencing requirements under the POEA Act, which only has the objective of preventing pollution and protecting the environment.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 5	Background	• Again, it is not clear whether responsible persons are required to ensure mandatory compliance with the Guideline or can refer to the requirements as a guide only.
FRNSW comment: Taken as comment.		
Section 6	Legislated requirements	• Section 6.2 suggests that the relevant planning authority can seek advice from FRNSW and consider recommendations when making their determination to grant development/planning consents. Again, clarification is sought as to whether FRNSW will be requiring / recommending mandatory compliance with the requirements of the Guideline in providing such advice. • Section 6.2 also suggests that the Guideline will apply for developments of both new and existing waste facilities. Does this mean that if existing facilities wish to obtain approval to undertake any further development, they will then become subject to the Guideline requirements? Or is the intention that existing facilities must comply with the Guideline immediately or subject to some other trigger? We have serious concerns in relation to any requirement for retrospective compliance. • Section 6.3 states that unprocessed mixed waste or processed renewable material and byproducts may represent risk similar to dangerous goods, and require consideration of specific controls as per Part 7.1 Division 5 of the WHS Reg. Clarification is sought as to whether this section constitutes a guide only or is a mandatory requirement. The Guideline is also unclear regarding what exactly a Material Recovery Facility (MRF) would be required to do in order to achieve compliance with this section, particularly as a MRF may only intend to accept recyclables but consumers may place inappropriate material into the recycling stream received by the MRF. • Section 6.4 in relation to the National Construction Code is unclear. What is the Guideline recommending or prescribing here? Is the intention that specific requirements of the Guideline will be used to satisfy or will apply instead of “Deemed-to-satisfy” provisions of the NCC? Clarification is also sought in relation to the administrative process for ensuring compliance with this section of the Guideline. • Clarification is sought as to whether this requirement will be applied retrospectively so as to require existing waste facilities to have construction certificates re-issued to include acceptable solutions for special hazards under cl. E1.10 and E2.3 of the NCC.
FRNSW comment: When providing comment to the relevant regulatory authority FRNSW will make recommendations consistent with this guideline. Clause 145 of the *Environmental Planning and Assessment Regulation 2000* requires any approval of development to comply with the Building Code of Australia in force at the time of application; this includes development of any existing waste facility undertaking further development. There is no intention, nor statutory mechanism (construction certificates cannot be reissued), to make existing waste facilities immediately comply with this guideline. Compliance with the *Work Health and Safety Regulation 2017* is not optional. The role of the National Construction Code has been clarified.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.1	Designing for special hazard	• Section 7.1.2 provides that Consent Authorities should issue a condition on development consent requiring clause E1.10 and E2.3 of the NCC be complied with to the satisfaction of the FRNSW, achieved through either providing an acceptable solution (Refer Appendix A) or through direct consultation with the FRNSW. • The FRNSW acceptable solution set out in Appendix A is expressed to be applicable to the case of a typical waste facility handling putrescible combustible waste material. For any other case, a holistic assessment is required. • As MRFs do not fit the category of a typical waste facility handling putrescible combustible waste material, we understand that should a MRF seek a development consent, a holistic assessment by FRNSW would be required. We are concerned that Guidelines do not specify parameters for such a holistic assessment, meaning the assessment process may become subjective. We would recommend an equivalency provision, whereby outcomes or requirements are clearly specified and a waste facility will be deemed compliant where it can demonstrate the same or better outcomes to outcomes set out in a guideline. • 7.1.3 requires performance based design to consider 'all possible fire scenarios'. This is too onerous a standard. We submit that a more appropriate standard is for performance based design to consider all "reasonable and foreseeable fire scenarios".
FRNSW comment: Appropriate pathways have been added for application to waste facilities. The application of the development section has been clarified. The suggested "reasonable and foreseeable fire scenarios" has been added to the nominated clause.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.2	Existing waste facilities	• Section 7.2 requires an owner or PCBU to undertake an assessment of the design and performance of their existing waste facility against the requirements specified within this guideline and provide to the relevant consent or regulatory authority for determination. • Clarification is sought as to the following: o What is the trigger for the requirements set out in section 7.2? Do they apply as soon as the Guideline is introduced or only if a waste facility intends to undertake development works? o What is the time frame within which the assessment under section 7.2 must be completed and submitted? o What is the administrative process for the assessment – will there be prescribed forms etc? o What will the determination process entail and if an assessment is not determined to be acceptable, what are the implications? o Will re-assessments be required on a periodic basis? • We consider that retrofitting the requirements of the Guideline to existing waste facilities will likely be practically impossible and prohibitively expensive, regardless of whether the site is leased or operator owned. Even for new developments, the land size required to meet the Guideline requirements may not be available. The proposed maximum storage requirements and other requirements will substantially increase both the area of land needed to be acquired for new developments and construction costs, which will like render many operations or proposed operations unviable based upon the economics of the industry today. • If mandatory compliance with the Guideline is required, it is critical that reasonable time frames are permitted for compliance, so as to provide an opportunity for the industry to recalibrate and renew / renegotiate existing agreements.
FRNSW comment: The application of this section has been clarified as relating to the development or upgrading of an existing waste facility.		
Section 7.3	Firefighting intervention	• With respect to the requirements for firefighting intervention in section 7.3, we consider that many waste facilities are unlikely to have sufficient land size to meet these requirements, including with respect to perimeter roads and quarantine areas. • The requirements for aerial appliance access also require clarification.
FRNSW comment: The 'aerial appliance' note has been removed – it is covered by the referenced guideline. The perimeter ring-road requirement has been clarified as applying to non-sprinklered waste facilities only.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 7.4	Fire hydrant system	• Clarification is sought as to whether section 7.4.2, requiring the design and construction of the fire hydrant system to take into consideration the factors outlined in Appendix B, applies to existing waste facilities or only new developments. • Section 7.4.5 provides that where appropriate to protect against high risks and hazards, suitable on-site fixed external fire monitors should be provided as part of the fire hydrant system. Clarification is sought as to the meaning of "high risks and hazards". • We also note that the effect of section 7.4.5 is to require fix thermal heat detection cameras (or similar) for every 10 metres of storage area. Compliance with this requirement would be extremely expensive for operators of waste facilities. • The requirement in section 7.4.8, requiring a fire hydrant system to have a minimum water supply and capacity (e.g. storage tank) appropriate to the total hydraulic discharge of the worst case fire scenario. This requirement, particularly the obligation to cater to the worst case fire scenario, would require extremely large tanks which will reduce site capacity further or in some cases may not be able to fit on existing sites. Further, where waste facilities are leased, site owners may not consent to the installation of tanks. • Section 7.4.9 provides that the fire hydrant system is to incorporate fire hose reels installed in accordance with Clause E1.4 of the NCC and externally to cover open yard storage areas to enable effective first attack of fires by appropriately trained staff. The obligation to have fire hose reels covering external open yard areas would necessitate installation of fire hose reels throughout the waste yard, which is cost prohibitive and again there are likely to be challenges for waste facilities on leased sites obtaining landlord consent.
FRNSW comment: The requirements of AS 2419.1 should be applied to development as applicable. The total hydraulic discharge requirement has been amended – for existing waste facilities an alternative solution may be necessary for fire water run-off containment.		
Section 7.5	Automatic fire sprinkler system	• Section 7.5.7 requires a fire sprinkler system to have a minimum water supply and capacity appropriate to the hydraulic discharge of the worst case fire scenario. Again, this would require very large tanks which may not be able to fit on existing sites. Landlord consent to installation may also be a challenge for waste facilities operating on leased sites.
FRNSW comment: The fire safety system requirements have been amended altering the total volume required. Any leased site (building) should be appropriate for the intended use.		
Section 7.8	Fire water run-off containment	• The requirements in section 7.8.1 for a waste facility to have effective and automatic means of containing fire water run-off at worst case fire scenario for up to 4 hours will be totally impracticable and cost prohibitive. It will be likely be impossible to retrofit existing sites and landlords of leased sites may not grant consent.
FRNSW comment: The total hydraulic discharge has been revised to minimum 90 minutes plus four hours from each fire hydrant protecting an external stockpile. If stockpiles are internal this equates to 90 minutes operation of sprinkler and hydrant systems. An alternative means of fire water run-off containment should be proposed for existing waste facilities.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
Section 8	Facility Operation and Management	• The requirements of section 8.2.2 are unclear and require clarification. Section 7.4.5 indicates that suitable on-site fixed external monitors should be provided throughout the facility. This requirement appears to be subjective – clarification is sought as to what is considered "suitable" and who will determine suitability. • We consider that the maximum stockpile sizes and minimum separation distances set out in sections 8.3 and 8.4 are unworkable. The plans set out in Annexure 2 provide a visual guide to the impact the requirements of sections 8.3 and 8.4 would have on our existing MRF. Overall site capacity will be greatly reduced, as areas may not be utilised for storage if Sections 8.3 and 8.4 of the Guideline are imposed. • We are also concerned that reduction of storage capacity on sites is likely to detrimentally impact the commercial viability of MRFs (if the limits are intended to apply to recyclable material following processing at the MRFs). The requirements of the Guideline will likely mean that MRFs have reduced operational capacity, which would not only impact the commercial viability of individual MRFs, but may be detrimental to the current recycling system in general. In particular, facilities such as our MRFs, which store materials to be sent to local remanufacturing, may have a reduced volume of materials on hand to send for remanufacturing rendering them unable to maintain a minimum stock level which remanufacturers may require to remain operational. We submit that the Guidelines must balance the need for fire risk mitigation with the need to ensure MRF operations remain viable and sustainable, so as to continue performing their the critical function within the recycling industry in NSW, including the NSW Container Deposit Scheme. • Section 8.3.6, requires, amongst other things that the capacity of the waste facility to move any stockpile is to determine the maximum size of the stockpile, and that the external stockpile must be able to be moved to a dedicated external quarantine area within 8 hours or less. We are concerned that a requirement to keep available a quarantine area into which the stockpile can be moved will significantly reduce the total storage capacity available at waste facilities. Even if such land is available, it will be effectively "tied up" and not available to be used for other purposes. We are also concerned that it may be impracticable to attempt to move a stockpile during a fire, including due to traffic restrictions and personnel safety considerations.
FRNSW comment: The 'suitability' of a fire safety system's design is assessed by appropriate engineers and consultants and is then determined by the certifying authority prior to issuing the corresponding construction certificate. The maximum stockpile sizes and minimum distances are based from actual burn trials conducted by WISH and are limited to prevent fire spread to any adjoining premises. Clause 8.4.3 allows a masonry wall barrier to reduce separation distances; this has been emphasised as an alternative that does not adversely impact operational capacity. Clause 8.3.6 has been changed to apply to any internal stockpile of a building not fitted with a fire sprinkler system.		

Name:	Anonymous
Organisation:	Blue Mountains City Council
Title of document:	Fire safety at waste facilities

Page or section no.	Section title / subject of section	Specific comments or suggestions
7.2	Existing waste facilities	• Whilst recognising that preventative measures are needed, in the short term, the application of this guideline will have significant business and cost implications for existing waste facilities, it may call into question the viability of some existing sites and will act as a cost barrier to new market entries. • Regarding the owner or PCBU providing an assessment of the design and performance of their existing waste facility against the requirements specified in the guideline to the relevant consent or regulatory authority for determination is considered unreasonable. It is also unclear whether the consent or regulatory authority will have the knowledge and skills to undertake this determination. • A state wide fire risk assessment of all waste facilities and prioritisation of high fire risk facilities for immediate action would be more appropriate. • Additionally a more holistic framework should be considered including: o Encouraging a two stream system: ▪ A fire risk assessment and strategy/plan approach that considers the individual nature of each waste facility and its combustible waste that guides any fire safety conditions applied by consent authorities. ▪ Application of this guideline on rogue operators or new facilities that do not want to undertake the assessment/plan approach • Clearer thresholds of when the guideline will apply are needed.
FRNSW comment: Section 7.2 applies in respect of development (i.e. section 7). Under the EP&A Act the consent and regulatory authority must ensure that buildings within their jurisdiction meet the required building code and/or have adequate provision for fire safety. Development proponents should engage consultants having suitable expertise as required. Any state-wide fire risk assessment is a matter for the relevant regulator.		
3	Application	• The guideline should clearly state what it does not apply to eg reducing fire risk from ancillary facilities on sites such as offices or charity facilities. • The guideline appears to focus on undercover areas and it is unclear how the guideline applies to landfills where all waste is combustible. • Clearer thresholds of when the guideline will apply are needed

Page or section no.	Section title / subject of section	Specific comments or suggestions
FRNSW comment: The application section has been changed.		

General comments or suggestions
• There appears to be little integration or interface between this NSW guideline and existing licence conditions on fire safety such as those found in Emergency Management Plans, Work Health and Safety Plans and Pollution Incident Response Management Plans, or the fire safety requirements of the National Construction Code. How these existing fire safety conditions interact with the application of this guideline is unclear. How and when this guideline applies given other current legislated fire safety conditions should be considered. Any duplication should be minimised and unnecessary red tape removed. • Priority should be given to absorbing the content of this guideline, where appropriate, into existing regulated plans. • Some existing waste facilities are likely not to be able to conform to these guidelines due to site constraints. • The role of the owner vs the PCUB is not distinguished and could lead to confusion given the owner is responsible for annual fire safety checks and plans. ‘ • The guideline should provide some further information on what is classed as combustible waste material based on science, taking into account the volume of material • and the variation in fire risk of different combustible waste materials • This needs to be accompanied by training, tools, resources and certification to ensure consistency in application of this guideline as well as fire risk assessments and plans Conclusion: A strategy or plan for reducing fires in NSW waste facilities based on a fire risk approach, in consultation with the waste and resource recovery sector, should be considered with this guideline. High risk existing sites would then be immediately assessed for upgraded fire safety systems, with lower risk existing sites being guided by what is reasonable and feasible. The guideline would benefit from further review and should consider providing two pathways to fire safety compliance either through: • the application of conditions in relevant licences based on these guidelines, or • a tailored waste facility fire risk assessment and associated implemented fire safety plan The outcome should be an effective, reasonable and feasible framework for reducing the incidence of fires in existing and future waste facilities.
FRNSW comment: This guideline addresses matters of fire safety from a fire service perspective and has been developed for multiple stakeholders, not just waste facility operators. It reiterates existing legislative provisions so that each stakeholder understands their obligations and gives interpretation into matters not duly considered (i.e. special hazards requirements of the NCC). In some instances, this already occurs when the regulatory authority seeks comment from FRNSW (e.g. a fire safety study). Being a guideline, this document isn’t enforceable. However, this guideline is intended to provide recommendations that the responsible regulatory authority may consider and apply to a given waste facility.

Name:	Various – anonymous
Organisation:	Various – anonymous
Title of document:	Fire safety guideline – Fire safety in waste facilities – Version 01 (Issued 19/11/2018)

Page or section no.	Section title / subject of section	Specific comments or suggestions
p5	4 Definition " Combustible waste materials"	We had an interesting discussion about when a 'waste' material becomes a 'good' for sale and no longer waste. For example – Peats Soil and Garden Supples in SA collect waste wood products, pallets, woodchips and sawdust etc. to create potting soil. The low grade potting soil is very much like sawdust in many ways. We enforced them to treat the storage of this processed materials the same way that the waste is managed, which is like what's found in your guideline. However, this view was not appreciated 1st off by the client. Might be wise to include some words or insert a link to join the guideline of 'Combustible waste material" to other "Large Storage of Combustible material" guidelines to cover storage of recycled waste
FRNSW comment: Noted. The definition of stockpile has been amended.		
p5	4 Definition " Combustible waste materials"	I was wondering if metal stockpiles from automotive metal recycling facilities are intended to fall under the definition of "combustible waste materials" within the guideline. It is clear that shredder floc waste is as it mentioned specifically in the definitions (part c), so the absence of a direct reference to metal stockpiles specifically may imply that the metal stockpiles are not considered combustible materials? However these facilities do have a history of metal stockpile fires so potentially it may be classed as "e) any other waste which may pose a fire risk". It would be good to have this clarified due to the quantities of different wastes, floc waste stockpiles are inherently much smaller than the metal stockpiles and are easier to comply with the maximum stockpile sizes and separation distances within the guideline. However metal stockpiles are often very large. I believe most major metal recycling facilities existing in Australia would not come close to complying with the maximum external stockpile size specified in the guideline
FRNSW comment: Most metal waste comprises mixed waste involving combustible material, thus the degree of combustible material amongst collected metal waste should be assessed and carefully approximated to determine the fire risks and hazards. Metal waste often result in complex three-dimensional fires due to the non-combustible metal structures.		

Page or section no.	Section title / subject of section	Specific comments or suggestions
7.7	Smoke Hazard Management	We agree that this could be an issue. In our operation odour control is of significant importance, and our fire management strategy currently dictates that all ventilation is to cease in the event of a fire to prevent the spread of fire through applicable ventilation systems.
FRNSW comment: The NCC performance requirement for smoke hazard management is to vent and extract smoke in a manner that assists the evacuation of occupants, and as appropriate to the fire load, fire intensity and fire hazard in the waste facility.		

General comments or suggestions
• Space/land requirements; stockpile and separation distances – prescriptive; impractical, not workable. Performance-based design? At the moment, requirements onerous; significant costs, e.g. automatic temperature monitoring. • Best practice guide instead – how to achieve best practice; VIC process (tested! Trialled!) should be followed from an outcomes perspective; prevention and cure. This one doesn't deal with prevention. • Language – causes uncertainty amongst insurers, EPA, councils etc. **Mandatory/regulated/enforceable? Needs clarity particularly as there are significant differences in licences vs. guidelines, e.g. stockpile limits. Need to work out compliance. • Certainty for existing sites/businesses. How retrospectively do all that's in guidelines? How can existing sites practically and viability meet requirements? • Financial assurances - existing contracts with councils; impacts • Solutions/alternatives – Fire specifically asked that industry try to offer some solutions in our submission in addition to presenting issues.
FRNSW comment: This guideline addresses NCC performance requirements in relation to the special hazard; the Victorian EPA document does not specifically address the NCC requirements for fire safety provisions. The use of language has been revised. Appropriate pathways have been added for application to new and existing waste facilities.
NSW is currently grappling with new commercial realities brought about by the China National Sword initiative, amongst other things, such that the financial feasibility of materials recycling operations is now in question, with many facilities under pressure of closure. The Guideline as drafted will cause significant detriment to kerbside recycling in NSW. Given the essential community service nature of kerbside recycling services, We believe it is imperative that the Guideline and requirements set out therein strike an appropriate balance between managing fire risks and ensuring the commercial viability of waste operations, and in particular the recycling industry given its critical importance to sustainable waste management in NSW. This consideration must also extend to any time frames imposed for implementing the requirements of the Guideline.
FRNSW comment: Taken as comment.

