

## APCR (AIR POLLUTION CONTROL RESIDUE) BUSINESS PLAN

- (a) Its expected effect on the provision of facilities and services by the Local Government

The Eastern Metropolitan Regional Council (EMRC) operates the Red Hill Waste Management Facility (RHWMF) at 1094 Toodyay Road, Red Hill, WA 6056, approximately 16km (23km by road) northeast of the Perth Airport. The Site Boundary, as per Licence (L8889/2015/2), bounds an area across four lots, approximately 352 hectares (ha). The RHWMF is a landfill site with Class III and Class IV landfill cells.

Lots 8, 9, and 10, the land directly west of Lot 11, were acquired by EMRC in December 2012 and cover an area of approximately 37ha. While these lots have yet to be incorporated into the prescribed development footprint, the EMRC is seeking to expand operations into these relatively recent land acquisitions, which currently do not contain any permanent infrastructure. In 2019/20 a substantial portion of these lots was levelled, and a large pad was constructed suitable for future resource recovery infrastructure.

It is proposed that an APCr processing plant be constructed on part of Lot 10. This forms an integral part of the overall development plan for Red Hill. A permanent large-scale FOGO processing plant is planned to be constructed at this location, together with a liquid waste processing plant in the near future.

The development of this part of the RHWMF has been planned for over a number of years – refer to Red Hill Development Plan (D2020/05621) and is integral to the strategic development of the facility over the next 20 years. The construction of an APCr plant is consistent with the licensed use of the site and the on-going provision of new resource recovery services at this facility.

- (b) Its expected effect on other persons supplying facilities and services in the district; and

The Site is owned and managed by the EMRC and it has been in operation since 1981. Access to the Site is from Toodyay Road and allows vehicles to enter and exit the Site from the northwest corner of Lot 11. The Site is licenced for the acceptance and burial of waste classified as Class II, III and IV waste, as specified in the Department of Water and Environmental Regulation (DWER) guideline Landfill Waste Classification and Waste Definitions 1996 (as amended 2018). The APCr processing plant will have no impact on other persons supplying facilities and services in the district. The proposed location for the processing plant is well buffered from surrounding residents.

APCr is a by-product generated from air pollution control systems from Waste to Energy Plants (more commonly referred to as fly ash). Typically, it includes a mixture of ash, carbon and lime and APCr is classified as Class V waste as per the WA Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).

The treatment of APCr at Red Hill will involve concrete immobilisation, reducing the waste classification from Class V to Class IV or less, through the treatment and disposal processes. APCr will be transported from the Waste to Energy facility in sealed, controlled waste vehicles / tankers and discharged into an overhead silo at the processing site at Red Hill. The processing of the APCr with cement and water is a sealed activity as well as the transfer of the material from the APCr plant to the Class IV cell. Regular testing of treated APCr will ensure it meets or is below the Class IV standards.

The community can access the Site either to take part in activities run at the EMRC's waste education centre or to drop-off a range of waste materials at the Site's community waste transfer station. Source separated green waste is accepted and processed at the Site through mulching and open windrow composting. Access to the waste transfer station is through the main weighbridge and then via a dedicated road so as to minimise potential conflict between heavy trucks and the public.

The EMRC is in regular contact with residents in the vicinity of the RHWMF. The Waste Management Community Reference Group (WMCRG) meets every 6 months; meetings with residents also take place as and when needed. The EMRC held community consultation sessions with the WMCRG 24 October 2022 and local community members on 24th August 2021 regarding this proposal.

- (c) Its expected financial effect on the local government; and

The construction and installation of a concrete batching plant for APCr processing will be of strategic value to the EMRC and make a positive financial impact on the EMRC. This new service will provide for additional jobs and a new revenue stream adding to the financial viability of the organisation. The total amount of APCr to be processed is around 33,000 tonnes per annum which will cover the disposal from both waste to energy plants under construction. This undertaking includes processing ability for a batching plant sufficient to process around 20,000 tonnes of APCr with the ability to expand its capacity to accept APCr an addition 13,000 tonnes.

The capital costs will be recovered by a separate charge on the waste to energy proponents. The gate fee charged for each tonne received will cover operational expenses, together with other overhead costs such as maintenance costs, fuel, licence and labour costs.

### **Project Funding**

The project will be funded by the EMRC. Provision has been included in the 2022/23 capital works programme for the design and construction of a concrete batching plant. The budget was approved at the Ordinary Council Meeting of 23 June 2022.

