

# FLOOD EMERGENCY RESPONSE PLAN (FERP)

for

**SUEZ Resource Recovery Facility  
20 Davis Rd, Wetherill Park NSW**

as of

**November 2019**

**Person in Charge of FERP:** Chief Warden

**FERP Team Members:** Deputy Warden  
Wardens  
First Aiders

**1. Introduction:** This Flood Emergency Response Plan (FERP) has been established to clearly define actions that should be taken in the event of a pending flood event to our site. The plan is designed to proactively outline actions to be taken to prevent loss of life and physical injuries to persons on site, damage to buildings, machinery and equipment and stock /supplies at this site in order that we may resume operations as quickly as possible after the flood event is over. This plan will work simultaneously with the sites odour, operational traffic and operational environmental management plans if an event occurs. The FERP has been prepared with reference to the Flood Risk Management Guidelines (FRGM) (OEH 2017). The FERP considers the provisions of the FRGM with the applicable guideline being *Flood Emergency Response Planning Classification of Communities*. The development has been assessed against *Figure 1 – Preliminary Flow Chart for Flood Emergency Response Classification* to determine the FERP Response Classification of Communities, with the resultant classification being “High Trapped Perimeter Area” as noted in section 2 of this FERP. The FERP addresses the provisions of this classification which states “*Vehicle evac must be completed before routes close. After closure resupply insitu or transported by Air/Boat*”. As the site is cut-off by the short duration overland flow flood event refuge on-site is proposed under Section 5 of this FERP, which also notes when the predicted safe evacuation of the site can be undertaken. Evacuation of the site for a flood emergency is identified in the sites Emergency Response Plan PLANS003.2.14, Action Plan FLOOD Code brown. This plan is to be updated every 5 years, as indicated in the Floodplain Development Manual.

**2. Overview of flood threat:** The SUEZ Resource Recovery Facility site is exposed to overland flooding from the west. Flood mapping created by Golder Associates (Refer Appendix A) shows the predicted overland flow passing from the western boundary through the northern east-west driveway of the site, then heading

east along Davis Rd. The predicted depth of flow for the 100-year storm, a storm event with a likelihood of 1% to occur in a single year, is approximately 300mm along the Northern driveway, and a top water level of 40.40 is reached along the western boundary of the site, decreasing to 39.20 at the north-eastern boundary. The maximum predicted depth of flow is 700mm along the Northern driveway in a Probable Maximum Flood (PMF) event, the largest likely flood event to occur (Refer Appendix A for flood depths). In this event, the top water level along the driveway will reach a level of 40.80. The finished floor level of the building is 41.00m, with the basement level being 35.00m. During a flood event the basement may be inundated with stormwater, whereas the ground floor should have sufficient freeboard of 600mm in a 100-year storm event. The site is determined to be a High Trapped Perimeter Area as per Figure 1 – Preliminary Flow Chart for Flood Emergency Response Classification the FRMG, as the only practical exit from the site is unavailable during a flood event, causing a high risk of safety for those who attempt to evacuate after flooding begins.

**3. Flood Warning & Notification:** Should a flood event occur peak flood flows are predicted to occur within 1 to 2 hours from the start of a storm event. The Chief Warden is to monitor alerts from the Bureau of Meteorology for severe storms. Should a severe storm commence the Chief Warden is to monitor the western and northern boundaries for the presence of overland flows and provide flood warning should the relevant depth of flow exceed 50mm in depth.

**4. Monitoring Potential Flood Event:** The Site Manager will advise the Chief Warden when flood conditions are possible. On notification of the impending storm, Chief Warden is to advise all workers of a 'Code Brown' (via two-way radio or other device) and signal instructions to take. The Chief Warden will assign personnel the responsibility to visually monitor the overland flow elevations every 15 minutes and record and report the findings to the Chief Warden. The Chief Warden or other designated Warden will monitor the following information sources and undertake the following:

- i. Regional and Local Radio Stations
  - ii. Relevant Websites
  - iii. Bureau of Meteorology
  - iv. SES Reports
  - v. Onsite weather station monitoring & alerts
- a. Liaise with local emergency services (e.g. SES).
  - b. Remove or relocate items and equipment expected to be impacted by the flood.
  - c. Consider the need of sandbagging and other protection methods for the site.
  - d. Consider the need of turning off the electricity and gas mains.
  - e. Relocate workers to building before the flood reaches hazardous levels, following Flood Evacuation Diagram (Appendix B). If outdoors, workers must take extra precaution to avoid hazards such as flooded roads, downed electrical power lines, utility poles and trees.