General comments or suggestions
The scope of the application of the Guideline requires clarification. In particular, the Guideline should clearly set out the extent to which the Guideline will apply to existing waste facilities and whether retrospective compliance will be imposed on operators of such existing facilities. The application of certain requirements of the Guideline will have severe ramifications for existing facilities, as outlined in Item 5 below. As noted in Annexure 1 to this letter, the definition of waste facility should also exclude exceptions provided for by regulations, as per the definition of waste facility in the Protection of Environment and Operations Act 1997 (NSW). The Guideline needs to also clarify how its requirements intersect with the licencing regime for environment protection licences in NSW.
FRNSW comment: The application has been revised.
The Guideline does not clearly specify which authorities will use the Guideline and when / how it will be enforced. The Guideline also indicates that some requirements may only apply in certain circumstances, but does not specify which sections are optional and which are mandatory (and when). Even if it is clarified that following the Guideline is not mandatory, we remain concerned about the ramifications of onerous guidance criteria. Today, insurers often already undertake fire risk assessments of facilities they insure and may impose requirements upon recycling facilities as a condition of insurance. The requirements of Guideline, even if not mandatory, will likely be effectively enforced by insurers when a risk based approach to assess an individual waste facility is more appropriate (as outlined below).
FRNSW comment: The application section of the guideline has been clarified by adding pathways appropriate to the assessment by determining authorities. FRNSW has a statutory responsibility to protect life and property. A safer waste facility should inherently have lower insurance premiums than a less-safe facility.
We do not consider the Guideline to reflect contemporary understanding and practices on the subject of fire safety in waste facilities. The requirements of the Guideline are overly prescriptive and conservative which will result in significant and unnecessary burdens being placed on waste facility operators. We support the continuation of a risk based approach to fire safety in waste facilities which has been adopted in NSW to date and is currently adopted in Victoria. An approach which allows for waste facilities to demonstrate equivalency with fire risk management outcomes based on a holistic assessment of the individual waste facility is far superior to a requirement for all waste facilities to adopt identical fire safety measures. A prescriptive “one size fits all” approach does not take into account the specific risks and existing fire safety measures at individual waste facilities. We submit that a waste facility should be deemed to be compliant where it can achieve a similar or better level of fire risk management to those outcomes expressed in a Guideline, including by way of imposing alternative measures to those prescribed in the Guideline.
FRNSW comment: All waste facilities should be holistically assessed case-by-case when being determined by the relevant regulatory authority. It needs acknowledgement that the regulator of waste operations is different from the consent authority responsible for development, and both sets of requirements must be attained (i.e. the facility should have adequate fire safety provisions appropriate to the business and undertaking being granted by licencing).
In our view, the Guideline does not contain an appropriate level of information, nor is the technical content currently appropriate or sufficient for use. Many requirements of the Guideline appear open to subjective interpretation. Accordingly, comprehensive definitions and examples are needed to ensure consistency in the application of the Guideline. For example, requirements regarding storage of materials do not provide clear definitions of what constitutes “internal” vs “external” storage, and it is not clear if or how requirements regarding “combustible material” apply to specific materials processed by Material Recovery Facilities.
FRNSW comment: The guideline does recommend the PCBU engage an external consultant to provide specialist advice in correctly interpreting and applying this guideline.

General comments or suggestions
A number of specific requirements in the Guideline are impractical and would require drastic changes to the way in which waste facilities currently operate, rendering various waste facilities uneconomical to operate. For example, the requirements around stockpile distances, heights and quarantine areas will substantially limit the capacity of existing sites and/or lead to sites incurring substantial expense to achieve compliance, making operations commercially unviable in some instances. In particular, the requirements regarding external stockpile separation distances from boundaries will significantly reduce the footprint of operational / functional land available to be used on sites. By way of example, the plans set out in Annexure 2 show the current boundaries of our own MRF with an overlay of the effective reduction in boundary which would result if the stockpile separation requirements of the Guideline are imposed. This would substantially reduce the volume of product which a Material Recovery Facility can keep on site and impact the overall commercial viability of that facility. This will in turn reduce the volume of recycling feedstock which we can supply to its paper mills for remanufacturing, producing a negative outcome for closed loop recycling in NSW. We also consider that operators of existing waste facilities will face significant challenges in implementing requirements for installation of certain infrastructure and systems, such as fire detection and sprinkler systems, on leasehold sites.
FRNSW comment: The guideline outlines adequate fire safety provisions appropriate to the business and undertaking of a waste facility to ensure NCC performance requirements are met. Separation distances are based on actual fire test trials; they ensure fire does not spread into any neighbouring premises (by means of radiant heat exposure). Leasehold sites not having certain infrastructure and systems may not have adequate fire safety provisions appropriate for a waste facility.

	FRNSW comments to non-standard submissions
Organisation:	Various – as identified below
Title of document:	Fire safety guideline – Fire safety in waste facilities – Version 01 (Issued 19/11/2018)

Australian organics recycling association
• FRNSW agrees with the assertion that composting sites should be excluded from this guideline, same as 'Reducing fire risk at waste management sites' by the WISH Forum. The combustibility of organic material and physical nature of compost piles means composting sites do not need consideration as a 'special hazard' and should be regarded as any other processing facility. • Any assessment or determination of a development that is a composting site should be made in accordance with existing statutory provisions and their requirements.
Australian Sustainable Business Group (ASBG)
• The application of the guidelines has been clarified, including new vs existing facilities. • Appropriate pathways for assessment by relevant regulatory authorities have been added. • Classification of combustible waste by fire behaviour properties has been added. • Separation distances are relative to large and high stockpiles that result in complex three-dimensional fires (unlike flammable liquids), and have a high heat release rate and heat flux. These distances are from actual waste fire burn trials. • Section 7.2, existing waste facilities, has been revised. • The quarantine area has been changed to only apply to a building not fitted with a fire sprinkler system. • The firewater run-off containment system has been reduced to minimum 90 minutes as per *HiPAP No 2 Fire Safety Study Guidelines*. • The requirement to rotate stockpiles to dissipate heat has been modified to 'as required'. • The maximum internal stockpile size has been increased to 1,000 m^2; multiple stockpiles are allowed when separated by wall, or by means of an alternative solution. • Minimum separation distances may be reduced by separating wall, installed fire safety systems, or by means of an alternative solution.
Environment Protection Agency Waste Compliance
• The application has been changed to exclude waste facilities with less than 50 m^3 of combustible waste; most Community Recycling Centres (CRCs) will be exempt. • A fire hydrant system, or other suitable means of firefighter water supply (e.g. static tank), should be provided for the attending fire brigades. • In rural areas the land may be classified Bush fire prone land. NSW RFS *Planning for Bush Fire Protection* requires a static water supply if no reticulated water supply is available (e.g. 10,000 L tank). • Fire water run-off containment will not be necessary if minimal hydraulic fire safety systems are provided. • The site plan as provided within the waste facility's emergency plan should suffice for ESIP requirements in the case of most CRCs. • CRC owners should use appropriate pathway during assessment of any development (e.g. alternative solution, fire safety exemption).

Local Government NSW
• The application of this guideline has been clarified in respect of the existing statutory provisions and the corresponding consent or regulatory authorities who enact them; the consent and regulatory authorities can exercise discretion within the scope of their legislated powers in considering this guideline. • In regard to being piloted, this cannot be achieved when overriding statutory provisions prevail (i.e. *EP&A Reg.* applies to all development and cannot be piloted). • The application has been changed to exclude waste facilities with less than 50 m^3 of combustible waste. • Most Community Recycling Centres (CRCs) will be therefore be exempt from this guideline. • Appropriate pathways have been added. • The fire safety systems of all development should be holistically assessed against the National Construction Code and its performance requirements; for an existing waste facility the consent authority has the statutory power to determine if a facility has adequate provision for fire safety. • NSW EPA and FRNSW has already conducted an audit on some waste facility operators considered high-risk (or 'rogue operators' as suggested). • The role of the PCBU vs owner has been clarified.
Sims Metal Management
• The application of the guideline has been clarified. • Insurance coverage is not a matter that concerns FRNSW; the increase in premiums is likely associated with increasing risks, whether real or perceived, encountered in the industry, and any facility having adequate provision for fire safety should be rewarded by having lower premiums. • This guideline was drafted by FRNSW from empirical knowledge gained through tacit experience in extinguishing many waste fires that have occurred. FRNSW has also extensively consulted with many industry stakeholders during their fire safety study processes. • As stated, the 2018 EPA Victoria Guideline focuses on education and performance outcomes for the PCBU; this guideline is for all stakeholders including consent/regulatory authorities and focuses on the NCC performance requirements as well as facility operations that do not result in excessive fire risks to life and property. • Appropriate pathways have been added. • The definitions have been amended. • The nature of combustible waste material often results in a complex fire that can be more hazardous to contain and extinguish than a nicely bunded petroleum fire. • The application to existing facilities has been clarified. • The requirement to have a ring main has been removed. • A compliant fire hydrant system is not cost prohibitive; buildings of all Classifications can and do have a compliant fire hydrant system installed. • The requirement for automatic fire sprinkler system has been clarified. • The requirement for fire water run-off containment has been clarified. • Storage and stockpile limitations are based on an assessment of fire loads and apply in the case of no other fire safety measures being installed. A documented stockpile management procedure which includes fuel hazard identification and reduction, along with auditing, should result in commensurate stockpiles and separation distances. • The 'FRNSW acceptable solution' is not expected to be applied to metal recycling facilities.

Waste Contractors & Recyclers Association (WCRA)
• This guideline was developed from consultation FRNSW has with industry stakeholders via the fire safety study process and provides all stakeholders with a transparent understanding of FRNSW requirements for the special hazard. • While the focus of the NSW Taskforce response to the China Sword may have been on outputs from kerbside recycling, this guideline primarily focuses on fire safety of all waste facilities including satisfying the performance requirements of the *National Construction Code* (NCC). • The application of each section has been clarified in respect of how it applies to both new and existing waste facilities. • FRNSW is an advisory agency not having any authority to direct a consent or regulatory authority to do anything, hence why the word 'should' is frequently used. • Many requirements have been revised; appropriate pathways have been added which will assist existing facilities undergoing development (i.e. an alternative solution). • Prescriptive requirements (i.e. 'technical data'), including the "FRNSW Acceptable Solution", address the lack of deemed-to-satisfy provisions within the NCC addressing the performance requirements for special hazards (i.e. Clause E1.10 and E2.3 of the NCC). These are aimed at builders, engineers and consent/certifying authorities. • The 'combustibility' of common waste materials have been defined. • Existing waste facilities who operate from a premises having adequate provision for fire safety should not be unduly affected by this guideline. • This guideline has now been endorsed by NSW Rural Fire Service; this guideline may be submitted for endorsement and adoption by the Australasian Fire and Emergency Service Authorities Council (AFAC) as the national position of fire authorities in Australia. • The Victorian guideline 2018 is published by Victoria EPA primarily for consideration by the PCBU; this guideline addresses other stakeholders including consent/regulatory authorities so that they don't have to refer to FRNSW for consultation on satisfying NCC performance requirements. • Insurance coverage is not a matter that concerns FRNSW. Any waste facility having adequate provision for fire safety should be rewarded by having lower premiums. • It is agreed that batteries are an ignition risk increasing at an 'alarming rate'. Any policy addressing such hazards need to be made by the appropriate regulator. The PCBU can however implement appropriate risk mitigation tools, including public education to such contaminants are not disposed of in general mixed recycled waste material. • It is acknowledged that stockpiling is a legitimate activity, but stockpiling must be done in a manner that does not compromise any provision for fire safety. • The cost of complying with this guideline will not be 'quite high' for any waste facility already having adequate provision for fire safety. • Training programs on risk management, fire safety, Workplace safety, materials handling, compliance etc. are available to all industries including the waste industry.

Waste Management and Resource Recovery Association of Australia (WMRR)
• The guideline applies to all waste facilities handling combustible waste with noted exception as identified in the application section. However, section 7 only applies to development and planning (i.e. new waste facilities and existing facilities that are being demolished, erected, rebuilt, altered, enlarged or extended). • Section 126 of the POEO Act relates to an air pollution event and is regulated by NSW EPA. If a significant fire occurs, where notable damage to property is sustained, development approval will be required under the *Environmental Planning and Assessment Regs 2000* to demolish or rebuild the facility, enacting section 7 of this guideline. • The guideline does apply to all waste facilities with noted exceptions. However, the application of each section has been clarified in respect of how it applies to both new and existing waste facilities. • The definition of combustible waste material has been modified. • The trigger for *HIPAP 2 Fire Safety Study Guidelines* have been added. • As a principal stakeholder in the fire safety provisions of a waste facility, FRNSW consultation 'should' be included for any development. • The clauses relating to Heat Release Rate and fire load have been revised and made clearer. • The application of section 8 Facility operation and management has been clarified; minimum separation distance tables have been replaced with graphs appropriate to the fire risk (i.e. Heat Release Rate). • The temperature monitoring requirement has been modified. • The application of the 'FRNSW acceptable solution' has been clarified.

28 February 2019

Mr David Lewis, Chief Superintendent Fire Safety
Fire and Rescue
Fire Safety Branch
1 Amarina Avenue
Greenacre NSW 2190
By email: firesafety@fire.nsw.gov.au

Dear David,

In response to recent meetings and the call for comment on the proposed Fire Safety Guidelines, AORA would like to thank you for the opportunity to put forward the following discussion.

From the outset, it must be stated that AORA is committed to working with FRNSW to develop appropriate controls for fire safety management in the composting industry. AORA is concerned that the guidelines do not address the specifics of composting businesses and the differences from other resource recovery facilities such as Material Recycling Facilities (MRF's) that are handling & processing high heat rate release (HRR) materials.

AORA makes the following comments –

1) The draft guidelines do not identify characteristics of materials that present significant combustion risk. Within a composting facility, materials at different stages of the process have different characteristics that impact upon potential flammability.

For example, during the active composting phase, the primary activity in a composting facility, the material has to be kept damp to allow active microbial degradation. At such moisture levels, the material is not combustible and should not be subject to the control of such guidelines. This approach may also apply to other materials in a composting facility.

2) Further, Section 8.3 of the draft guidelines takes guidance from "Reducing fire risk at waste management sites" from the Waste Industry Safety and Health Forum. However, the guidance document specifically excludes certain types of waste management sites (at section 1.4.6) including: "***Composting sites, including in-vessel, green waste composting and anaerobic digestion plants"***. As such, it is imperative that composting facilities are treated separately and not covered by these draft guidelines.

3) Composting facilities are all unique in regard to the site, the technology, the products composted and the product flow through the various phases of the composting process. Prescriptions as to pile size, quantities of materials in a pile & separation distances, as presented by the draft guidelines, are inappropriate and unworkable as one size does not fit all.

4) The proposition for these draft guidelines to be triggered by a DA or consent variation may represent onerous compliance costs to the existing business. This will potentially strongly disincentivise further development of that facility which would therefore impact industry wide upon the capacity to increase materials composted and therefore divert organics from landfill.

5) Water requirements must take into account the location of the composting facility and the nature of the water supply. Some facilities do not have a reticulated municipal supply.

6) In general, property prices are high and the imposition of buffer distance, quarantine area requirements and proposed distances between piles, will often render a business un-economic.

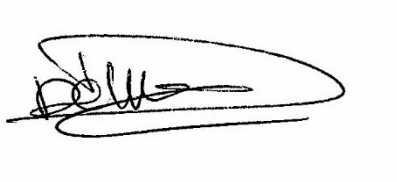
AORA proposes the following –

1) FRNSW engage directly in open cooperative dialogue with the composting industry to identify activities and processes unique to the composting industry, separating it from other resource recovery activities, such as MRF's and removing from the ambit of these proposed guidelines.

2) If DA variations or consents are sought, it should not automatically trigger the imposition of the current proposed guidelines as identified in 7.2.3. Instead FRNSW, and/or the determining authority if different, should work collaboratively with those individual composting businesses to develop appropriate controls and potentially alternative arrangements for fire safety management which should be phased in over a mutually agreeable time.

3) FRNSW develop a separate set of guidelines and appropriate controls that are tailored to the composting industry based upon the different recycled organic materials, handling techniques & processing methodologies used in the manufacture of compost, with proposed guidelines emphasising the need to assess sites on an individual basis.

Yours Sincerely,



Diana De Hulsters
National Executive Officer

On behalf of AORA NSW: David Bonser, Chair NSW
Duncan Le Good, Vice Chair NSW and AORA Director

AUSTRALIAN SUSTAINABLE BUSINESS GROUP'S

Submission on

Fire Safety in Waste Facilities

March 2019

Sydney, Brisbane

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Australian Sustainable Business Group (ASBG) is pleased to comment on Fire and Rescue's Fire Safety in Waste Facilities (FSWF) with this submission.

Overall FSWF should be rewritten to provide a list of risk issues which can be used and referred to by a fire assessment or equivalent in the preparation of a fire study for new facilities. FSWF should emphasise its preference for a fire study, using its default criteria for such encouragement or if a facility chooses not to undertake a fire study.

This 'guideline' document establishes a confusing mix of prescriptive and site specific criteria to new and also existing waste facilities, which store combustible waste materials. FSWF prescribes what is considered an ultra conservative criteria for waste facilities. Clear examples of this appear when compared to Australian Standards covering Dangerous Goods. In general separation distances in FSWF are larger than that required for flammable solids class 4.2 PG III, and combustible liquids under Australian Standards. Table 3 compares separation distances, indicating the FSWF separation criteria can only be described as ultra conservative.

Table 3: Comparison of AS 1940, AS/NZS 5026 and Fire Safety in Waste Facilities s8.1 Separation distances in meters

	AS 5026	AS 1940			Fire Safety in Waste Facilities s8.1			
Quantity tonne/kL	**4.2 PG III**	**PGII**	**C1**	**C2**	**LP S HRR**	**BP S HRR**	**LP H HRR**	**BP H HRR**
120	9	17^	7.2^	6.1^	7	**13**	**20**	**24**
200	10	21^	9	7	9	**15**	**24**	**31**
440	14.8+	28^	12	9.3^	11	**20**	**30**	**38**
600	16.6+	33^	14	10.8^	12^	**21.5**^	not acceptable*	not acceptable
760	17.6+	36^	15.1^	11.9^	13	**23**	not acceptable	not acceptable

+ Extrapolated from set separation distances

^ Used split differences to obtain the separation distances, generally rounded up

* *Not acceptable* is because the maximum stockpile size is 20 x50m and due to the low density of the material is unlikely to exceed 550 tonnes

For example, storing 120,000 litres of diesel (a C1 combustible liquid) requires a separation distance from the bund wall of 7.2 metres. In contrast, storing 120 tonnes of bailed plastic waste (approximately 600 m^3) under FSWF requires 20 or 24 meters of separation. Prima face diesel is a Dangerous Good and as expected has a far higher fire risk, but requires 1/3 of the separation distance. Putting it another way under ANZS 1940, 24 m separation allows for about 290,000 litres of petrol, about twice the mass permitted for plastic under the FSWF. Many of FSWF prescribed requirements, such as these separation distances, were established in isolation based on the assumption there are *no other fire control measures* other than separation. Use of these separation distances is substantially excessive if other relatively simple control measures are also applied.

In most cases FSWF assumes combustible waste material is uniform across all waste facilities with no delineation between highly variable combustible properties. As a result FSWF is poorly drafted such as not putting such default controls in context, nor recommending a fire study be used as the first desired option.