### **Cost Benefit**

It is expected that the APCr plant will generate a financial surplus. The capital costs will be recovered over a 10-year period from charges to the waste generators.

- (d) Its expected effect on matters referred to in the local government's current plan prepared under section 5.56.

The EMRC has a 10-year Strategic Plan (SP) 2017-2027 and a five-year Corporate Business Plan (CBP) 2021/2022 – 2025/2026 that is revised and reported back to Council on a quarterly basis. The SP and the CBP are underpinned by an Annual Budget and a 10-year forecast budget comprising both operating and capital expenditure.

The EMRC currently relies on its waste management services to generate revenue for financial resilience and investment in other initiatives. The EMRC has recently conducted a Strategic Review which considers the expected market changes resulting from the WARR Strategy (Waste Avoidance and Resource Recovery 2030) and recommends actions that should foster the organisation's long-term financial viability.

The current Class IV landfill cell has significant remaining disposal capacity, offering disposal options for contaminated soils and other contaminated solid wastes meeting Class IV landfill waste acceptance criteria.

The EMRC is currently seeking an amendment of the existing site licence to permit disposal of Class IV APCr processed waste in the existing Class IV cell. During stakeholder engagement interviews, representatives from the Department of Water and Environmental Regulation (DWER) noted the geological setting of the Red Hill landfill was well suited to providing Class III and IV landfilling capacity to service the Perth metropolitan area and being appropriately buffered from residential development.

The EMRC has also been extremely successful in recognising the opportunities that exist in waste management and the changes that are happening within the waste industry including the acceptance of PFAS waste. Expanding its waste management activities to include acceptance and processing of APCr and FOGO processing are future objectives for the Site and will ensure that the EMRC continues to be a leader in the WA waste management and resource recovery industry.

- (e) The ability of the local government to manage the undertaking or the performance of the transaction.

The EMRC typically has around 25 staff working full time at Red Hill. It is expected that three new staff will be required to operate the proposed APCr Processing Plant. One employee will be required to operate and manage the plant, and two employees will be required to drive the two agitator concrete trucks back and forth to the Class IV Cell on a continuous rotation. A third truck is needed as a spare, in case of mechanical issues.

The EMRC has the management expertise to undertake the proposed operation safely and efficiently. The transportation of APCr from the Waste to Energy plants will be the responsibility of the respective operators.

- (f) Any other matter prescribed for the purposes of this subsection.

Nil.

### **Risk Management**

The delivery schedule for the APCr is contingent upon when the waste to energy plants are commissioned and the EMRC is working closely with these proponents and the DWER for the approval to instal the plant at Red Hill.

The EMRC is developing supply contracts with both waste to energy plant operators to manage contractual risks. Procurement of Treatment Plant and Equipment – The EMRC has already conducted a public tender for the supply and installation of a concrete batching plant.

Proximity of FOGO Plant and Cross Contamination of Material – The proposed permanent FOGO Plant is to be located on the west side of the Resource Recovery Pad, the proposed APCr Treatment Plant on the east, approximately 300m away. Waste to the FOGO pad will be delivered in Refuse Trucks, while APCr and cement will be delivered to the batching plant in sealed tankers, a well-ried method of moving bulk dry powders. There is a small risk of vehicles going to the wrong location however with training and signage, this risk can be managed.

Cement / APCr Delivery – to minimise the risk of cement and/or APCr being delivered to the wrong silo there will be site-specific operational procedures which will document the control systems to control the risk. There will be site supervision and training for delivery drivers, simple lock out controls such that only cement deliveries can be connected to the cement silo hose, and high levels of signage and visual cues.

Cement / APCr Dust Management – there is a risk of spillages of the APCr during transfer from the truck to the silos. To mitigate against this the APCr is transported in specialised containment trailers and the silos that have dust containment filters to prevent leakage during transfer from the trailer. Air monitoring will be implemented as per the DWER licence to check air quality and find any issues with the operation.

### **Schedule**

- EPA / DWER Approval – pending
- Design of Concrete Batching Plant – Concept design (complete) to be submitted with the Licence referral
- Tender for manufacture and installation of Concrete Batching Plant – being re-tendered.
- Tender for agitator (concrete mixer) trucks – to be issued
- Tender for cement (if required) – August 2023
- Manufacture and installation of concrete batching plant – subject to Council approval
- Completion of works – 30<sup>th</sup> October 2023 (Commissioning subject to S38 and works approval)