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Contact: Senior Firefighter Lachlan Haar

25 October 2021

Ms Emma Barnet
NSW Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 5022

Dear Ms Barnet

Re: Comment on Response to Submissions (RTS) for the Minto Resource Recovery Facility) (SSD-5339)

Fire & Rescue NSW (FRNSW) acknowledge correspondence received on 12 October 2021, requesting input into the RTS for the Minto Resource Recovery Facility) (SSD-5339).

It has been the experience of FRNSW that waste recycling facilities pose unique challenges to firefighters when responding to and managing an incident. Factors such as high and potentially hazardous fuel loads, facility layout, and design of fire safety systems have a significant impact on the ability to conduct firefighting operations safely and effectively. Consultation with organisations such as FRNSW throughout the development process enables the design and implementation of more effective fire safety solutions that help to mitigate the impact of incidents when they occur.

Waste facilities present 'special problems of firefighting' that warrant classification as 'special hazards', and consideration of provision for special hazards under Clause E1.10 and E2.3 of the NCC.

Fires in waste facilities present specific issues for firefighting, including:

a) the physical nature of combustible waste and waste by-products, including fire properties and ignition potential of both unsorted and sorted materials
b) unsuitable storage method, stockpile size, separation distances and accessibility
c) mechanised waste handling, sorting and processing systems, including vehicles
d) poor emergency vehicle and/or firefighter access for firefighting intervention
e) facilities having an inadequate or no fire hydrant system, including water capacity
f) facilities having an inadequate automatic fire suppression system installed
g) buildings having an inadequate smoke hazard management system installed, and
h) facilities having inadequate provision to contain fire water run-off.

FRNSW have reviewed the RTS and make the following recommendations:

1. Consent authorities may consider as 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 or through direct consultation with FRNSW.

a. The waste facility is to provide safe, efficient, and effective access for emergency vehicles as detailed in FRNSW guideline Access for emergency vehicles. Aerial appliance access is to be provided if the facility is located within a fire district covered by an aerial appliance.
b. The waste facility is to have a fire hydrant system installed appropriate to the risks and hazards for the facility. FRNSW recommends a fire hydrant system designed and installed to Australian Standard AS 2419.1-2017 and have an enhanced standard of performance appropriate to special hazards.
c. The waste facility is to have an automatic fire sprinkler system installed if the building has a floor area greater than 1000 m² and contains combustible waste material. FRNSW recommends the fire sprinkler system be installed to Australian Standard AS 2118.1-2017.
d. The waste facility is to have a fire detection and alarm system installed appropriate to the risks and hazards identified for each area of the facility. 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.
e. 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.
f. 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 fire scenario. 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.
g. The owner is encouraged to engage a fire safety engineer or other suitably qualified consultant to develop a performance design specific to the facility and its operations. The performance-based design should consider all possible fire scenarios.
h. The occupier/operator is to develop an emergency plan for the waste facility to AS 3745–2010 Planning for emergencies in facilities. An external consultant should be engaged to provide specialist advice and services in relation fire safety planning and developing an emergency plan.

2. To ensure that the fire prevention, detection, protection and firefighting measures are appropriate to the specific fire hazards and adequate to meet the extent of potential fires, a comprehensive **Fire Safety Study (FSS)** is recommended to be undertaken.

3. That the FSS is developed in accordance with the requirements of Hazardous Industry Planning Advisory Paper No.2 (HIPAP No.2).

4. That the FSS is required to be developed in consultation with FRNSW and to the satisfaction of the operational requirements of FRNSW. FRNSW recommend that the development of a FSS be a condition of consent.

5. That the development of the FSS considers the operational capability of local fire agencies and the need for the facility to achieve an adequate level of on-site fire and life safety independence.

6. FRNSW preference is to review the Preliminary Hazards Analysis (PHA) report as this will determine the approach and design of the recommended fire safety study.

7. That the FRNSW fire safety guideline for Fire Safety in Waste Facilities that includes legislated requirements and development considerations (planning) is utilised and consulted.[1]

8. That the FRNSW fire safety guideline for access for fire brigade vehicles and firefighters is utilised and consulted.[2]

9. That a comprehensive ERP is developed for the site.

10. That the ERP specifically addresses foreseeable on-site and off-site fire events and other emergency incidents, (e.g. fires involving solar panel arrays, bushfires in the immediate vicinity or potential hazmat incidents).

11. That the ERP detail the appropriate risk control measures that would need to be implemented in order to safely mitigate potential risks to the health and safety of firefighters and other first responders (including electrical hazards). Such measures would include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the photovoltaic system (either in its entirety or partially, as determined by risk assessment).

12. Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site should also be included in the ERP.

13. That two copies of the ERP (detailed in recommendation 8 above) are stored in a prominent 'Emergency Information Cabinet' which is located in a position directly adjacent to the site's main entry point/s.

For further information please contact the Fire Safety Operational Liaison Unit, referencing FRNSW file number BFS21/3870. Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Yours sincerely,

Superintendent John Hawes
Manager
Fire Safety Operational Liaison Unit

Cc: emma.barnet@planning.nsw.gov.au

[1] https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/guidelines_fire_safety_in_waste_facilities.pdf
[2] https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/guidelines_access_for_emergency_vehicles.pdf