FSWF also differs from the two main reference documents Victoria's Management and storage of combustible recyclable and waste materials – guideline (MCWM) and UK's Waste Industry Safety and Health Forum - Reducing fire risk at waste management sites - New fire guidance (UK WISH). Both these document make it clear that there are two options:

- Preferably undertaking a fire study and implementing the recommendations or
- Following the default very conservative and prescriptive criteria.

This distinction is lacking or poorly explained in the FSWF documents, where use of a fire study appears as an add-on not an alternative option. Consequently, it is strongly recommended that the FSWF clearly identify that there are the same two options available for affected waste facilities.

In addition, there is confusion over the application of FSWF to existing facilities. Clarification is required as to how the FSWF is to apply and which parts are optional. Existing waste facilities should not be required to retrospectively comply with FSWF default criteria or even parts of it. Most sites will not have the land required nor be able to afford the costs required. A different approach is required for existing sites.

ASBG recommends that for such compliance on existing facilities a level of reasonable and feasible criteria should apply. This should be similar to other requirements to upgrade existing buildings and infrastructure when new building codes and rules are introduced. Centre to this approach is again use of a fire study, which is risk-based and considered reasonable and feasible changes based on best risk management for the lowest cost to achieve an outcome.

The final issue is for capturing firewater. There is no requirement under the MCWM or UK WISH document to capture 4 hours of firewater assuming worst case flow rates. Firewater capture has been attempted before in the mid 1990's to poor result. While capture of firewater is worth considering, it is recommended this be assessed using a fire study and apply only to new sites at the planning level. The 4 hour default lacks evidence and research this is an ideal amount and should be changed to a reasonable and feasible outcomes based approach.

Overall the FSWF requires a major review with ongoing discussions with the waste sector to develop a reasonable and feasible set of outcomes.

RECOMMENDATIONS

R1 ASBG Recommends the FSWF:

- Clearly clarifies its role as a guideline document
- Promotes the use fire study
- Lists risk areas to be considered in a fire study

R2 ASBG Recommends the FSWF acknowledges that prescriptive criteria are default values, where most are considered in isolation from other controls, but should only be used as a maximum backstop when no fire study or no other controls are undertaken.

R3 ASBG Recommends the FSWF acknowledges there are considerable differences between recycling sectors and in waste combustible material largely associated with each. This promotes the case-by-case fire study approach rather than the use of default generic criteria.

R4 ASBG Recommends the FSWF carefully reconsider how it will apply to existing sites, potentially developing a risk-based approach developed in consultation with the waste sector.

R5 ASBG Recommends the FSWF clearly specifies when a waste material is considered a combustible waste material or not using scientific measurement approaches and it also consider the large variations in the fire risks of different combustible waste materials.

R6 ASBG Recommends the NSW Government implement improved education, regulation and controls on generators of waste, including households to reduce the risks of contamination by ignition sources of collected waste streams for recycling and disposal.

R7 ASBG Recommends the FSWF remove the mandatory requirement to use the separation distances in section 8.3, referring to them as default distances only to be used when no fire study has been conducted or no other controls have been undertaken.

R8 ASBG Recommends for existing facilities re-write section 7.2 to:

- Remove the retrospective application of all of the mandatory requirements it contains.
- Develop, with stakeholder involvement, a publically available risk assessment process be used to identify existing sites that require a fire study.
- Identify which agencies apart from Fire and Rescue can also apply this risk assessment.
- Be based on a principle of reasonable and feasible fire control methods similar to that used in the compliance of buildings for fire controls.

R9 ASBG Recommends the FSWF recognise that while quarantine areas are desirable from a fire-fighting perspective, they may not be feasible for most existing sites and also for some new urban waste facilities

R10 ASBG Recommends the FSWF remove the default 4 hour firewater capture requirement, replacing with a fire study where fire water capture is to be considered.

R11 ASBG Recommends the FSWF promote the use of a fire study allowing for a range of flexible approaches considered on a case-by-case basis for the management of waste stockpiles. Use of Australian Standards and other methods, which achieve a reasonable level of risk management to that required under WHS Regulation be used in principle.

R12 ASBG Recommends the FSWF omit section 8.2.1 as it is considered too restrictive to the production and processes in the recycling sectors assuming all have compostable or spontaneously combustible waste materials.

R13 ASBG Recommends the FSWF omit section 8.3.3 as it is considered too restrictive, assuming all combustible waste material has the same density and fire risks.

R14 ASBG Recommends the FSWF clarifies the separation distances in s 8.4 are of guidance only where no other control methods are used and that a fire study be preferably used to ascertain appropriate separation distances when considered in combination with other fire control methods.

1 OVERVIEW

The Australian Sustainable Business Group (ASBG) is pleased to comment on Fire and Rescue NSW's draft Fire Safety in Waste Facilities (FSWF).

ASBG agrees there is a need to improve fire standards, but also that the existing standard and requirements need to be better enforced. Too often in the waste sector a criminal element which intentionally evades legal controls, sets poor examples of what can occur. Deliberate waste fires are becoming more common to avoid increasingly more expensive waste disposal and treatment processes. Too often the waste sector is subjected to increasing controls due to the actions of a few deliberate criminal operators. However, this criminal action is a result of rapid and now very high waste management costs, exacerbated by international markets and significant red tape. Environmental protection also plays a strong role as its standards increase the cost of operating recycling activities becomes less viable, due to the wastes from the processes and also the higher quality required by the regulators and the market on the product produced. Criminal avoidance of the law can only be addressed by better policing, not by increasing the controls and conditions on all operators in that sector.

If there is evidence that waste facility fires have increased due to non-criminal issues then some changes to increase oversight and rules are in order. However, a more surgical regulatory approach is preferable over a blunt method. The aim should be to encourage innovative low costs approaches to reduce risk.

FSWF draws on the work undertaken in UK by the Waste Industry Safety and Health Forum – Reducing Fire Risk at Waste Management Sites (KU WHISH). Unfortunately, much of the criteria used in the UK WHISH was adopted in FSWF without consideration of its qualifying information. For example, UK WISH's separation distances are adopted as standard design criteria in FSWF, but this is not the case in UK WHISH. For example, the Standard Separation Distances and Stack Sizes (UK WISH Appendix 1 Section 4) are provided as:

- An option to a fire study
- Only be used where sites have a basic level of fire provision.

Yet FSWF adopts these separation and stack sizes as virtually mandatory requirements, offering little flexibility.

UK WISH offers considerable guidance criteria, well thought through and aimed at assisting fire studies at such waste facilities. ASBG members would prefer the adoption of the UK WISH document over the draft FSWF as it is far more practical, flexible and provides many reasonable and feasible solutions and options. In contrast FSWF is far more prescriptive, in many criteria, such as separation distances and stockpile layout, but vague in the application of FSWF on existing facilities and its guideline, rather than rule status. Overall UK WHISH is a far superior document, but the separation distances provided are inconsistent with standards covering flammable and combustible dangerous goods and as such UK WHISH distances are highly questionable.

2 SCOPE AND APPLICATION

2.1 Scope

To clearly convey the areas captured by any regulatory document requires the scope of its application to be well defined. Vagueness, will simply lead to the regulatory officer, especially in another department making their own mind up on how to interpret the document, which can swing widely. As a consequence, the scope of FSWF requires being clear to minimise miss-interpretation ensuring the regulators and the regulated but understand what the rules are.

This section considers the main areas scoping FSWF and provides advice on how to improve its clarity.

2.1.1 Guideline or Requirement?

There is confusion over the application of the Guidelines as in section 2 it states:

This guideline details Fire and Rescue NSW (FRNSW) requirements for:

Is the intent that FSWF is a guideline or a requirement? ASBG is somewhat confused if the requirements such as presented in sections 7, 8 and 9 can be interpreted as mandatory. FSWF should be a guideline covering the issues to be considered din a fire study with a default set of conditions to be used in the lack of a proper fire study.

Clarification of the use, status of this document, how it is applied and where it is required to achieve a better understanding on how it should be used. FSWF will be used by multiple stakeholders including Councils, EPA, SafeWork NSW and other associated government agencies as well as the waste sector. Most critical is the flexibility in which the FSWF is to be applied. ASBG members report their experience that most NSW government agencies will interpret a confused message as a hard line mandatory requirement. As a consequence, only if the intent of the document is mandatory, unambiguous language must be used to ensure alternatives are available options. Unfortunately this document, while mentioning use of fire studies and their recommendations, does not portray this to be a preferred approach, with the default arrangements used in the absence of such.

NSW's Government's Guidance for Regulators to Implement Outcomes and Risk-based Regulation requires what is stated in its title. As a consequence, prescriptive regulation and policy should be written in terms of outcomes using a risk based approach. Considering the financial impacts of the control measures in FSWF ASBG considers that a Better Regulation Statement is required to support it.

R1 ASBG Recommends the FSWF:

- ***Clearly clarifies its role as a guideline document***
- ***Promotes the use fire study***
- ***Lists risk areas to be considered in a fire study***

2.1.2 Combining the Effectiveness of Control Measures

The scope also outlines a common issue ASBG has with FSWF in it requires a set of combined control; fire safety systems, ignition detection, storage and stockpiling controls etc. Together these combined conrols are an effective methods to best manage fire risk and are used by most Australian Standards dealing with the storage and handling of flammable and combustible material. However, FSWF deals with each major

control method in isolation and appears not to consider the fire risk reduction when they are combined. This is a major issue with FSWF and discussed further in the document.

R2 ASBG Recommends the FSWF acknowledges that prescriptive criteria are default values, where most are considered in isolation from other controls, but should only be used as a maximum backstop when no fire study is undertaken or no other controls are undertaken.

2.1.3 Application – One Size Fits All?

Application of FSWF applies to any waste facility in NSW involved *in the storage, processing, resource recovery and land application of combustible waste material.* This is a one size fits all approach that focuses on the higher fire risk types of waste facilities.

There are large differences in the fire risk between different recycling and waste management operations. Waste facilities should be broken down into it industry sub-groups including:

- Landfills → putrescible and non-putrescible
- Transfer stations
- CRC Recycling → where household hazardous waste is collected and sorted and properly stored
- Paper recycling → Industry specific design requirements should be separate from this document as this sector has a good fire safety records
- Plastic recycling
- IT recycling
- Metal recycling → Ferrous and non ferrous
- Energy from Waste facilities
- Green waste and wood processing
- Food waste processing
- Composting
- MRFs
- Oil recycling
- Hazardous waste treatment and processing → Covered under other Dangerous Goods fire controls including AS 1940 etc.

FSWF discusses the Special hazards associated with waste facilities that store combustible material. Again these special hazards vary considerably to the subset type of waste facility as listed above. There are many reasons why the fire risk has increased at certain waste facilities such as new ignition source contamination (e.g. Li-ion batteries), negatively valued product, arson, avoidance of disposal fees.

Significant variation occurs between waste facility type, so again a one size fits all approach is a very blunt method, which should only be used where no effective fire study has been undertaken.

R3 ASBG Recommends the FSWF acknowledges there are considerable differences between recycling sectors and in waste combustible material largely associated with each. This promotes the case-by-case fire study approach, based on the risks of each subsector, rather than the use of default generic criteria.

2.1.4 Application to Existing Waste Facilities

Application of the FSWF requirements to existing operating waste facilities again requires clarification. In the scope section (a) it discusses *planning, design, assessment and operation of the facility.* This along with other similar vague reference will be interpreted by Councils, EPA and other agencies as need to be applied to existing sites.

ASBG expects like the UK WISH documents that existing facilities may require to undertake a fire study, but they will not be required to uptake all the requirements under the FSWF.

Most existing waste facilities storing combustible materials does not have the land area in which to comply with the prescriptive default requirements of the FSWF. Enforcement will simply close many sites, which should not the intent of the document. Additionally, application to existing sites breaches the common law provision on the presumption against retrospective legislation. Consequently, affected waste facilities should not be subject to the FSWF without appropriate forewarning and reasonable time period to review their fire safety requirements. To do otherwise can be considered a retrospective application. As the FSWF is a policy document, it should not be made retrospective. As a consequence, the FSWF should only apply to proposes sites and then only during the development process. This is also discussed in section 3.1.2 of this submission.

Application of even parts of the FSWF could be challenged as retrospective. So to improve the fire safety at existing sites it would appear that either a new document is required or that a reasonable set of desirable improvements are provided along with a reasonable time frame in which to comply.

As a consequence, a fire study required on an existing site would need to take into consideration the area and location of the site when considering the types of control methods, which can be reasonably installed. Use of the terms reasonably and economically feasible would need to be included into such new policy documentation.

Finally, ASBG member often are subject to new rules being retrospectively applied. While there are legal processes for this, many times these are imposed, usually by other agencies interpreting such documents, without such parliamentary backing. To prevent the misuse of FSWFs being retrospectively applied, it must clearly state it's to be only applied at the planning approval stage of an affected waste facilities. Application to existing facilities should be subject to additional public consultation processes and if required a new policy developed.

R4 ASBG Recommends the FSWF carefully reconsider how it will apply to existing sites, potentially developing a risk-based approach developed in consultation with the waste sector.

2.1.5 What is Combustible Waste Material?

All flammable and combustible liquids Australian Standards for storage and handling of dangerous goods contain a detailed laboratory test method to assess such properties. The list in FSWF is vague and unscientific — '*any solid waste material that can ignite and burn*… and *(e) any other waste material which may pose a fire risk…'*

There is a considerable difference between combustible solid and flammable and combustible liquids under the Australian Dangerous Goods Code 7.6ed. Fire risk of a flammable (solid, liquid or gas) and a combustible liquid is based on its ease of ignition. Flammable and combustible liquids use the flash point test method. Flammable solids uses a laboratory test method outlined in section 2.4.2.2.1 Definitions and properties. The closest Dangerous Good classification class to combustible waste is 4.2 Flammable Solid – Spontaneously combustible, though Class 4.1 could apply. Nevertheless, the combustible waste material referred to in FSWF falls far short of the Dangerous Goods classifications.

Use of Standard HRR and High HRR, may make it simple for fire-fighting issues, but over simplifies the risks of a large variety of combustible waste materials used across the waste sectors. Also it only considers the fire risk during combustion and not the ease of ignition, which is the focus of Dangerous Goods risk management for fire.

R5 ASBG Recommends the FSWF clearly specifies when a waste material is considered a combustible waste material or not using scientific measurement approaches and it also consider the large variations in the fire risks of different combustible waste materials.

2.1.6 Sources of Waste Ignition

The issue then becomes if combustible waste material has become a recent high risk storage issue why recently? Changes to the domestic waste composition and the market forces in the waste sector are the main culprits including:

- Disposal of Li-ion batteries are identified by the waste sector as a major risk as one cell can caused a significant ignition source. Also Li-ion batteries, within goods or alone were recently listed as a dangerous good with UN Nos. 3090, 3091, 3480 or 3481.
- Aerosol cans are commonly disposed of in domestic and commercial waste and recycling streams. Aerosols are Dangerous Goods class 2.1 flammable gas, charged with LPG. Puncturing of cans in waste management equipment releases LPG which can be easily ignited.

Contamination of recycling bins is increasing as the cost of waste disposal increases. As a consequence, many use recycling bins as an alternative waste disposal method. Given there are no penalties applied for the addition of illegal wastes including flammable dangerous goods even asbestos in recycling there is little incentive for generators of waste to properly arrange for the separation and more costly, in time and or money. in contrast the fine for littering of a cigarette butt is $200 in NSW, but at worst contaminating your recycling bin may cause it not be emptied. Even if it caused a fire in the recycling truck there is no environmental fine applying to such high risk behaviour for residents.

Risk associated with these ignition sources is greatest at the unloading of the vehicles at the waste facility. At the tipping point there are many proprietary[1] and in-house developed ignition detection and extinguishing processes available. Punchering of containers in a mixed waste stream (e.g a Li-ion battery would catch on fire) is where the fire risk is the highest due to this ignition source. The further the waste progresses through a waste processing or disposal operation generally the lower the fire risk. This common risk profile is not considered in FSWF, but would be picked up in a fire study for such a site.

Market forces also play a role, as the cost of disposal increases and the demand from both the customers and government agencies require a higher quality and standards, margins are squeezed. Additionally market fluctuations can make a stockpile worth a few million dollars to be a multi-million dollar liability in less than a few days.

For example a criminal waste operator deliberately gain fire approvals, then quickly after stacked the warehouse with highly flammable wastes and deliberated burned the waste[2] to avoid paying the high cost of waste treatment and disposal. There is little that anyone can do to prevent such outcomes if there is criminal intent to by-pass safety systems, controls and government oversight. Using these types of fires as a basis for forming fire standards is a flawed approach as they

R6 ASBG Recommends the NSW Government implement improved education, regulation and controls on generators of waste, including households to reduce the risks of contamination by ignition sources of collected waste streams for recycling and disposal.

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1 See for example Do Not Let the Ignition Source Take the Initiative http://global-recycling.info/archives/824

2 Tottenham Victoria, 30 August 2018 one of the worst industrial fires occurred since the Coode Island fire in 1991

3 COMMENTS ON CHAPTER 7

3.1 Overview

Chapter 7 FSWF deals with the development considerations, largely at the planning level, but also includes existing facilities. This section also calls up the UK WISH document *Reducing fire risk at waste management sites.* However, FSWF document is far less flexible and reasonable, tending to mandate criteria, which is simple and easy to enforce, but very blunt, costly and in many cases is unnecessary to achieve reasonable levels of fire risk and is unfair as it does not apply to most other industry sectors.

As in section 2 of this submission certain sections of the FSWF are considered and commented on with recommendations being made where appropriate.

3.1.1 Separation Distances

7.1.5 The maximum sizes and minimum separations of all stockpiles of combustible waste material are to comply with section 8.3 and be detailed in an operations plan that is prepared for the waste facility (refer to section 8.7). The operations plan should be made a condition of consent by the relevant authority.

ASBG addresses the issues with separation distances in section 4.1.4, but the key issues include:

- While listed by WISH, these are guidelines values and should be only a default value used where no fire study has been undertaken and no other control measures implemented
- Assumes all combustible waste is at least a Class 4.2 Flammable Solid Spontaneously Combustible, which is very conservative
- In consistent with other AS on Dangerous Goods:
  - Does not consider or make provision for fire walls
  - Does not consider or make provision for other control methods
- Use of Standard and High HRR rating is again only a default setting and considered too simple due to large variations in fuel load, fire intensity and temperature of different waste types and ignores ignition risk.

R7 ASBG Recommends the FSWF remove the mandatory requirement to use the separation distances in section 8.3, referring to them as default distances only to be used when no fire study has been conducted or no other controls have been undertaken.

3.1.2 Existing Facilities

7.2.1 The owner or PCBU should undertake an assessment of the design and performance of their existing waste facility against the requirements specified within this guideline and provide to the relevant consent or regulatory authority for determination.