**5. During the flood (Response Phase) – Assembly Points & Actions:**

- a. Due to the nature of the flood threat evacuation from the site will not be possible, therefore refuge on site is to be undertaken;

- b. All personnel are to follow the flood evacuation diagram found in Appendix B and assemble in the main building;
- c. DO NOT drive over any flooded roads, causeways or bridges;
- d. DO NOT walk into the floodwater;
- e. DO NOT attempt to wade across or swim through flood waters of any kind.
- f. Liaise with Police and SES regarding road conditions and safe evacuation routes;
- g. Be aware of possible contaminated water;
- h. Be aware of animals, insects and parasites that may be present in or around flood waters;
- i. Due to the predicted short duration of the flood peak, safe evacuation from the site should occur within 2-4hrs of the flood peak.

**6. After the flood (Recovery Phase)**

- a. Assess site for any potential contamination issues.
- b. Keep clear of any fallen trees, powerlines and contaminated waters. Continue to not enter remaining floodwaters (such as those in the basement of the building or waters blocking exit routes).
- c. Remove remaining floodwater, mud and debris from the plant by using wash down hoses, brooms, squeegees, mops, sump pumps and clean-up supplies as is safe to do so. Ensure safety equipment is worn during this process and be cautious of native wildlife that may be present on the site seeking shelter.
- d. Inspect equipment for damage, begin discard/removal of all non-salvageable equipment.
- e. Contact qualified persons to inspect potentially damaged services (such as electricity and gas).
- f. Remove sandbags, other items used to protect building exterior.
- g. Begin cleaning/drying of all essential equipment.
- h. Dehumidify/dry all damp/moist areas.
- i. Preserve equipment/materials that might otherwise be lost.
- j. Reclaim any salvageable supplies/business operating equipment.
- k. Conduct safety walkthrough to inspect other safety hazards or damages to the site

The environmental management, and odour management plans form a part of the post flood site management.

For more information regarding recovery after a flood event, refer to the 'NSW SES Recovery Guide for Floods and Storms', found at:

<https://www.ses.nsw.gov.au/media/2194/20140721-recovery-guide-print-ready.pdf>.

**7. Training:** All workers that enter the site must be trained in this document as a part of the site induction. The FERP is to be read through and understood as a part of the 'Site Safety Rules' and the Induction Checklist.

Further FERP training must be undertaken by all wardens and safety officers for the site in accordance with the requirements of the 'Emergency Management Procedure'. The Chief Warden should continually read this FERP, approximately every 6 months in order

to have a thorough understanding of the procedure to be undertaken in the case of a flood event. A flood drill should also be run as outlined in the SUEZ 'Emergency Response Plan' to ensure the Wardens and personnel are able to act quickly and responsibly in a real flood event.

The awareness training of this flood plan can be found in the 'Emergencies' section of the Site Safety Rules, which outlines that this document is to be read and understood prior to working on the site. To read through this FERP is also a requirement on the Induction Checklist, to be ticked off prior to work on the site.

Following this plan helps reduce the risk of harm to all people on the site in the event of a flood.

## 8. Review and Document Control

VERSION	CHANGE	REVIEWED	AUTHORISED	DATE ISSUED
1	Initial Issue	Jacque Simmons Site Manager		May 2019
2	Reviewed to include stage one and stage two works. Inclusion of site plans	Jacque Simmons (Site Manager) Kelly Gee Project Manager		November 2019

# Appendix A – Golder Associates Flood Depth Maps





PMF Flood Case

This map shows the flood depths of the site for the peak PMF event.