Application to existing sites to the requirements of these guidelines is clearly retrospective and suggests the default provisions are mandatory. Most existing affected waste facilities cannot comply due to lack of land and extremely high costs especially for:

- Separation
- Fire water capture
- Dedicated quarantined spread areas

Recently the recycler SKM in Victoria had its operating licence to accept recyclates, mainly paper and plastics, suspended because it did not meet the Victorian Waste Management Plan (VWMP). The VWMP calls up the Management and Storage of Combustible Recyclable and Waste Materials – Guideline, which is the Victorian equivalent to the NSW FSWF document. While there are fire issues at SKM, the issue here is that already since the October 2018 Guideline document was introduced it has been enforced on an existing facility. There is no doubt other NSW regulators, especially the NSW EPA will enforce FSWF. Consequently, further detailed consideration of how the FSWF document will apply to existing facilities is required. This should be similar to how fire controls are upgraded on older buildings when fire standards for new buildings change. Use of grandfathering, reasonable and practicable control measures should be applied as many existing sites, simply will not have the land area and or be subject to unreasonable capital cost expenses.

Compliance with NSW's Better Regulations conditions requires the application of FSWF be outcome based. Feasible and reasonable upgrades to existing facilities should be the basis for this approach. Expecting all affected waste facilities to be upgraded is inconsistent with a risk-based approach. Here the NSW Government needs to develop a risk assessment process, developed with public consultation, which identifies fire risks of waste facilities based on a clear set of criteria including facility types, combustible waste materials used, process methods, history and existing fire controls.

3.1.3 Orders to Upgrade

7.2.2 If the assessment determines that an upgrade is required to address a deficiency in the design or performance, the relevant authority should impose an appropriate condition (e.g. licensing) or direction (e.g. issue an Order) on the owner.

Such orders may render such sites unviable due to high cost and or insurance rates will either not be able to be obtained or excessively costly. Sites with large stores of wastes will become subject to clean up notices, but may then not be able to afford the waste disposal costs. This can increase the risk of arson. This can increase the risk of becoming an orphan contaminated site. Consequently, EPA, Fire and Rescue and SafeWork NSW need to coordinate activities to avoid such outcomes if orders are issued.

R8 ASBG Recommends for existing facilities re-write section 7.2 to:

- ***Remove the retrospective application of all of the mandatory requirements it contains.***
- ***Develop, with stakeholder involvement, a publically available risk assessment process be used to identify existing sites that require a fire study.***
- ***Identify which agencies apart from Fire and Rescue can also apply this risk assessment.***
- ***Be based on a principle of reasonable and feasible fire control methods similar to that used in the compliance of buildings for fire controls.***

3.1.4 Emergency Vehicle Access

7.3.3 Enhanced emergency vehicle access is to be provided for the special hazards of the facility, including a perimeter ring road around buildings and access roads between external storage stockpiles.

This may not be possible for existing sites. This is a prescriptive requirement and should be put in a performance based requirement which can consider a range of approaches.

7.3.4 The facility should cater for a large emergency service response (e.g. multiple alarm and multiple agency) if the potential hazard may result in a large emergency.
***Note:** This includes from any pollution event requiring a protracted hazardous materials response (e.g. contain and remove fire water run-off).*

The scale of the emergency can be determined by an appropriate fire study. The outcomes of this study can determine the likely needed response scale and design accordingly.

3.1.5 Quarantine Area

7.3.5 A dedicated external quarantine area is to be provided to extinguish the largest sized internal stockpile of combustible waste material stored within any building.
***Note:** A very large surface area will be required to receive, breakdown and extinguish a large stockpile.*

To make a dedicated very large surface area for such indoor sites is only achievable where there is ample land on which to make available. This may apply to landfill sites which have recycling facilities at the same site, but not achievable at many other recycling sites.

Most transfer stations, Material Recycling Facilities (MRF) and other recycling facilities operate in-doors in urban areas. In many cases the building takes up the entire block of land. This provision will not be applied to such existing sites.

In addition, new transfer stations and MRFs in particular for traffic and energy efficiency reasons need to be located in urban areas, which are limited in land availability.

R9 ASBG Recommends the FSWF recognise that while quarantine areas are desirable from a fire-fighting perspective, they may not be feasible for most existing sites and also for some new urban waste facilities.

3.1.6 Smoke Control

7.7.3 Natural low-level venting, either permanent or readily openable, is to be provided on not less than two opposing walls so that de-stratified (i.e. cooled) obscuring smoke can be vented and minimum visibility be maintained

This is likely to conflict with EPA requirements to control odour and dust from indoor waste facilities. Making a ventilation system which complied with minimising the emission of odour, noise and dust, but permitting smoke ventilation during a fire appears contrary in operation. While engineering solutions are available these will be of high cost. As such the smoke control requirements need to be assessed and balanced with environmental air emissions issues using the principle of reasonable and feasible.

3.1.7 Fire detection and alarm systems

Use of appropriate fire and alarm detection systems requires that a fire study and installation of its recommendations be used. Again there is much confusion within FSWF as to if a fire study plus the mandatory control measures are required together or should be separate actions. Give the highly conservative nature of the prescriptive control measures these should not be mandatory, but as a default alternative to the lack of a proper fire study.

3.1.8 Fire water run-off containment

7.8.1 The waste facility is to have effective and automatic means of containing fire water run-off, with primary containment having a net capacity not less than the total hydraulic discharge of the worst-case scenario.

***Note:** The total hydraulic discharge is the discharge from both the fire hydrant system and automatic fire sprinkler system for a duration of four hours. Failure to contain fire water run-off can result in pollution of the environment and require a protracted hazardous materials response.*

This is again a prescriptive requirement and one which has been tried in the past with poor uptake. After the 1990s fire at Diversey Chemicals in Seven Hills a draft requirement for fire water retention at all dangerous goods storage sites was recommended, but it's application was considered too costly and difficult for many sites to manage and was poorly enforced.

Making a large storage area to capture four hours of fire water creates its own issues:

- To be effective it must remain empty, but will fill with stormwater and requires management of such contaminated waters formed from normal operations.
- Such stormwater requires careful testing and potentially treating before it can be released off site or to sewer.
- EPA's approach is to require placing roofing over the catchment area, but this can lead to fire-fighting difficulties as then the areas will become indoors.

Need for worst case scenario assumes all waste facilities have the same fire risk. AS1940 requires capture of 20 min of fire water, not 4 hours, which is used for steel/structural cooling. This is added to the maximum bund capacity, which for flammable liquid dangerous goods, not solids. Australian standards also list multiple methods for secondary containment. With risk assessment work this can include the use of pits, pumps and other storage systems some distance from the pit. This is considered acceptable if the pit, pump and piping are suitably insulated/protected from fire.

In the UK WISH it recommends[3] the use of a controlled burn as part of the fire-fighting strategy to minimise firewater runoff and fire fighter safety. Fire water is also another aspect to be considered in a fire study of the site, with no mandatory minimum storage volumes cited.

Section 7.8 is overly prescriptive and should be re-written as outcome based or used only as a default example where no fire safety assessment has been performed. It appears as an environmental *ad hoc* addition with little consideration of how such capture volumes with be achieved. Also to minimise the capture of stormwater in such systems adds to the complexity and cost. NSW EPA's common approach to minimising bund waters is to roof the area. In practice this is not reasonable nor feasible, as well being potentially contrary to quarantine areas. Roofing also add complexities to the ability to fight fires, with roofing getting in the way of fire combat methods. Additionally, it will be very costly be applied to most existing sites due to lack of land to install such a large piece of infrastructure, such as underground capture tanks.

R10 ASBG Recommends the FSWF remove the default 4 hour firewater capture requirement, replacing with a fire study where fire water capture is considered.

The UK WISH document calls for consideration of the capture of fire water, but does not make any calls for 4 hours at worst case scenario. A similar approach should be adopted under the FSWF.

[3] UK WISH s 1.7.6 and Chapter 2.9

4 CHAPTER 8 ISSUES FACILITY OPERATION AND MANAGEMENT

There is an assumption that fire risk remains constant throughout a recycling or waste treatment process flow path. This is not the case. A major reason for the common occurrence of fires at waste facilities is because the waste collection process has little control over the contaminant levels in the waste stream. There is virtually no disincentive for a resident to place aerosol cans, containers of flammable liquid (e.g. nail polish remover, hair spray, paint thinners, etc). and ignition sources, such as hydrogen peroxide 30% solution in hair dye, Li-ion and other battery types and is also discussed in section 2.1.6 of this submission.

Placing all the risk management on the receival facility is poor practice, costly and unfair. A lot more could be done to regulate and police up stream contamination to greatly minimise fire and other risks in the recycling sector. Again an improved outcome for all would be achieved if the Guidance for Regulators to Implement Outcomes and Risk-based Regulation was used as a basis for the drafting of the FSWF.

4.1 Stockpiles and Separation

FSWF has been prepared using the most conservative controls assuming the worst case scenario conditions especially on stockpile management and separation distances. This section deals with select sections in FSWF and provides recommendations where appropriate.

4.1.1 Stockpile movement

8.1.2 The storage method and arrangement of stockpiles is to minimises the likelihood of fire spread and provide separation which permits access for fire fighting intervention.

***Note:** Fire separating masonry walls (e.g. bunkers) and automatic fire sprinkler systems may allow larger stockpile sizes and/or shorter separation distances.*

This section should be re-written allowing more flexibly and based on outcomes using the risk-based approach as per the Guidance for Regulators to Implement Outcomes and Risk-based Regulation. While Australian Standards on Dangerous Goods are referred to they are considered generic control methods, which in many cases cannot be complied with due to site limitations or other reasons including costs and practicability. To permit flexibility SafeWork NSW and its Hazardous Chemicals legislation permit variations to the AS DG requirements, provided they provide a similar or better level of risk management.

Prior to 2005, WorkCover NSW required compliance with AS DGs, but were swamped with 5,000 variation applications a year due to site constraints. This old prescriptive approach was replaced with a performance based approach where AS DG are a reference guideline document, but the site occupier has the ability to undertake their own risk assessments and install alternative control systems to achieve a *similar or better level of risk management*. Hence stockpile design and layout for combustible waste materials needs to be assessed on a case-by-case basis with the use of a default model if this is not undertaken.

While the use of fire walls is a common method to permit closer storages of DGs, there are other methods. For example the use of thermal cameras, increased fire suppression systems in higher risk areas etc. However, FSWF does not consider these approaches in its requirements, breaking the flexible approach used by SafeWork NSW.

In fact if the requirements for storage and separation were used for other combustible materials, there would be considerable push back and disquiet. Coal, plastic, wood, furniture, many hardware types, even many Dangerous Goods would be far from compliant under the requirements in FSWF. Overall FSWF represents a major shift in fire control methods, which can set an extremely costly and largely unnecessary

set of tighter controls across most waste industry sectors. Such a scenario could also undermine Australian Standards covering flammable and combustible substances and drive up insurance premiums and the minimum required controls on a large range of industry types.

R11 ASBG Recommends the FSWF promote the use of a fire study allowing for a range of flexible approaches assessed and considered on a case-by-case basis for the management of waste stockpiles. Use of Australian Standards and other standards and methods which achieve a reasonable level of risk management to that required under WHS Regulation be used in principle.

4.1.2 Spontaneously Combustible Wastes

8.2.1 Stockpiles of combustible waste material are to be rotated to dissipate any generated heat and minimise risk of auto-ignition. The maximum duration of idle storage should not exceed six months, unless determined otherwise through risk assessment.

***Note:** Combustible waste material may oxidize and generate heat, which when confined, can cause a material to auto-ignite and combust.*

This section reflects what appears as an overall definition of combustible waste materials: It is erroneous to assume all combustible wastes act the same. While two levels are used (Standards and High HRR) this is considered too simply as there are vast differences in waste combustible material. FSWF uses the worst case scenario combustible waste and applies it across all sites. This is not a risk based approach. Also the worst case scenario seems to treat combustible wastes as if they have the same or similar properties to *Class 4.2 Flammable Solids – Spontaneously Combustible.* This is not the case, as apart from some Hazardous Waste with Dangerous Goods classifications, all other combustible wastes are not classed as DG 4.2.

Placing a maximum storage time will interfere with many recycling processes as the market they supply will require the large volumes very quickly. Requiring a 6 month maximum assumes a smooth material flow through the facilities, which are the exception and not normal market operation.

Section 8.2 overall needs to be applied only to certain types of waste materials which can be subject to spontaneous combustion outcomes, such as composting and paper. General Solid Waste, plastics, textiles, liquids etc do not require such controls.

Requiring the turning over of a stockpile of combustible waste material seems to assume all combustible waste materials must be treated as if it were compost. This is clearly not the case and overly simplifies the issue, assuming the worst case scenario applies for all combustible waste type. This is poor guidance, costly, blunt and from a fire risk perspective unnecessary in many cases. Again the individual fire risks of each type of combustible waste, of which there are many, should be considered based on their properties.

Temperature controls should only apply to combustible wastes that may be subject to self heating and spontaneous combustion. There are many standards and protocols for managing compost and similar waste types. These should be referred to and considered when undertaking a fire risk study or generic standards that apply to that type of process. Such controls should be considered on either a process-by-process basis. Process-by-process basis can, for example, capture standard green waste composting. But the site operator should have the choice of either compliance with this process standard or undertaking a case-by-case risk assessment by a fire risk or equivalent professional.

R12 ASBG Recommends the FSWF omit section 8.2.1 as it is considered too restrictive to the production and processes in the recycling sectors assuming all have compostable or spontaneously combustible waste materials.

4.1.3 Stockpile Size

8.3.3 The maximum internal stockpile size is to be limited to 450 m^3

Again this section assumes that all combustible waste are the same and at the worst case scenario. And again it sets a limit based on virtually no other control methods other than those in section 8. 450 m^3 is also extremely limiting when the density of waste materials are considered, which represents a stockpile of about 20 x 17 x 4 m, as discussed in Table 2 and preceding text.

R13 ASBG Recommends the FSWF omit section 8.3.3 as it is considered too restrictive, assuming all combustible waste material has the same density and fire risks.

4.1.4 Minimum separation distance

8.4.1 Minimum separation distances are to be maintained between external stockpiles, depending on pile method and HRR, as given in Table 1 below:
Note: *If two separation distances apply between different stockpiles (i.e. due to different lengths of stockpiles), the greatest distance is to be used.*

Table 1 – Extract table 8.4.1 from FSWF *Minimum separation between external stockpiles*

Length of Stockpile (m)	Standard HRR		High HRR	
	Loose Pile	**Baled**	**Loose Pile**	**Baled**
10	7	13	15	20
15	9	15	20	24
20	10	17	21	27
30	11	20	26	33
50	13	23	31	40

ASBG compared FSWF separation distances with similar Australian Standards for flammable and combustible liquids (AS 1940:2017) and Flammable Solids AZ/NZS 5025: 2012. Firstly the stockpile lengths were converted to tonnages as shown in Table 2.

The following assumptions were made:

- General household waste has a density of 500 kg/m^3
- Plastic waste at its highest density is 156 kg/m^3 which is similar to medium density paper[4]
- A 20 m wide stockpile was used to provide the maximum tonnages permitted, but stockpiles of 10m wide have the same separation distances under FSWF
- The side bevels were considered

As a result the following table converts the stockpiles into tonnes.

[4] Victorian EPA Waste Material Density Data

Table 2: Tonnes Per Stockpile Length							
Length	Height	Width	Block m^3	Bevel m^3	Total m^3	Total tonnes @ 500 kg/m^3	Total tonnes @ 156 kg/m^3
10	4	20	800	240	560	280	87
15	4	20	1200	280	920	460	144
20	4	20	1600	320	1280	640	200
30	4	20	2400	400	2000	1000	312
50	4	20	4000	560	3440	1720	537

Next a comparison table was used to compare the separation distances to those in the cited Australian Standards. Note AS permits splitting the differences between whole meters of separation to determine distances for in between volumes. AS 1940 uses kL and AS / NZS 5026 uses tonnes in table 2. The spilt differences were also applied to the 8.1 table to obtain comparable levels. Also AS/NZS 5026 requires that quantitative risk assessments be undertaken for quantities exceeding 200 tonnes. Here ASBG extended the separation distances according to a formula based on the provided distances and quantities for DG 4.2.

Table 3: Comparison of AS 1940, AS/NZS 5026 and Fire Safety in Waste Facilities s8.1 Separation distances in meters								
	AS 5026	**AS 1940**			**Fire Safety in Waste Facilities s8.1**			
Quantity tonne/kL	**4.2 PG III**	**PGII**	**C1**	**C2**	**LP S HRR**	**BP S HRR**	**LP H HRR**	**BP H HRR**
120	9	17	7.2^	6.1^	7	**13**	**20**	**24**
200	10	21	9	7	9	**15**	**24**	**31**
440	14.8+	28	12	9.3^	11	**20**	**30**	**38**
600	16.6+	33	14	10.8^	12^	**21.5**^	not acceptable*	not acceptable
760	17.6+	36	15.1^	11.9^	13	**23**	not acceptable	not acceptable

+ Extrapolated from prior separation distances

^ Used split differences to obtain the separation distances, generally rounded up

* Not acceptable is because the maximum stockpile size is 20 x50m and due to the low density of the material is unlikely to exceed 550 tonnes

The minimum separation distances are generally far more conservative than AS 1940: 2017 for C1 combustible liquids C1 and C2s. Also except for Standard HRR loose pile the distances are greater than under AS 5026: 2012 for Dangerous Goods Class 4.2 PG III flammable solids spontaneously combustible.

So why are these separation distances so much greater for combustible waste than for Dangerous Goods Classes 4.2, some Class 3s and C1 and C2 combustible liquids? The source of these separation distances is from the UK WISH document calculated these separation distances using radiative fire transfer models of stockpiles of combustible waste. They make it clear that these only apply to *sites which ONLY have a basic level of fire protection*[5]. This is why the Australian Standard's separation distances are much smaller, for more flammable goods, because there are other fire control systems also assumed to be in place. As a consequence, the separation distances should not be considered in isolation with other fire risk control systems. In fact most the FSWF document's prescriptive criteria are a list of individual control systems considered in isolation and not how they work as a combined set to reduce fire risk. Having one of the prescriptive systems such as separation, fire deluge system etc is enough by its self to manage the

[5] See Appendix 1, S4.1 WISH – Reducing Fire Risk at Waste Management Sites UK 2017

fire risk. Consider that installation of a simple radiation wall, which can be a simple sheet steel, would easily block radiation transition. Also increasing the level moisture in stockpiles can significantly decrease ignition risk. Control methods such as these are not considered in the FSWF.

Overall, the FSWF is oversimplified when it comes to separation distances is poorly reflects its reference material. In contrast, the UK WISH document is a far better document, but it still contains many flaws in comparison to other British and Australian Standards covering the storage and handling of flammable and combustible dangerous goods. These standards contain a rich range of alternative and additional control methods which are not considered in the UK WISH document, making it easy to misinterpret and misuse.

R14 ASBG Recommends the FSWF clarifies the separation distances in s 8.4 are of guidance only where no other control methods are used and that a fire study be preferably used to ascertain appropriate separation distances when considered in combination with other fire control methods.

5 CONCLUSION

Ideally the FSWF with a clear scope of what types of waste facilities, types of combustible waste, threshold volumes it will apply to. Also clarified is how the FSWF is to be used by other regulators. Clear identification by the use of Councils in planning applications will be provided. Also clear are the FSWF contains two options:

- Use default criteria, or
- Use a fire study undertaken by an expert

Given the blunt nature of the default criteria, most affected waste sites will be advised in the FSWF to use a consultant to undertake a fire study for new sites.

Existing affected waste sites will be considered on a risk based approach. This risk based approach will be developed with consultation with the waste sector and provide a reasonable method for the assessment of existing waste facilities based on their risk profile. If a site triggers further risk assessment a number of options will be provided including use of a consultant to undertake a fire study. This fire study will focus on reasonable and feasible fire controls. Existing facilities will not be required to achieve the same risk management as for new facilities, but strive to improve fire control to a reasonable and practical level.

The UK WHISH document will also be used as a major supporting document to improve the flexibility and range of issues which are to be covered in a fire study. There is a caveat with UK WISH's separation distances as they are to be used only when there are only simple fire controls in place and are very conservative and inconsistent with Australian, British and most other design standards dealing with flammable and combustible material storage.

1. Community recycling centres

Community Recycling Centres (CRCs) allow householders in NSW to dispose of materials that can be hazardous to the environment or to public health by temporarily storing these materials safely until they can be recycled or disposed of appropriately. The materials targeted by CRC are:

- Paint (water based, oil based, and other paint types);
- Domestic gas cylinders (typically LPG, but also other types);
- Batteries (including lead acid batteries and other types of batteries used by households);
- Conventional tube and compact fluorescent lamps, and other types;
- Smoke detectors; and
- Used oil.

Very small quantities of other dangerous goods – aerosols, acids, alkalis, flammable liquids, oxidising agents, and toxic materials are sometimes dropped-off by householders, and provision is also made for the safe storage and handling of these materials.

CRCs are located variously at landfill sites, waste transfer stations, recycling centres, council depots, and in a few instances, in a standalone building. Sometimes they are integrated into the structure of their host facility, and sometimes they are in a standalone structure, some distance from other structures.

Because CRCs collect and temporarily store small quantities of materials that are hazardous materials or dangerous goods, they are designed and operated to meet the requirements of the WHS Act and Regulation, SafeWork NSW guidelines, and relevant Australian Standards in relation to these materials, which include provisions for emergency planning and response (fire amongst others). The requirements for design and operation of CRCs are outlined in a CRC Handbook, which is now in its second edition. CRCs must undertake risk assessments, prepare operations plans and safe work procedures, and provide equipment and procedures for emergency response, including fires and spills, appropriate to the hazards.

Through their design, operation, and the limiting of storage levels by frequent collection – facilitated by a comprehensive online inventory system *dropoffwaste* – CRCs typically store less than 5-10 m^3 of materials. Much of this is water-based paint, which is not a dangerous good or hazardous substance. The materials – limited to retail packagings of less than 20L in size - are stored in flame proof metal transportable receptacles, or purpose built dangerous goods storage cabinets.

2. Guidelines for fire safety in waste facilities

The *NSW Guidelines for fire safety in waste facilities* (or the guidelines) are intended to minimise the likelihood and severity of fires, assist safe and efficient fire brigade intervention, and assist in protecting people and the environment from fires. The guidelines are intended for use by consent authorities, and organisations involved in the design and development control, and management and operation of any applicable waste facility.

The definition of waste facility is very broad: any waste facility within NSW involved in the storage, processing, resource recovery and land application of combustible waste material. Examples given include recycling centres, resource recovery centres, materials recovery facilities, and energy recovery facilities. As such the guidelines would apply to Community Recycling Centres. However, it is not clear if the guideline applies to landfills.

The guidelines require waste facilities to be designed and operated to: manage the special risks associated with combustible waste materials including their fire properties and ignition potential; to limit stockpile sizes and ensure adequate separation distances; ensure adequate access for firefighting intervention, install adequate fire hydrant systems, including water capacity; provide automatic fire suppression systems where appropriate; provide an adequate smoke hazard management system; and provide the means to contain fire water run-off. They outline considerations for development control, facility operation and management, and workplace fire safety.

2.1. Impact on CRCs

Table 1 summarises the requirements of the guidelines and their potential impact on CRCs. Many of these requirements are already met by CRCs as they comply with requirements for hazardous materials and dangerous goods. The requirements for stockpiles do not apply. However, there are several requirements that would apply, but are considered inappropriate for CRCs, namely: for fire hydrant systems, automatic fire suppression systems, automated fire run-off containment, and emergency services information packages. These requirements, although appropriate for many waste facilities where significant quantities of combustible waste materials are stored or processed, are not appropriate for CRCs because of the small quantities of materials stored, and the risk controls already in place.

Table 1: Impact of guideline requirements on CRCs

Guideline Requirements	Impact on CRCs
Design for special hazards	CRCs already do this to meet DG & HS requirements
Firefighting intervention access	CRCs already do this to meet DG & HS requirements
Fire hydrant system	The guideline requires waste facilities to have a hydrant system appropriate to the risks and hazards for the facility. This is not feasible or appropriate for many CRCs, particularly those in small regional or remote communities.
Automatic fire sprinkler systems	The guideline requires waste facilities in buildings of greater than 1,000 sqm in area, or storing more than 200 m^3 of combustible waste materials to install an automatic sprinkler system. This is not feasible or appropriate for CRCs.
Fire detection and alarm systems	CRCs already do this to meet DG & HS requirements
Smoke hazard management	CRCs already do this to meet DG & HS requirements, providing adequate natural ventilation to prevent the build-up of explosive atmospheres.
Fire water run-off containment	The guideline requires waste facilities to have an effective and automatic means of containing fire water run-off. This is not appropriate or feasible for most CRCs.
Stockpile management	CRCs store materials in flame proof metal receptacles or cabinets, and quantities are limited to < 5-10 m3. The requirements of the guideline regarding this are not applicable to CRCs.
Operations planning	CRCs already do this to meet DG & HS requirements
Fire risk assessment and mitigation	CRCs already do this to meet DG & HS requirements
Emergency plan	CRCs already do this to meet DG & HS requirements
Emergency services information package	The guideline requires waste facilities to prepare an emergency services information package (ESIP). This is not appropriate for most CRCs, where placards, an evacuation plan, safety data sheets and materials register are provided and adequate.
Fire safety statements	CRCs already do this to meet DG & HS requirements

2.1.1. Fire hydrant systems

Where CRCs are integrated in a waste transfer station or recycle centre where a wide range of materials other than CRC target materials are accepted and stored, fire hydrant systems are usually provided. However, where a CRC is located at a small regional or rural landfill, fire hydrant systems are often not appropriate or available. The guideline should only require fire hydrant systems be provided where a risk assessment indicates they are appropriate.

2.1.2. Automatic fire sprinkler systems

The guideline requires buildings with a floor area of greater than 1,000 m^2 or storing more than 200 m^3 of combustible waste material, to install an automatic fire sprinkler system. **Table 2** provides a sample of CRCs, where they are located, and the approximate floor area of the structure in which they are located. Whilst CRC drop-off and storage areas typically take up less than 500 square metres, they can be in structures of considerably larger floor area. Very few of these structures would contain sufficient combustible waste materials to warrant an automatic fire sprinkler system. The guideline should only require an automatic fire sprinkler system based on the quantities of combustible waste materials stored, not floor area.

Table 2: Impact of guideline requirements on CRCs

CRC	Location	Structure Type	Structure Floor Area
Albury	Resource Recovery Centre	1/3 drive through open two sides, 1/3 storage shed, 1/3 second hand shop	4,305
Kiama	Waste Transfer Station	Enclosed shed	350
Lismore	Resource Recovery Centre	Roof only	2,720
Liverpool	Council depot	Enclosed shed	300
Northern Sydney	Standalone	Commercial unit building	864
Port Macquarie	Waste Transfer Station	Roof only	2,944
Port Stephens	Waste Transfer Station	CRC is small awning attached to side of WTS structure	1,080
Randwick	Recycling Centre	Shed open one side	300
Singleton	Landfill	Shed open two sides	444
Thornleigh	Standalone	Building	1,350
Wingecarribee	Resource Recovery Centre	Enclosed shed	944

2.1.3. Fire water run-off

Much like fire hydrant systems, where CRCs are integrated in a waste transfer station or recycle centre, fire hydrant systems are usually provided, and a fire water run-off system should be provided. However, where a CRC is located at a small regional or rural landfill, an automatic fire water run-off system is often not appropriate or feasible. The guideline should only require automated fire water run-off systems be provided where a risk assessment indicates they are appropriate.

2.1.4. Emergency services information packages

FRNSW's *Guideline for emergency services information packages and tactical fire plans* applies to any premises that contains a fire control centre (FCC) or fire control room (FCR); contains a facility emergency control centre (FECC); is a major hazard facility (MHF); or is an explosives site. An ESIP is also required where it has been determined as applicable by a consent or regulatory authority. However, CRCs and the facilities in which they are located generally do not have an FCC, FCR or FECC, and are not MHFs or explosives sites. In some circumstances, the nature and quantity of the material stored at a facility in which a CRC is located may be such that an ESIP would be warranted, but this is rare. The guideline should only require emergency services information packages be provided where a risk assessment indicates they are appropriate.

2.2. Application of the guidelines

2.2.1. General application

The UK guidance document *Waste 28 Reducing fire risk at waste management sites* referred to by the guidelines specifically excludes: landfill sites; composting sites; hazardous / special waste treatment and transfer facilities; waste to energy plants; and sites falling under the control of Major Accidents Hazards Regulations. It also excludes sites with less than 50 m^3 of combustible waste material stored, but could apply to specific sites below that level if they pose significant risks to human health or environment in a fire. It would be more appropriate if the *NSW Guidelines for fire safety in waste facilities* were limited in a similar way. The application of the guideline should be focused on specific gaps in existing legislation, guidelines or standards. Facilities collecting and storing dangerous goods and hazardous substances, such as CRCs, that are already subject to existing legislation, guidelines and standards applicable to these materials, should be excluded from the guidelines.

2.2.2. Application to CRCs

As CRCs are designed and operated to meet the meet the requirements of the WHS Act and Regulation, SafeWork NSW guidelines, and relevant Australian Standards in relation to dangerous goods and hazardous substances, which have provisions for emergency planning and response including fire, and store relatively small quantities of combustible waste materials, they should be specifically excluded from the guidelines, unless they are integrated into a larger waste facility structure.

3. References

Fire and Rescue NSW, Fire safety guideline – Emergency service information package and tactical fire plans, 2017, Greenacre NSW, Australia

Fire and Rescue NSW, Fire safety guideline – Fire safety in waste facilities, 2018, Greenacre NSW, Australia

United Kingdom Health and Safety Executive, Waste 28 – Reducing fire risk at waste management sites, Waste Industry Safety and Health Forum, 2017, United Kingdom

LOCAL GOVERNMENT NSW

Draft Submission on the Fire safety guideline – *Fire safety in waste facilities*

February 2019

LOCAL GOVERNMENT NSW

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Opening

Local Government NSW (LGNSW) is the peak body for local government in NSW, representing general purpose councils and related entities. LGNSW facilitates the development of an effective community-based system of local government in the State.

LGNSW welcomes the opportunity to make comment on Fire and Rescue NSW's (FRNSW) *Fire Safety Guideline – Fire safety in waste facilities* (the guideline) that provides guidance on fire safety in waste facilities including fire safety systems and processes which facilitate firefighting intervention, protecting fire safety and the environment from risks of fire.

Councils, particularly in regional NSW, operate a range of waste facilities such as community recycling facilities, landfills, transfer stations and drop off centres for e-waste, recycling and bulky household goods. Councils are also the consent authority for certain types of waste facilities.

This is a draft submission awaiting endorsement by LGNSW's Board. Any amendments will be forwarded in due course.

Background

The guideline once finalised applies to any waste facility within NSW involved in storage, processing, resource recovery and land application of combustible waste material. It is intended to be used by the operator, regulatory authority, development proponent, planning/environmental consultant, consent or certifying authority which is responsible for the management, assessment, consultation or determination of any applicable waste facility.

Historically FRNSW has attended numerous fires at waste facilities. These fires are often large and have a detrimental impact on firefighting intervention, the environment, local community and the waste industry itself. The potential fire size correlates with the nature of the combustible waste material being processed, stockpile arrangements, on-site fire safety systems and emergency procedures specific to each facility.

A 2016 UTS study for the Commonwealth Department of the Environment into waste fires in Australia found that for NSW the major causes of waste fires were unknown, with the next biggest cause being arson, followed by spontaneous combustion and then the dumping of hot coal/ash.

Response

The level of stakeholder engagement that facilitated the development of the draft guideline has not been outlined by FRNSW. Regardless of this, the draft guideline would benefit from being piloted both by consent or certifying authorities and a range of waste facilities. This would test the practicalities of implementation at waste facilities and determine the capacity and potential associated training requirements for consent or certifying authorities' staff using the guideline.

There is little integration or interface between this draft guideline and existing licence conditions on fire safety such as those found in Emergency Management Plans, Work Health and Safety Plans and Pollution Incident Response Management Plans, or the fire safety requirements of the National Construction Code. How and when this guideline applies given other current legislated fire safety conditions should be considered and clearly documented.

Any duplication should be minimised and unnecessary red tape removed when the guideline addresses an existing requirement for fire safety in waste facilities.

It is recommended that the draft guideline be piloted to:

- *test the practicalities of implementation with waste facilities and consent or certifying authorities; and*
- *determine the capability and potential associated training requirements for consent or certifying authorities' staff to enable them to determine if the guideline has been appropriately applied at facilities.*
- *test the interface/integration/overlap between these guidelines and other fire safety conditions required by consent or certifying authorities under legislation to reduce duplication and unnecessary red tape.*

LGNSW recognises that fire preventative measures are needed at waste facilities. However, the current draft guideline applies to any waste facility in NSW regardless of the volume and type of combustible waste material that is stored, processed, recovered or land applied at the facility. The financial impact of implementing these guidelines in existing licensed small low risk facilities is likely to be significant and is often impractical due to site constraints. Clearer thresholds should be considered as to when this guideline would apply. The guideline would benefit from further consultation and review to ensure it is reasonable and feasible for all scales of waste facilities.

It is recommended that consideration be given to applying the guideline to a minimum volume of combustible material stored, taking into account the variation in fire risk of different waste materials, unless they pose significant risks to human health or environment in a fire, similar to the UK guidance document (Waste 28).
(https://wishforum.org.uk/wp-content/uploads/2017/05/WASTE-28.pdf)

Where facilities have adequate existing guidance this guideline should not apply. For example, councils run over 100 Community Recycling Centres (CRCs) across NSW funded by EPA where only small volumes of combustible waste materials are received, with many stored in small quantities in flame proof metal containers.

The CRCs collect and temporarily store small quantities of materials that are hazardous materials and dangerous goods and are designed and operated to meet the requirements of the WHS Act and Regulation, SafeWork NSW guidelines, and relevant Australian Standards in relation to these materials, which include provisions for emergency planning and response (fire amongst others). They are also required to meet the legislated requirements in their development and operation of the EP&A Act and National Construction Code and POEO Act.

These centres often have a large floor area to allow vehicles to drop off materials yet store small volumes of combustible waste material. If automatic fire sprinkler systems as required under the guideline were enforced, the centres would need additional funding from EPA to comply.

It is recommended that the guideline not apply to existing facilities where a framework for fire safety guidance is already in place that is overseen by a consent or certifying authority, for example EPA funded Community Recycling Centres.

Section 7.2.1 of the guideline requires the owner or PCBU (person conducting a business or undertaking) to provide an assessment of the design and performance of their existing waste facility against the guideline requirements and provide it to the relevant consent or regulatory authority for determination. This is considered unreasonable where there are already other regulatory controls on fire safety in place. It is also unclear if the consent or regulatory authority will have the knowledge and skills to undertake this determination.

It is recommended that Section 7.2.1 apply to existing facilities that have no other fire safety regulatory controls in place.

A holistic outcome-based framework should be considered by FSNSW that provides flexibility to allow operators to tailor fire safety systems to their own circumstances. Some existing waste facilities are not likely to be able to conform to these guidelines due to site constraints. It is important that tailored fire safety systems are viewed as part of doing business and are not viewed as a cost barrier to new market entries. A two-stream framework could be considered:

- A fire risk assessment and strategy/plan approach that considers the individual nature of each waste facility and its combustible waste that guides any fire safety conditions applied by consent authorities.
- Application of this guideline on rogue operators or new facilities that do not want to undertake the assessment/plan approach

A system of training, tools and resources as well as certification (and accreditation) should be considered to complement this two stream framework.

Given the detrimental impact waste facility fires have on the environment, community and the waste industry itself, until such a framework is in place, a mechanism to identify high fire risk waste facilities for immediate action is needed.

It is recommended that a flexible outcome-based approach that is measurable be considered, rather than prescriptive guidance, to allow operators to tailor fire safety systems to their own circumstances.

It is recommended that in the short term FRNSW work with consent and certifying authorities as well as the waste industry to identify high risk waste facilities for immediate fire safety preventative measures.

The role of the owner vs the PCBU is not distinguished and could lead to confusion given the owner is responsible for annual fire safety checks and plans.

It is recommended that the role of owner vs PCBU is clarified.

Conclusion

LGNSW welcomes FRNSW's commitment to reducing the number of waste fires in NSW as these fires pose a serious risk to people, the environment and the economy. Whilst the cost of prevention is less expensive than the cost of fighting waste fires and clean-up, it should be recognised that these guidelines are prescriptive and their application is likely to have significant cost of business implications for waste facilities.

A strategy or plan for reducing fires in NSW waste facilities based on a fire risk approach, in consultation with the waste and resource recovery sector and consent and certifying authorities, should be considered, with this guideline but one component. The outcome should

be an effective, reasonable and feasible framework for reducing the incidence of fires in existing and future waste facilities.

LGNSW recommends:

- The draft guideline be piloted to:
    - test the practicalities of implementation with waste facilities and consent or certifying authorities;
    - determine the capability and potential associated training requirements for consent or certifying authorities' staff to enable them to determine if the guideline has been appropriately applied at facilities; and
    - test the interface/integration/overlap between these guidelines and other fire safety conditions required by consent or certifying authorities under legislation to reduce duplication and unnecessary red tape.

- That consideration be given to applying the guideline to a minimum volume of combustible material stored, taking into account the variation in fire risk of different waste materials, unless they pose significant risks to human health or environment in a fire, similar to the *UK guidance document (Waste 28)*. *(https://wishforum.org.uk/wp-content/uploads/2017/05/WASTE-28.pdf)*

- The guideline not apply to existing facilities where a framework for fire safety guidance is already in place that is overseen by a consent or certifying authority, for example EPA funded Community Recycling Centres.
- That Section 7.2.1 apply to existing facilities that have no other fire safety regulatory controls in place.
- That a flexible outcome-based approach that is measurable be considered, rather than prescriptive guidance, to allow operators to tailor fire safety systems to their own circumstances.
- That in the short term FRNSW work with consent and certifying authorities as well as the waste industry to identify high risk waste facilities for immediate fire safety preventative measures.
- That the role of owner vs PCBU is clarified.

For further information, please contact Liz Quinlan, Senior Policy Officer – Waste, on Liz.Quinlan@lgnsw.org.au or 02 9242 4095.