LEGEND

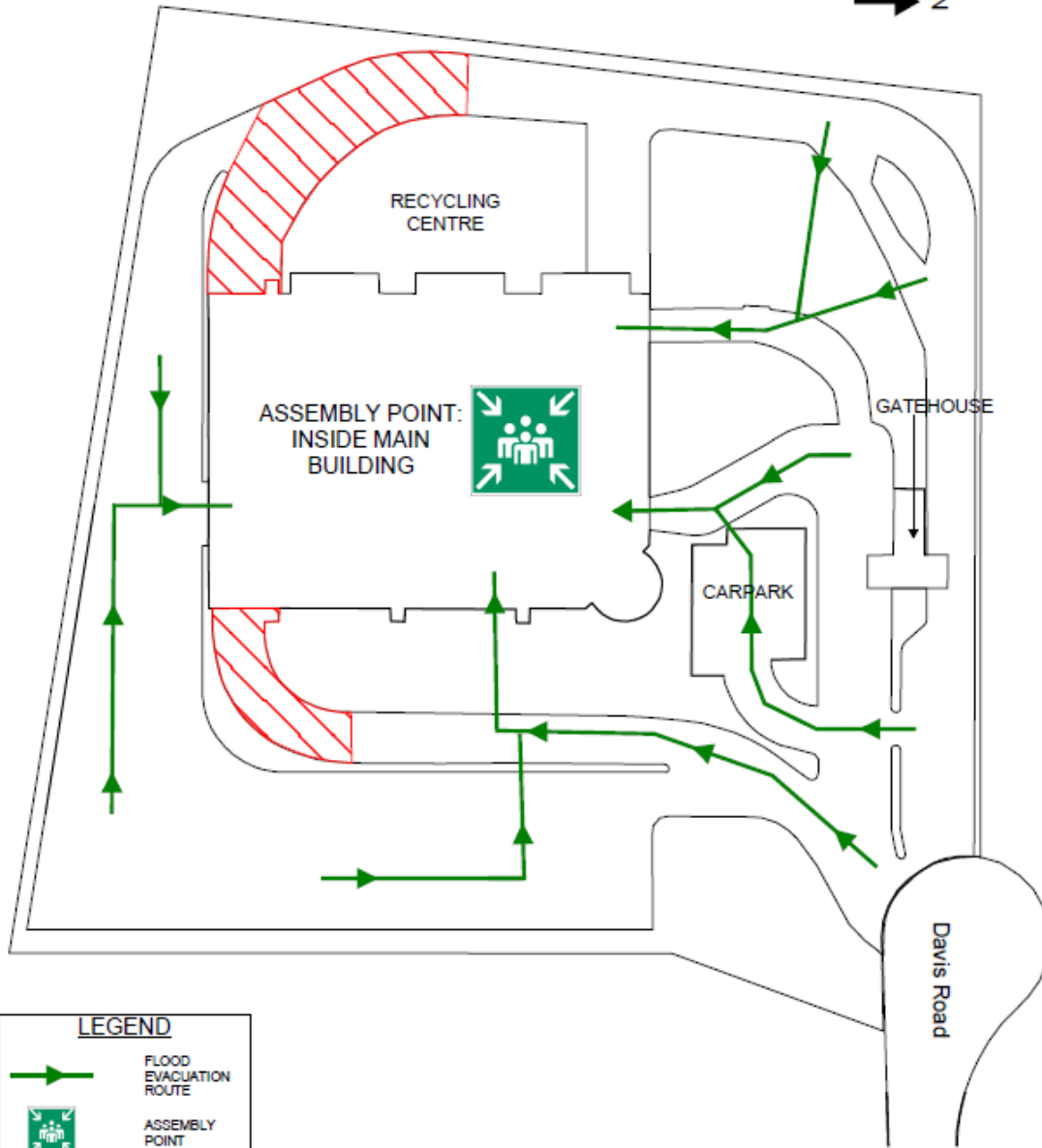
- 0.0m - 0.1m
- 0.1m - 0.3m
- 0.3m - 0.5m
- 0.5m - 1.0m
- >1.0m

**Appendix B – Flood Evacuation Diagram**

# FLOOD EVACUATION DIAGRAM

## SITA AUSTRALIA – WETHERILL PARK RESOURCE RECOVERY FACILITY

**SITE PLAN**



LEGEND	
	FLOOD EVACUATION ROUTE
	ASSEMBLY POINT
	RAMP TO BASEMENT - TO BE AVOIDED