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Monday, February 25, 2019

Mr. Paul Baxter
Commissioner Fire+ Rescue NSW
1 Amarina Avenue
GREENACRE NSW 2190
Via Email – **consult.firesafety@fire.nsw.gov.au**

Fire Safety Guideline – Fire Safety in Waste Facilities

Dear Commissioner,

We welcome this opportunity to make a submission with regards to the proposed Fire Safety Guideline – Fire Safety in Waste Facilities (*the Guideline*) that is currently in circulation for public comment with submissions now due 28 February 2019.

Sims Metal Management (SMM) is fully aware and supportive of the need to improve and lift standards across the waste and resource recovery sector, however, we do have some significant concerns with regards to the Guideline as presented.

The Guideline was issued for public consultation on 19 November 2018 – to our knowledge there was no industry consultation prior to this and to be frank, industry was extremely surprised and disappointed that a Guideline with potentially such significant and far reaching impacts was released without prior discussion.

We are also concerned that the Guidelines have seemingly been circulated quite widely throughout Government since at least February 2018, again, with no consultation with the industry that it prescribes to.

Put simply, to our knowledge there is not a facility in the State of NSW that could comply with the Guidelines. The fact that any new development can be required to comply with these Guidelines as a condition of consent and that Orders can be issued to any sized facility to retrofit the suggested F+RNSW "acceptable solution" does nothing to provide the industry with any certainty, stability or confidence to continue to invest in NSW – a large proportion of facilities may not ever be able to comply with F+RNSW's "acceptable solutions". We understand from verbal discussion with F+RNSW that the intention is not to apply the Guideline to existing facilities (unless the facility applies for a DA to modify or change the facility), this has not been made sufficiently clear in the Guideline.

We believe that the Guideline in its present form will result in unwarranted and significant damage to waste handling and recycling infrastructure and capabilities across NSW.

Our industry currently employs tens of thousands of people across the state, provides essential services and recovers for beneficial reuse many millions of tonnes of products saving limited natural resources. The industry is obviously critical in ensuring that NSW Government meets its mandated sustainability targets.

This Guideline will have a significant impact on industry's ability to take out adequate insurance coverage for their operations and may result in long-standing reputable, legitimate operators either walking away from the industry, discontinuing future investment or facing significant liability and risk exposure. At a forum convened to discuss this issue on December 11 2018 (attended by 3 of your Officers), a representative from the insurance industry confirmed that if these Guidelines were to be implemented, insurers will require compliance with the Guidelines or insurance may not be provided, or, if a fire event was to occur and a facility was not in compliance, a claim could potentially be jeopardised, compromised or refused. The industry is already struggling with regards to insurance coverage – there has been an increase in premiums on average between 250-400% over the last twelve months.

Quite simply, many legitimate operators will not be prepared to risk the potential financial and personal liabilities that may arise in circumstances where they have limited control. In contrast, rogue operators will most likely ignore these Guidelines (as they do with many other regulatory instruments) and will grow their business operations while legitimate operators will exit the industry. The serious concern of consistency and fairness in applying these Guidelines equitably across the industry also applies.

The industry is already suffering significant hardship through the well-publicised impacts of the China National Sword Policy. I am sure that nobody would like to see these Guidelines be the straw that broke the camel's back so to speak.

I would like to draw your attention to guidelines developed in Victoria – *Management and Storage of Combustible Recyclable and Waste Materials – Guideline* (EPA Victoria Publication 1667.2 October 2018). The 2018 Guideline replaced a 2017 Guideline with the same name (EPA Victoria Publication 1667 2017).

This 2018 version of the EPA Victoria Guideline was *"updated to better support compliance with the new WMP CRWM, after consultation with community, industry members, local government, and waste and resource recovery groups"* (EPA Victoria).

The resultant 2018 EPA Victoria Guideline was developed in consultation with your peers (Metropolitan Fire Brigade and the Country Fire Authority) and produced what we believe to be a more workable document focused on outcomes and not prescribed technical standards. The 2018 EPA Victoria Guideline has the broad support of both regulators and industry in Victoria. At the forum attended by your officers in December 2018, it appears that your officers were unaware that the Victorian Guidelines had been changed, this was confirmed in a follow up meeting in February 2019. Perhaps F+RNSW could review this document and the process by which it was put together accordingly, in particular industry consultation.

One significant issue discussed at the meeting with F+RNSW and NSW EPA in February was the mitigation of risk by policy and regulations of what we believe to be one of the root causes of many fires in the industry – the proliferation of NiCad and lithium ion batteries.

These items have no readily accessible recovery and recycling pathways to the community and often end up being placed in recycling bins. Industry needs some regulatory action on these items as it has little or no control with regards to their prevalence in the waste and recycling streams. These items are extraordinarily difficult to detect and remove from the waste stream due to their size and ubiquitous nature. Industry believes that regulators must provide an appropriate product stewardship scheme similar to those in place for waste oil, e-waste, tyres etc.

SMM believes that these items have led to a ~90% increase in fires in its facilities globally over the last 3 years. This cannot be a problem that is simply dumped on the resource recovery industry with the extreme risk well known. The industry needs support from agencies such as NSW EPA and F+RNSW to address this community safety and environmental risk.

Specific Comments Regarding the Fire Safety Guideline – Fire Safety in Waste Facilities

[1] Document History

As noted above, the Guidelines have seemingly been circulated quite widely throughout Government since at least February 2018, with no consultation with the industry that it prescribes to. SMM is very active within our industry peak body organisations (e.g. WCRA and NWRIC) and we believe that we could have offered significant value in the development of the Guidelines.

[2] General Principles

The F+RNSW Guideline appears to be somewhat clunky and in part ambiguous, and appears to be focused on one-size-fits-all technical specification as compared to the 2018 EPA Victoria Guideline that is more focused on education and performance outcomes.

Industry has serious concerns around the prescriptive nature of the NSW guidelines. Some of the concerns include:

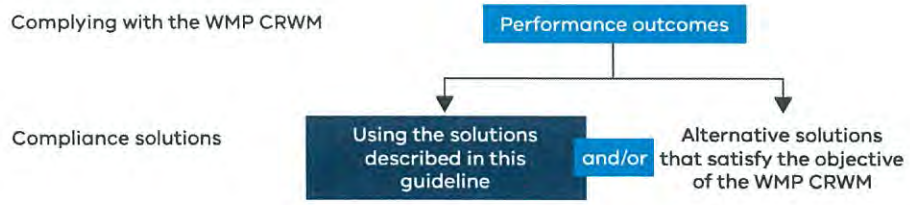
- It will be simply physically and commercially impossible for many sites to comply, exposing them to regulatory sanctions and may make them uninsurable;
- Number of potential regulators (130+) and interpretations;
- System requirements for fire hydrant systems and fire water run-off containment refer to "worst case fire scenario, including from multiple hose lines, fire monitors and aerial appliances" irrespective of waste facility size. Is this realistic or practical?;
- How will industry be assured of a level playing field and that a fair, transparent and equitable application of the guidelines transpires? All too often, it is the organisations genuinely trying to do the right thing that seem to attract attention, whilst less than reputable organisations seemingly fly under the radar.

In our opinion, one of the greatest failings in the F+RNSW Guideline is the lack of a clear methodology for a PCBU to propose and for F+RNSW to consider an alternative to F+RNSW's acceptable solution. The EPA Victoria Guidelines (2018) presents:

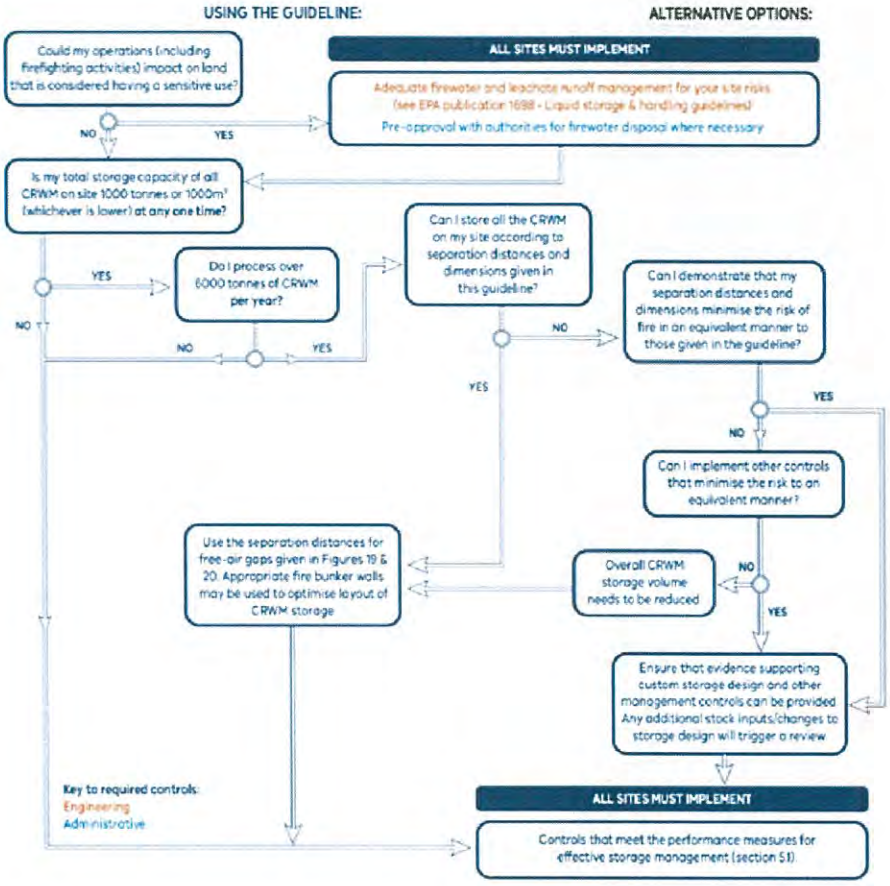
Responsibilities of Occupiers in Managing Risks from Fire

Occupiers are responsible for minimising harm to human health and the environment from fire at their sites, Irrespective of how the fire starts. Fires can start elsewhere, such as in a neighbouring yard or a bushfire, and could spread to your facility.

The WMP CRWM states under Clause 7 that if you occupy or control a WRRF you must take all reasonable steps to manage and store CRWM in a manner that minimises risks to human health and the environment from fire. One way to demonstrate compliance with Clause 7 of the WMP CRWM is to follow the advice and specifications in this guideline. Alternatively, you can manage and store CRWM in a different manner, but you should show that you are minimising risks from fire to a level at least equivalent to this guideline.



With regards to one of the most significant issues that industry faces – stockpile management, the EPA Victorian Guidelines provides for alternative options, the EPA Victorian Guideline flowchart:



[3] Section 3 – Application

The Guideline applies to any waste facilities within NSW involved in the storage, processing, resource recovery and land application of combustible waste material.

Will this include what the industry believes to be an extremely high risk activity – car wrecking? Over the last decade, there has been a significant shift in the wrecking industry. The wrecking industry is now proliferated by operators who are nearly totally focused on stripping cars for scrap commodity value as compared to the traditional approach of dismantling for spare parts for sale and re-use as the primary business activity. These new style car strippers operate as bona fide scrap yards without having to put in place appropriate environmental and safety controls required of scrap metal yards. Many of these operations are virtual death traps and operate without any apparent regulatory oversight.

And:

Note: *Under Section 4.17 of the EP&A Act, the consent authority may impose requirements from this guideline (in part or full) as a condition on the development consent.*

How will industry be assured of a level playing field and that a fair, transparent and equitable application of the Guidelines transpires? This ambiguous clause does nothing to provide the industry with any certainty, stability or confidence to continue to invest in NSW, considering that there are potentially 130+ consent authorities and regulatory stakeholders. All too often, it is the organisations genuinely trying to do the right thing that seem to attract attention, whilst less than reputable organisations seemingly fly under the radar. This is certainly the ambient environment that reputable operators are faced with at present.

And:

Note: *The responsible regulatory authority may impose requirements from this guideline on the PCBU as either a condition of consent or licensing or issuing an Order.*

Again, industry has great concerns as to how the issue of a potentially arbitrary Order by one of 130+ regulatory authorities based on their particular interpretation will provide a fair, transparent and equitable application of the Guidelines or provide any certainty, stability or confidence to continue to invest in NSW. Effectively, an operation could be shut down or face the imposition of extraordinary costs based purely on its location and the interpretation of the Guidelines of the local regulatory authority. This will pose significant competition issues.

And:

F+RNSW recommends that the PCBU engage an external consultant to provide specialist advice and services in relation to the application of this guideline to their waste facility.

As compared to the EPA Victorian Guidelines (2018), the F+RNSW Guidelines appear to be far too rigidly prescriptive and technically based as compared to the EPA Victorian Guidelines that have been presented very in an easy to follow workbook format focusing on performance outcomes and education. F+RNSW may consider the format of the Victorian Guidelines in an effort to improve clarity and outcomes.

[4] Section 4 – Definitions

Combustible waste material – means any solid waste material that can ignite and burn, which includes:

a) *Wood and wood products of all types inclining pallets woodchips and sawdust;*
b) *Rubber (natural or synthetic, including shredded or crumbed tyres;*
c) *Shredder floc wastes*
d) *Waste derived fuel, refuse derived fuels (RDF), solid recovered fuels (SRF) and processed engineered fuels (PEF);*
e) *Any other waste which may pose a fire risk.*

The F+RNSW definition appears somewhat limited and ambiguous and does not specifically mention waste types that may be susceptible to fire risk (i.e. – paper and plastics). In the case of metal recycling, the definition does not address the fact that not all shredder floc waste is combustible. "Any other waste which may pose a fire risk" is also too broad a term and can be subject to interpretation.

The EPA Victoria Guidelines define combustible recyclable and waste materials (CRWM) as recyclable and waste materials that could create a fire hazard. They include but are not limited to:

- *paper and cardboard*
- *wood*
- *plastic*
- *rubber, tyres, and tyre-derived waste*
- *textiles*
- *organic material*
- *refuse-derived fuel (RDF)*
- *specified electronic waste (e-waste)*
- *metal and other materials with combustible contaminants*
- *combustible by-products of metal processing activities.*

CRWM may include industrial or municipal waste

And:

Waste facility – means any premises used for the storage, treatment, processing, sorting or disposal of waste. A waste facility includes sites holding an environment protection licenses and unlicensed sites.

Per comments above, will this include what the industry believes to be an extremely high risk activity – car wrecking? Over the last decade, there has been a significant shift in the wrecking industry. The wrecking industry is now proliferated by operators who are nearly totally focused on stripping cars for scrap commodity value as compared to the traditional approach of dismantling for spare parts for sale and re-use as the primary business activity. These new style car strippers operate as bona fide scrap yards without having to put in place appropriate environmental and safety controls required of scrap metal yards. Many of these operations are virtual death traps and operate without any apparent regulatory oversight. Recent changes to threshold limits for licensed sites (that we believe to be inadequate) was a lost opportunity for EPA NSW to manage this risk.

[5] Section 5 – Background

Specific requirements may be imposed on the waste facility, or any processes undertaken (e.g. storage, processing, transportation) by the relevant regulatory authority such as local council, DPE, NSW EPA or SafeWork NSW.

Again, industry has great concerns as to how the potentially arbitrary issue of a specific requirements by one of potentially 130+ regulatory authorities based on their particular interpretation will provide a fair, transparent and equitable application of the Guidelines or provide any certainty, stability or confidence to continue to invest in NSW. Effectively, an operation could be shut down or face the imposition of extraordinary costs based purely on its location and the interpretation of the Guidelines of the local regulatory authority. This will pose significant competition issues and may lead to "Council shopping" and the concentration of high risk facilities.

[6] Section 6 – Legislative Requirements

We have no issues with this clause.

[7] Section 7 – Development Considerations (Planning)

7.1 Designing for Special Hazard

7.1.1 Combustible waste is to be considered a special hazard and the risks and hazards of the waste facility identified. A Fire Safety Study may need to be done in accordance with Hazardous Waste Industry Planning Advisory Paper No. 2 Fire Safety Study Guidelines

Is it really appropriate to put a blanket classification on combustible waste that will see it assessed in line with conditions set out for hazardous industries (i.e. petroleum refineries etc.)?

7.1.5 The maximum sizes and minimum separations of all stockpiles of combustible waste material are to comply with section 8.3 and be detailed in an operations plan that is prepared for the waste facility (refer to section 8.7). The operations plan should be made a condition of consent by the relevant authority.

Per provided commentary in General Principle response above, in our opinion, one of the greatest failings in the F+RNSW Guideline is the lack of a clear option or methodology for a PCBU to propose and for F+RNSW to consider an alternative to F+RNSW's acceptable solution. Our abovementioned response includes a flow chart included within EPA Victoria Guidelines setting out a process by which alternatives may be presented and considered.

7.2 Existing Waste Facilities

7.2.1 The owner or PCBU should undertake an assessment of the design and performance of their existing waste facility against the requirements specified within this guideline and provide to the relevant consent or regulatory authority for determination.

We understand that the F+RNSW Guideline is intended for new facilities and redevelopment of existing facilities. Accordingly, this clause needs to have the following text added at the commencement of the clause "*When an existing facility undergoes demolition, erection, rebuilding, alteration, enlargement or extension*"

7.4 Fire Hydrant System

7.4.1 The waste facility is to have a fire hydrant system installed appropriate to the risks and hazards for the facility, including a ring main design for redundancy.

Consideration must be given to removing the standard requirement for a ring main as the preceding text makes provision for a system appropriate to the risks and hazards of the facility. A requirement for a mandatory ring main system may not be appropriate for smaller facilities.

F+RNSW should have a clear methodology for alternative proposals to be submitted, assessed and approved. F+RNSW should have a clear methodology for alternative proposals to be submitted, assessed and approved. Please see reference to EPA Victorian Guideline flowchart on page 4 of this submission.

Worst case fire scenarios must take in to account quantity and characteristics of stored materials, stockpile size/management for each individual site.

Mandating this requirement may see the stifling or abandonment of future investment in the industry and may see existing sites fall behind best practice as further investment and development of these sites will prove to be cost prohibitive. It may be physically impossible to meet this requirement. This will do nothing to improve efficiency, safety and best practice in the industry and will have a perverse impact on the viability of operations, employment, environmental outcomes and NSW Government sustainability targets.

7.5 Automatic Fire Sprinkler Systems

7.5.1 The waste facility is to have an automatic fire sprinkler system installed if the building has a floor area greater than 1,000m^3 or contains 200m^3 or more of combustible waste material.

Please change to "*The waste facility is to have an automatic fire sprinkler system installed in each building……*"

7.5 Fire Detection and Alarm Systems

General – please specify that this clause refers to buildings and does not include outdoor and stockpile areas.

7.8 Fire Water Run Off Containment

Consideration must be given to removing the standard requirement for containment capacity to be equivalent to the worst case fire scenario or 1,500,000L. This requirement may be unreasonable or simply impossible for smaller facilities or existing facilities undergoing development due to gradient, space, site configuration, location and cost.

F+RNSW should have a clear methodology for alternative proposals to be submitted, assessed and approved. Please see reference to EPA Victorian Guideline flowchart on page 3 of this submission.

Worst case fire scenarios must take in to account quantity and characteristics of stored materials, stockpile size/management for each individual site.

Mandating this requirement may see the stifling or abandonment of future investment in the industry and may see existing sites fall behind best practice as further investment and development of these sites will prove to be cost prohibitive. It may be physically impossible to meet this requirement. This will do nothing to improve efficiency, safety and best practice in the industry and will have a perverse impact on the viability of operations, employment, environmental outcomes and NSW Government sustainability targets.

[8] Section 8 – Facility Operation and Management

8.1 Storage and Stockpiles

SMM has significant concerns with regards to mandatory stockpile size and dimensions.

The stockpile dimensions noted in the guidelines may require SMM to regularly turn material away. This would place the community at further risk as material would be either illegally dumped, stockpiled at source or sent to businesses and smaller scrap metal dealers who do not have the systems or standards in place to remove high risk material and do not have the resources on site to deal with a fire if it were to occur.

Alternatively, materials may have to be landfilled - counterproductive to NSW's recycling efforts, feedstock availability to NSW steel mills and NSW Government targets and objectives. SMM operates one of only three large shredders in NSW (and one of only two in Sydney), it is our understanding that the other two shredding facilities face exactly the same issues.

F+RNSW should have a clear methodology for alternative proposals to be submitted, assessed and approved. Please see reference to EPA Victorian Guideline flowchart on page 3 of this submission.

SMM is an Australian industrial icon and success story. SMM was established in NSW over 100 years ago and has grown to be the world's largest metal recycler, with over 250 facilities and operating in over 20 countries. SMM has 40 sites across Australia. As such, we believe that we are suitably experienced, skilled and qualified to provide best practice risk management solutions to our operations.

With regards to the management of fire risk, SMM has in place a number of policies, programs and standards for managing and mitigating fire risk, including:

- ✓ Sims Metal Management Global Stockpile Management Procedure - The procedure includes fuel hazard reduction, company enforced mandated dimensions for various stockpiles taking into account the stockpiled material risk characteristics, requirements for fire breaks and fire lanes, distances from boundaries and firefighting requirements for the site (including minimum water delivery to stockpiles in the event of a fire) and unscheduled event management;
- ✓ Installation of ELV Depollution Stations – SMM has installed end of life vehicle depollution stations at its facilities in NSW. This equipment enables the safe removal of fuels and oils from cars prior to shipment to the St Marys shredding facility, minimising the risk of fire throughout the supply chain;
- ✓ Sims Metal Management Global Prohibited Material Procedures – High risk materials are identified and communicated to customers as materials we do not accept in the yards;
- ✓ Inbound Material Inspection Procedures - SMM employs dedicated inspectors whose responsibility is to inspect each load to ensure that prohibited materials are not in loads, and if found are contained, isolated and removed from site;
- ✓ Procedures for high risk activities such as Hot Works;
- ✓ Emergency response procedures;
- ✓ Auditing programs to ensure that the requirements of the procedures are being followed in operations.

In Victoria, SMM has had their fire risk management systems audited by EPA Victoria and accepted formally as an alternative solution.

[9] Appendix A – F+RNSW Acceptable Solution

Appendix A states *"this acceptable solution applies to the case of a typical waste facility handling putrescible combustible waste material. For any other case assessment is required"*. The description *"putrescible combustible waste material"* is confusing and is not in line with Section 4 of the guidelines – Definitions.

SMM has addressed its concerns with regards to the performance requirement provisions in the table throughout this submission.

Thank you again for this opportunity to comment on the Guidelines, we look forward to contributing and to working with you to formulate an improved Guideline that will prove to be more workable and flexible for all stakeholders and one that will facilitate real change in mitigating fire risk.

By producing a more workable document, we believe that industry will have more certainty and confidence to continue to invest in NSW and to improve efficiency, safety and best practice in the industry. Conversely, a more workable Guideline with the opportunity for industry to provide alternatives to F+RNSW's Acceptable Solution will contribute to the commercial viability of operations, employment, environmental outcomes and NSW Government sustainability targets.

Please feel free to contact me at your convenience if I can assist with any additional information or clarification.

Yours Sincerely,

Jason Blackmore
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Business Development Manager
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28 February 2019

Mr. Paul Baxter
Commissioner Fire + Rescue NSW
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Fire Safety Guideline – Fire Safety in Waste Facilities
Document dated 19 November 2018

Dear Commissioner,

The Waste Contractors & Recyclers Association (WCRA) is pleased to be provided with the opportunity to respond to the *Fire Safety Guideline – Fire Safety in Waste Facilities* (the Guidelines). We recognise that F+R NSW have faced and controlled a number of fires in waste management facilities in recent years. We understand that these fires consume lots of valuable F+R resources.

Our members place the highest priority on the safety of their people and their interaction with the communities in which they exist. We are supportive of Guidelines that are safe, adaptable and achievable without compromising workplace safety or the safety of the general community.

WCRA is an industry industrially registered organisation representing most of the employers in the waste and recycling industry in NSW and the ACT. WCRA currently has 186 Members who own, operate or control an estimated 90% of the vehicles and infrastructure used in waste and recycling activities in NSW and the ACT. This membership includes most of the commercial recyclers and recycling facility operators across NSW. Furthermore, whenever a NSW Council contracts out its waste and/or recycling service, it does so to a WCRA Member. To this end, WCRA is well placed to provide genuine and well considered feedback on the proposed Guidelines.

WCRA have consulted extensively with our Members seeking specific comments on the proposed Guidelines. Many of our members have expressed serious concerns which are detailed in this response. (Both F+R NSW and EPA attended consultation sessions facilitated by WCRA, first session on 10/12/2018 and again on 12/2/2019, where many of these concerns were detailed).

This submission also includes input from the members of the Australian Organics & Recycling Association (AORA). Whilst WCRA and AORA members share many common concerns in relation to these proposed Guidelines, AORA have specific concerns relating to the composting sector. Those concerns are detailed throughout this submission and in a separate submission that will be forwarded directly by AORA.

In summary our major concerns with the proposed Guidelines, are listed hereunder, with a greater level of detail in the pages that follow.

1. The absence of industry engagement in the development of the Guidelines since their inception circa 10 months from their date of release;
2. The request for these Guidelines was borne out of the NSW Taskforce response to the China Sword recycling ban. The emphasis of discussions at this Taskforce was largely concerned with the outputs from kerbside recycling;
3. That the proposed Guidelines, if implemented, may result in a zero level of compliance in current waste management facilities across NSW;
4. The absence of an option for waste operators to propose compliant fire management alternative solutions, and best practices adopted throughout the world, for assessment and approval by F+R NSW;
5. The high degree of technical detail included in the Guidelines. This includes provisions listed in the "F+R NSW Acceptable Solution". These technical provisions provide a utopian 'text book' set of standards. We are concerned that these are not a set of acceptable solutions;
6. Clearly written definitions for waste facilities and waste products do not exist in the current Guidelines. The 'combustibility' of waste types needs to be defined;
7. Fear exists amongst highly compliant operators that they may be severely impacted by these Guidelines, whilst the rogue elements in the industry will continue to operate without compliance or any perceived threat of compliance/regulation enforcement;
8. A National standard or set of Fire Guidelines for all waste management facilities should be developed and implemented to ensure clarity across the industry in Australia;
9. The Guidelines adopted in Victoria, and supported by industry, should be considered best practice for the development of Guidelines in NSW. F+R NSW have asserted that technical Guidelines are superior to the flexible standards set out in Victoria, we do not agree with this position;
10. Insurers are withdrawing from the industry and in some cases, premiums have risen by as much 400% (compared with previous years). Policies that have been written in the past are becoming more difficult to renew. These Guidelines, if adopted, will be considered by the insurance industry, and it may result in an elevation of compliance to a level that is not achievable. This may have a disastrous effect on investment in the waste and recycling industry in NSW;
11. Fires in waste facilities are being sparked and fuelled by waste types such as flammable aerosol cans and batteries (lithium Ion and Ni-Cad). Some of these waste types are new to the waste stream. Policy must be written to address these types of hazards, at the point of waste generation. F+R NSW and the NSW EPA should join industry in lobbying the manufacturers of these hazards to fund programs to remove this contamination from the inbound waste stream. In general recycling facilities (MRFs), e-Waste facilities and scrap metal yards, the event of fire due to these products is increasing at an alarming rate. PCBUs in licenced and mature operating environments are being forced to invest in processes and risk mitigation tools to deal with items that are contaminating loads that should be removed by Product Stewardship or similar programs.

12. It is important to note that stockpiling is a legitimate business activity that is standard practice across a range of sectors and has been a practice of the waste and resource recovery sector in NSW. Whilst 'uncontrolled' stockpiling is an issue, FRNSW and EPA support is needed in the development & support of proper controls.

13. The cost of complying with these Guidelines will be quite high. The recycling sector is under world-wide pressure and the potential for major cost recovery is very limited. These guidelines may result in NSW business closures, re-locations to other states, new proposals failing to progress, etc. At the same time NSW is a large collector of waste levies and has some very ambitious waste diversion targets. In our view, NSW should provide an economic & environmental analysis to support the development of these fire guidelines.

14. WCRA would like NSW Government support to develop a comprehensive training program which will better equip industry workers with risk management skills, stockpiling standards, compliance, insurance issues and strategies to better manage the risks of fire

WCRA would like F+R NSW to consider re-writing the current Guidelines and starting with a fresh approach. New Guidelines could be written in consultation with industry and experts in fire + rescue to deliver a set of Guidelines that ensured the high, achievable levels of WHS and Fire Safety. Obvious consideration must be made for the staff of F+R NSW who are charged with the responsibility of fighting fires in waste management facilities. This fact is not lost on industry.

The waste management industry recognises the need to reduce the risks and hazards associated with fire. However, it is equally important to ensure that the mitigation of these risks does not lead to the introduction of a standard that is impossible to achieve. The recycling industry is currently fighting significant economic threats and there are concerns that the adoption of these standards could result in the withdrawal of investment from the industry.

WCRA will continue to offer F+R NSW and the NSW EPA our support and assistance in the development of these guidelines and we look forward to working with all parties in the development of Fire and Safety Guidelines that will decrease the risks and hazards associated with fire in the waste management industry.

Yours faithfully,

Tony Khoury
Executive Director

Attach.

WCRA Comments Regarding the Fire Safety Guideline – Fire Safety in Waste Facilities

Document History

WCRA notes from the Document History table that these Guidelines were first circulated in February 2018. Industry was not consulted in this process until November 2018. The initials of names and the titles of Departments across Government exist without any reference to industry. WCRA members are willing participants in many areas of regulation and guidelines for best practice in the waste management industry. Removing consultation with industry often extends the time from concept to inception and may also lead to unintended outcomes, possible litigation and other actions that are not in the best interests of industry or regulators.

WCRA reiterates our willingness to assist F+R NSW and EPA in the development of new Fire Safety Guidelines that support a sustainable and safer NSW waste management sector.

1. Purpose

We agree that the protection of life, safety and the environment from the risk of fire at waste facilities must be better managed and there is room for improvement.

2. Scope

F+R NSW has responded verbally at our consultation sessions as follows:

- That these Guidelines are relevant only to new facilities;
- These Guidelines are not relevant or retrospectively applied to facilities currently licenced in NSW.

The scope should be expanded to include the above.

3. Application

As per our comment above, it would be prudent to note that:

- These Guidelines were developed with the intention to 'fast track' approval processes for new waste management facilities. If a new facility was compliant in all areas of the Guidelines, then this facility would not have to seek the approval of F+R NSW for their relevant planning approval;
- These Guidelines do not exist as a stand-alone set of Guidelines for adoption in all waste management facilities. These Guidelines set out the highest levels of practice and technical standards for Fire Safety;
- Facilities operating with Fire Safety Policies and Procedures outside of these Guidelines may apply to F+R NSW (as with current planning approval processes) for specific analysis and approval of Fire Safety systems outside the auspices of these Guidelines;
- Facilities with processes not described in these Guidelines may be deemed to be non-compliant by F+R NSW, the Guideline must be noted to reflect this fact;
- Insurers and underwriters should not read these Guidelines as minimum standards for Fire Safety Compliance. Waste management facilities with current licences and other planning

approvals have been assessed and approved by relevant authorities as compliant may be subjected to these higher standards.

4. Definitions

The document does not identify characteristics of stockpiled materials that determine them to present significant combustion risk. There would be a benefit to having a practical checklist of criteria that can be used to generally reference combustion risk. The following table will better clarify combustion risk of different waste type and the table below would be a good starting point. Importantly, waste types by type of facility and their relevant combustion risk profile must be clearly stated in the Guidelines.

Example: Combustible Waste Table

Type of Facility	Waste Type	Combustion Risk
MRF	Paper	High
	Cardboard	High
	Plastics	High
	Glass	Low
	Metals	Med
	Unprocessed co-mingled (in-bound stockpile)	High
	Waste residual	High
C&D facility/transfer station	Concrete	Low
	Bricks	Low
	Asphalt	Low
	Metals	Med
	Processed fines/aggregates	Med
	Timber, wood	High
	Un-processed mixed waste (in-bound stockpile)	Med
	Soil (GSW-R, GSW, Asbestos, ENM, VENM)	Low
	Asbestos	Low
	Waste residual	High
Liquid waste	Grease Trap	Low
	Septic Waste	Low
	Oily Liquids	Med
	Industrial Liquids	Med
	Fuels/Diesel etc	High
General waste transfer station	Putrescible waste	Low
	General waste	Med
	Organics	Low
	Paper	High
	Cardboard	High
	Plastics	High
	Glass	Low
	Metals	Med
	Unprocessed commingled (inbound stockpile)	High
	Waste residual	High

There are other facility types and waste types that could be added to this table (this is an example only).

5. Background

Clarity must exist in the definition/example of a waste facility. For instance, in the scrap metal industry many rogue operators state that their business activity is that of a motor vehicle wrecker (harvesting parts) when in fact the site is a scrap metal yard. Similarly, in the area of electronic waste, a site may

claim to be refurbishing electronic waste for sale into second hand markets. The reality of this operation is that many items fail testing and must be recycled, this facility will be receiving and processing materials that have a high fire hazard such as the rechargeable Ni-Cad and Lithium Ion batteries without the requirement of any fire controls. In these two examples, genuine bona fide waste facilities will be forced to comply with these Guidelines whilst rogue operators will not. This creates hazards for Fire Fighters that are not controlled whilst compliant operators will lose business to low-cost non-compliant operators.

Processes undertaken at facilities that are not classified as waste facilities may have inherent risks that match or exceed those at the waste facilities. This must be taken into consideration when defining a waste facility.

Specific requirements may be imposed on the waste facility, or any other process undertaken (eg., storage, processing, transportation) by the relevant authority such as local council, DPE, NSW EPA or SafeWork NSW.

WCRA members have raised major concerns with this clause as written. Currently more than 130 regulatory authorities would be able to enact this clause to restrict or terminate the operations of a waste facility. There are variables that exist on a case-by-case basis that need to be considered prior to empowering regulatory authorities (that may not be experts in this field) with the ability to close businesses or impose improvement orders. WCRA believe that a suitable qualified fire safety expert is better suited to regulate the storage, processing or transportation of waste. This clause again allows ambiguity in the processes where clearly defined Guidelines are required.

6. Legislated requirements

We have no issues with this Section.

7. Development considerations (planning)

General comments-

- Provision must exist for a PCBU to propose alternative solutions for consideration, assessment and approval from F+R NSW;
- The word 'should' is used in Sections 7.2 of this document and the use of this word does not provide any certainty as to the legality of these requirements. What if a Regulator 'should' enforce but chooses not to? This will lead to uncertainty in the market place.

7.1. Designing for Special Hazard

7.1.1. Not all waste types are combustible, some have a low or zero combustion factor. It is not appropriate to therefore have a blanket classification that all was be assessed in line with the conditions set for hazardous industries.

7.1.2. This clause must be emphasised. It is not clear in this document that waste facilities that do not comply with all aspects of these Guidelines may apply for and be granted approval to proceed with their relevant development or other application on a case-by-case basis.

7.1.5. As per comments in 7.1.2, it is not clear in this document that waste facilities that do not comply with all aspects of these Guidelines may propose alternative methodologies, apply for and be granted approval to proceed with their relevant development or other application on a case-by-case basis. The Guidelines must be written so that a PCBU can design fire safety systems specific to their facility. These systems could then be assessed by the relevant authorities and F+R NSW to ensure compliance to best practice.

7.1.6. We reiterate that a clear definition by waste type of combustion risk be included in the Guidelines.

7.2. Existing Waste Facilities

7.2.1. In our consultation sessions with F+R NSW have confirmed that these Guidelines do not retrospectively apply to existing waste facilities. Clarity must be written into the Guidelines to represent this fact. Any event that will lead to an existing facility being subject to these Guidelines must be clearly stated and without ambiguity. PCBU with existing waste facilities cannot be 'surprised' by these Guidelines when making changes unrelated to the receival, storage or processing activities of their business.

7.2.3. As per 7.2.1 Clarity must be written into the Guidelines to better represent this fact. Any event that will lead to an existing facility being subject to these Guidelines must be clearly stated and without ambiguity. A PCBU that controls existing waste facilities cannot be 'surprised' by these Guidelines when making changes unrelated to the receival, storage or processing activities of their business. In this clause the wording "the relevant consent authority should consider imposing requirements" should be rewritten to clearly identify that in these cases the PCBU must be compliant with the Guidelines. Ambiguity in this clause may lead to PCBU being subject to this clause when other operators are not required to comply.

7.2.4. F+R NSW should provide industry with guidance on best practice in relation between the stockpile sizes, separations, control measures and fire safety systems. This clause is suggestive; however, it is not clear in its objective or relevance.

7.3. Firefighting intervention

General comment – It is becoming increasingly difficult to identify and locate new waste management sites. The level of prescription required in this section will make it more difficult for new facilities to be located in the Sydney metropolitan area where the bulk of the waste is generated.

7.3.1. We note that any cluse relating to site access must be in line with WHS Regulations. Aerial access can only be granted where it is safe to do so. If a specific site does not allow for this access (due to the topography of the site, slopes, trees, neighbouring buildings, etc.) then the PCBU cannot reasonably be expected to comply to this clause.

7.3.3. Existing sites may not be able to construct ring roads or similar. Likewise, low combustibility waste types such as organic waste may not be separated sufficiently to allow access between the stockpiles. Consideration to the combustibility of the waste type must be incorporated in the requirement for a PCBU to comply with this clause.

7.3.4. Small existing waste facilities established many years ago that are now in or near heavily concentrated household or commercial areas may not comply with this clause. Once again, a case-by-case assessment against this requirement must be considered by the relevant authorities.

7.3.5. As with 7.3.4, in many cases it will not be possible for current waste facilities to comply with this clause. The reduction of area to operate a business whilst allowing for external quarantine areas would potentially force operators to close or relocate their business. This will result in lower access to waste facilities in the heavily populated parts of Sydney. A case-by-case assessment to identify and approve alternative solutions must be written into the Guidelines.

7.4. Fire Hydrant System

General comments:

- Mandating many of these requirements may see the stifling or abandonment of future investment in the industry and may see existing sites fall behind best practice as further investment and development of these sites will prove to be cost prohibitive. It may be physically impossible to meet this requirement. This will do nothing to improve efficiency, safety and best

practice in the industry and will have a perverse impact on the viability of operations, employment, environmental outcomes and NSW Government sustainability targets.

- The requirements of the Australian Standard AS 2419.1-2017 are noted, however, smaller waste management facilities may not have the opportunity to fit a ring main design into the Hydrant system. This is a concern as current waste facilities that fall under these Guidelines may not have the option of fitting a ring main design. The Guidelines must state that PCBU can design and install systems that, on a case-by-case basis, are found to be compliant.
- The clauses cover many technical aspects of the installation and operation of Fire Hydrant Systems. A case-by-case assessment of proposed methodologies must be considered by F+R NSW to enable PCBU to design and install suitable systems outside of these technical Guidelines;
- Mandating specific details (7.4.4) may lead to Fire Hydrant Systems being designed below the requirements for individual waste management sites resulting in underperforming Hydrant Systems being installed. Flexibility with guidelines for best practice where possible and appropriate will be far more effective than finite measurements and rules;
- 7.4.7 We recommend that F+R NSW release clear methodologies for alternative proposals that provide for ranges of compliance to meet clear objectives. This will provide industry with clearer objectives for compliance. Consultation with F+R NSW and a flexible set of Guidelines will allow for safe and efficient systems for individual facilities;
- Worst case fire scenario must be clearly defined to allow PCBU to design and implement the most appropriate system. Assessing this scenario to the satisfaction of F+R NSW should be written into the Guidelines;
- The adoption of the assessing principles in F+R VIC (issued by VIC EPA) provide for far greater flexibility for waste facilities to design compliant fire systems that incorporate all aspects of fire safety. Technical guidelines that do not provide for case-by-case flexibility do not allow PCBU to compliantly design for fire control.

7.5. Automatic Fire Sprinkler Systems

General comments:

- The clauses cover many technical aspects of the installation and operation of Fire Sprinkler Systems. A case-by-case assessment of proposed methodologies must be considered by F+R NSW to enable a PCBU to better design and install suitable systems outside of these technical Guidelines;
- We believe that all waste facilities should have a fire sprinkler system installed in all buildings.

7.6. Fire Detection and Alarm Systems

The Guidelines need to be clear that these clauses apply for buildings, sheds (undercover areas) and do not include outdoor or stockpile areas that could not comply with these Guidelines.

7.8. Fire Water run-off containment

7.8.1. Guidelines must be clear in the definition of “effective and automatic means of containing fire water”. A PCBU should be given clarity of the term ‘effective’. Reference to effective could be defined as in 7.8.3 or similar.

General comment – consideration must be given to removing the standard requirement for containment capacity to be equivalent to the worst-case fire scenario or 1.5 million litres. This requirement may be unreasonable or simply impossible for the smaller facilities or existing facilities undergoing development due to a multiple of site factors. F+R NSW should have a clear methodology for alternative proposals to be submitted, assessed and approved.

Worst case fire scenarios must consider quantity and characteristics of stored materials, combustibility, stockpiles, site specific details such as access for F+R NSW for each individual site. We are concerned that in the current form, these Guidelines may result in a PCBU not being able to suitably retrofit current sites to attain approvals. This may lead to the withdrawal of investment or worse still, the delay of critical upgrades necessary to improve fire safety. These Guidelines must consider the safe and continued employment in the waste industry and not restrict genuine efforts across the industry to improve fire safety standards.

8. Facility Operation and Management

General Comments:

- Placing limits on the stockpile's storage, movement, and size without considering the operational factors for each site does not allow PCBU to design and install work flows that may be best practice for their facility;
- The exactness of the details in Clause 8 may be read as the only option, minimum standard for waste facilities to be compliant in fire system management. It must be clearly stated that these clauses are for the design of new facilities and a utopian, perfect case scenario example of fire systems;
- F+R NSW have listed specific technical guidelines for the operation and management of facility. F+R NSW have not factored site-specific details that may include:
    - Combustibility of waste;
    - Site ambient temperature averages;
    - Industry best practice for waste types;
    - Competency and experience of the PCBU; and
    - Relevant local or international experience/learnings in fire systems for waste facilities.

  These factors must be considered to allow a PCBU to present a case-by-case methodology to F+R NSW for assessment and approval.
- A number of WCRA members are international leaders in their specific fields of waste management. These Guidelines do not allow for the learnings and successful policies and procedures for fire risk management to be transferred to and implemented in NSW;
- In their current form these Guidelines do not allow the waste industry to design and propose fire safety systems that are assessed and approved for compliance to best practice;
- WHS is the highest single consideration for the compliant members of the waste management industry. Fear exists amongst these compliant industry leaders that these Guidelines may impose further opportunity for rogue operators to operate with lower costs and higher risk to the community.
- Comments from AORA (in some cases these composters are also Members of WCRA. The proposed gap required between stockpiles (and windrows) is unworkable in the majority of currently operating open windrow composting systems due to legitimate space constraints, (this will unnecessarily expand the processing footprint required or reduce the amount that can be processed in a given area). Requirements for water supply (could unnecessarily put a burden for hydrant upgrading or water storage and supply where mains water is not available). Active in-process windrows and finished compost stockpiles to be exempt from proposed requirements by virtue of being non-flammable, based upon moisture content. Distance between materials of concern and buildings to be reconsidered based upon whether the materials are in an active composting phase or finished compost (low risk of spontaneous combustion) or stockpiled GW or overburden (medium risk of spontaneous combustion).

11. Appendix A – F+R NSW acceptable solutions

General Comments

- Paragraph three notes that this solution applies to the case of a typical waste facility handling putrescible combustible waste material. This statement is not in line with the definitions on the remainder of the document or Section 4;
- The term “acceptable solution” may be read to indicate a minimum standard. In the case of these Guidelines this acceptable solution is that for the highest possible standards for Fire Safety in waste management facilities. The perception and intention of this statement must be clearly defined.

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Mr David Lewis
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Fire and Rescue NSW
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28 February 2019

Dear Mr Lewis

Re: Fire safety guideline – Fire safety in waste facilities

Thank you for the opportunity to provide feedback on Fire and Rescue NSW's (FRNSW) Fire safety guideline – *Fire safety in waste facilities* and for extending the consultation period.

The Waste Management and Resource Recovery Association of Australia (WMRR) is the national peak body for all stakeholders in the waste and resource recovery industry. We have more than 2,000 members, representing over 500 individual entities nationally, operating across a broad range of business organisations, the three (3) tiers of government, universities and non-government organisations. More than a third of our membership is based in NSW where our sector directly contributes more than $4 billion per annum to the State's economy[1], and directly employs more than 8,500 workers[2].

Please note that WMRR supports all efforts and actions to make our sector safer and implement best practice. We acknowledge the intent behind the development of this guideline noting the document states that:

- The requirements of this guideline do not overrule those from any other specific guideline relating directly to the primary business or undertaking (e.g. guidelines for tyre storage), nor do these requirements overrule any conditions specifically imposed on the waste facility.
- This guideline also applies to any proposed development of a waste facility that involves building work intended to meet the National Construction Code.

WMRR also acknowledges that FRNSW reiterated at a joint WMRR/ WCRA workshop on 11 December 2018 that the guideline does not and will not apply to existing waste and resource recovery facilities, and the guideline does not hold regulatory power, with the EPA further highlighting that the conditions of an existing license would take precedence over the guideline. WMRR is concerned that whilst this may be the intent of FRNSW in preparing these guidelines, the reality will be very different, in that these will impact existing sites operations when being considered by third parties such as the insurance industry when considering reinsurance of our essential industry.

[1] IBISWorld 2017, Reports 2911, 2921, 2922, Solid Waste Collection Services, Waste Treatment and Disposal Services, Waste Remediation and Materials Recovery Services
[2] Access Economics Pty Ltd 2009, Employment in Waste Management and Recycling, report for Department of Environment, Water, Heritage and the Arts, Canberra

Moreover, the guideline details FRNSW requirements that are to be considered every time a consent authority is considering a new or amended development application. Thus, while not technically retrospective, the requirements will apply to every development that is seeking to make operational improvements or upgrades. As such, the guideline provides a sound justification for existing sites to avoid making any development applications, which will inevitably lead to a less progressive and efficient waste industry

There are several concerns shared by industry that WMRR is seeking further clarification from FRNSW:

1. While the document states that the guideline also applies to any proposed development… It does not say only applies to any proposed development… Additionally, section three (3) commences with: "This guideline applies to any waste facility within NSW involved in the storage, processing, resource recovery and land application of combustible waste material" therefore suggesting that the guideline could (and will) be imposed on existing sites.

2. Further, the guideline may be applied to an existing operation following a fire incident because in the event of a fire, s126 of the *POEO Act* will apply to the site and this section could be taken to mean that operators must show they were operating their facilities in a "proper and efficient manner". In light of the existence of this guideline, it would be reasonable for a Court (or relevant body) to refer to any existing NSW guidelines relevant to the issue, including this document, to make an assessment as to what a "proper and efficient manner" is.

3. While the guideline holds no regulatory power, the wording within the document is problematic as it implies that:

    a. these requirements are mandatory; and

    b. they could be applied to existing operations (see point 1 and 2).

    WMRR reaches this conclusion due to for example, the word "must" being used throughout the document in relation to what actions/standards facilities need to undertake or comply with, indicating that facilities are obliged to adhere to all requirements. Additionally, page four (4), which details the application of the guideline, states: "Under Section 4.17 of the *EP&A Act,* the consent authority may impose requirements from this guideline (in part or full) as a condition on the development consent. These are just some examples of wording that requires clarification before the guideline is finalised.

    Unless specifically worded in the guideline that the requirements are not mandatory, as mentioned above, the insurance sector will utilise this document as a blueprint for best practice and may require all facilities to comply with the guideline, which will be cost prohibitive and not practicable for industry. At a time when a great number of facilities are already finding it extremely difficult to gain insurance (let alone affordable insurance), this could result in the closure of a number of well-managed facilities that will become commercially unviable. Additionally, the regulator could make all or some of the requirements in the guideline mandatory unless otherwise specified.

As such, clarification is sought from both Fire and Safety NSW and the EPA on how s126 would be applied to existing operations alongside this guideline and WMRR is seeking a review of the wording used in the guideline to ensure the final document clearly states that the guideline is not mandatory and not retrospective.

WMRR's submission continues in the table below but the overarching challenge is that the guideline is overly prescriptive and onerous, and would have significant CAPEX, land, and space requirements that operators (existing and future) would simply not be able to bear. The State, in developing such guidelines, must ensure that they balance safety and best practice while ensuring the delivery of essential infrastructure that the waste and resource recovery sector delivers for the community and industry. It is suggested that the wording of the guideline is reviewed to ensure that it is clear the requirements are not mandatory, and the correct balance is struck.

In WMRR's view, FRNSW would find it very difficult to identify a facility that could comply with this guideline; this fact was acknowledged by FRNSW at the joint WMRR/ WCRA workshop, where it was also noted that despite investing $4 million in facility upgrades, one metal recycler was still unable to fully comply with the guideline.

The requirements proposed, including (but not limited to) the minimum separation distances and maximum stockpile sizes, would limit inbound volumes and inevitably considerably and negatively impact the overall viability of projects – creating little to no incentive for NSW to grow its resource recovery capacity. Moreover, to comply with the guidelines, operators may be forced to move outside of Greater Sydney and the unintended but real consequences of this are higher transport costs and risks associated with long-haul transportation.

Not only does the guideline not offer any engineering solutions to meet the proposed requirements, the requirements and guideline as they stand would appear to stifle attempts at innovation and do not consider proven and/or up-and-coming technologies and policies outside of Australia that effectively enable recycling facilities to comply with fire safety codes.

WMRR's members strive to meet best practice and it is always industry's aim to protect the health of the community and the environment. Additionally, workplace health and safety are a priority and operators will adopt policies and procedures to protect the health of their employees. The fire guideline should give further guidance on how industry can and should achieve best practice, however if this overly prescriptive document remains as it is now, then the guideline would be counterproductive as the cost of both compliance and insurance of facilities would potentially result in financial ruination of operators leading to closure of facilities.

WMRR strongly suggests that FRNSW turn to its Victorian counterparts and learn from the gazetted Waste Management Policy (Combustible Recyclable and Waste Materials), which was followed by the EPA's Management and Storage of Combustible Recyclable and Waste Materials – Guideline. The current Victorian approach, which is performance- and risk-based, should be followed closely in NSW as there simply is no one-size-fits-all approach. Please do not hesitate to contact the undersigned to further discuss WMRR's submission.

Yours sincerely

Gayle Sloan
Chief Executive Officer
Waste Management and Resource Recovery
Association of Australia

Section	Page no.	Detail	Comment
3	4	**Application** The Application states that: "This guideline applies to **any** facility within NSW involved in the storage, processing, resource recovery and land application of combustible waste material.	This suggests that the guideline may be imposed retrospectively which is highly problematic for existing facilities given the requirements are onerous and overly prescriptive. The guideline should include a statement that clearly says the guideline **does not** apply to existing operations.
4	5	**Definitions** Combustible waste material – means any solid waste material that can ignite and burn, which includes: (c) shredder floc wastes (e) any other waste which may pose a fire risk	(c) The guideline refers to the Waste Industry Safety and Health Forum Waste Burn Trials however, scrap metal and/or floc from scrap metal processing were not tested as part of these trials. Clarification is sought on why scrap metal risks are included in this guideline since no assessment of risk was conducted. (e) Further clarification and/or confirmation is sought from FRNSW that (e) will not serve as a catch-all that would result in the guideline being imposed (subjectively) on existing or future operations where majority of materials do not fall under the list of definitions. For example, C&D operators receive, and process materials largely made up of brick, concrete, asphalt, etc. However, there may be a small quantity of paper and plastic found in the process that may be flammable; these materials are set aside for collection by other operators. Moreover, this definition is subjective and leads to further questions such as: - Who/which authority determines the level of risk that deems it a fire risk? - Who determines which "other waste" is combustible waste?

			- What assessments can be relied on when determining the materials that may pose a fire risk?
4	5	**Definitions**	As "consent authority", "certifying authority", and "relevant authority" are used throughout the guideline, in some cases interchangeably, these should be defined in section four (4), and if intended to be one and the same, consistent language should be utilised.
7	9	**Development considerations (planning)** 7.1.1 A Fire Safety Study may need to be done in accordance with *Hazardous Industry Planning Advisory Paper No 2 Fire Safety Study Guidelines.*	The trigger points, that is the circumstances in which this may be required (and the who may trigger these requirements) that result in the study being undertaken need to be detailed in the guideline to provide consistency and certainty.
7	9	**Development considerations (planning)** 7.1.2 Consent authorities should issue a condition on the development consent requiring Clause E1.10 and E2.3 of the *NCC* be complied with to the satisfaction of FRNSW, achieved through either providing an acceptable solution (refer to Appendix A) or through direct consultation with FRNSW.	Proposed that this be reworded as follows: Consent authorities may issue a condition on the development consent requiring Clause E1.10 and E2.3 of the NCC be complied with to the satisfaction of FRNSW. This may be achieved through either providing an acceptable solution (refer to Appendix A) or through direct consultation with FRNSW.
7	9	**Development considerations (planning)** 7.1.6 The document *Reducing fire risk at waste management sites* by the Waste Industry Safety and Health Forum should be used for guidance.	This statement should be brought forward as the first clause or as a note preceding the section. 7.1.6 also appears to be a sub clause of/or related to 7.1.4. As such, part of 7.1.6 could proceed 7.1.4. e.g.: 7.1.4 combustible waste materials …. 7.1.5 For simplification in design (as per the Reducing fire risk at waste management sites by the Waste Industry Safety and Health Forum), the HRR of combustible waste…. 7.1.6 the maximum sizes and minimum separations...
7, 8.3 & 8.4	9, 14 - 17	**7 Development considerations (planning)** 7.1.5 The maximum sizes and minimum separations of all stockpiles of combustible waste material are to comply with section 8.3 and be detailed in an operations plan that is prepared for the waste facility (refer to section 8.7). The operations plan should be made a condition of consent by the relevant authority. **8.3 Maximum stockpile size** 8.3.1-8.3.6	The requirements in section 8.3 are overly prescriptive and do not allow for performance-based design. Section 8.3 starts with a note that says: "This section takes guidance from Reducing fire risk at waste management sites by the Waste Industry Safety and

			Health Forum." As such, allowances should be made for performance-based design of pile sizes and separation distances as permitted within the latter. To ensure appropriate holistic/consequence assessment is undertaken, this could trigger a fire safety study.
		8.4 Minimum separation distance	The minimum separation distances and stockpile limits are highly problematic. For instance, unprocessed scrap metal sits at approximately 250kg/m^3. However, if the illustration under 8.4.1 (page 16) is to be followed, then more than 13,000m^2 of land would be required to store 1,700 tonnes of scrap metal. This is prohibitively expensive (and arguably impossible for existing sites in Metropolitan Sydney) as all shredders require some stockpiles to ensure efficient processing and the layout would necessitate a fleet of vehicles and material handlers to move the stockpiles on-site. Meanwhile, a composting facility would easily exhaust the allowable capacity under these guidelines within three (3) hours of commencing daily operation. Thus, NSW runs the risk of putting on hold essential services because sites do not have the capacity to adhere to the guideline while receiving materials, which they are currently doing in adherence to their licence conditions. FRNSW was at pains to assure operators at the WMRR/ WCRA forum that existing licence conditions would override the guideline. However, clear wording needs to be included in the guidance or there is a risk that the guideline, which is unworkable at present, will be enforced by the regulator and inhibit or even prevent the normal operations of existing sites. Clarity is also being sought on the values in the table on page 16, specifically whether the intent is to interpolate between the values or use the table values only i.e. 30 < x < 50.
8.2	14	**Stockpile movement** 8.2.2 Any stockpile of combustible waste material not being fully rotated within a one-month period should have automatic temperature monitoring to identify any self-heating and localised hotspots,	At first read, this requirement appears onerous and financially prohibitive. Clarity is sought on 'automatic temperature monitoring' and whether the intent is to have permanent, in-place monitoring within the stockpiles, or if thermal guns checking stockpiles at regular intervals would suffice.

		and corresponding procedures be outlined in the operations plan for implementation to reduce heat and fire risks.	
11	22	**Appendix A** This FRNSW acceptable solution intends to assist consent authorities to make determination of a proposed waste facility without specific referral to FRNSW. EP1.3 The fire hydrant system delivers not less than 50L/s for a minimum of four hours duration. EP1.3 The minimum water supply capacity for the fire hydrant system is not less than 720,000 litres, either by way of full capacity tanks or reduced capacity tanks with infill from a town-main.	Clarity is sought within the guideline on whether this applies to the development consent or across the entire process. These performance requirements are extremely onerous, and industry is seeking clarification on their intent and assistance in finding a reasonable alternative given industry's inability to control such issues, including whether: - These proposed solutions are permitted for the full range of stockpile sizes. - FRNSW is seeking to set a benchmark requirement of five (5) hydrants operating simultaneously (which is what would occur). - Additional limitations are required on the Acceptable Solution to trigger FRNSW consultation. Additionally, guideline reference section 7.1 does not appear to reference the correct section. It should reference section 7.3 or clause 7.3.1 perhaps?