

Melbourne Energy & Resource Centre

Information Session – March 2023



Welcome & Introductions

Acknowledgement of the Traditional Owners

Presenters

- **Kristy Barnes** – Project Manager - Cleanaway
- **Jenna Beckett** – Specialist Coordinator – Arup
- **Marc Revault** – Technical Advisor - Ramboll

Facilitators

- **Matthew Gordon** – Facilitator - Capire Consulting Group
- **Christian Demetriou** – Support Facilitator - Capire Consulting Group

Purpose of today

- Explain the need for waste-to-energy (WtE)
- Share information about the Melbourne Energy and Resource Centre (MERC) proposal
- Respond to community's enquiries from previous engagement
- Understand and answer your questions
- Share the next steps for the project

Agenda

1. What brings you here today?
2. Presentation: What is the MERC and why is it needed?
3. Questions (using the Q&A box throughout the presentation)
4. Presentation: WtE information and responding to what we heard in early engagement
5. Questions
6. Next steps

Housekeeping

- We are recording the session
- Finish on time
- Use the Q&A box to ask questions anytime during the presentation
- We will try to answer your questions
- Stay on topic
- Respectful behavior

Questions raised for this meeting

- Location and emissions
- General information about the project and opportunities to collaborate
- Environmental impacts
- The process and stages of the procurement. The life cycle of the waste facility
- Impact on nearby conservation areas, Merri Creek and its tributaries
- Design and development details, scale of development (could it be increased in size), traffic, litter control, runoff, location relative to waterways, greenhouse gas emissions
- General information on community acceptance globally of this technology

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What else would you like to hear about today?

Questions raised for this meeting

- Health implications of nearby residents from burning of waste
- Broader environmental impacts
- Avoiding a culture of industry not taking responsibility for waste by producing things that can not be part of a circular economy
- Community complacency when waste can be burnt to produce energy

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What else would you like to hear about today?

How to engage?

- caportal.com.au/cleanaway/merc
- (03) 9021 0603
- merc@cleanaway.com.au



What is the MERC and why is it needed?

Cleanaway

Snapshot of Cleanaway

Cleanaway is Australia's leading total waste management, industrial, environmental and health services company.

Cleanaway is vertically integrated through the waste value chain the collection of organics (FOGO), recyclables and residual waste, to resource and energy recovery, to waste treatment and disposal.

Our services are underpinned by a diversified portfolio of licensed infrastructure assets operated by a committed workforce.



5,000+ Vehicles



~250 Sites Australia wide



125+ Licensed infrastructure assets



130+ Municipal councils



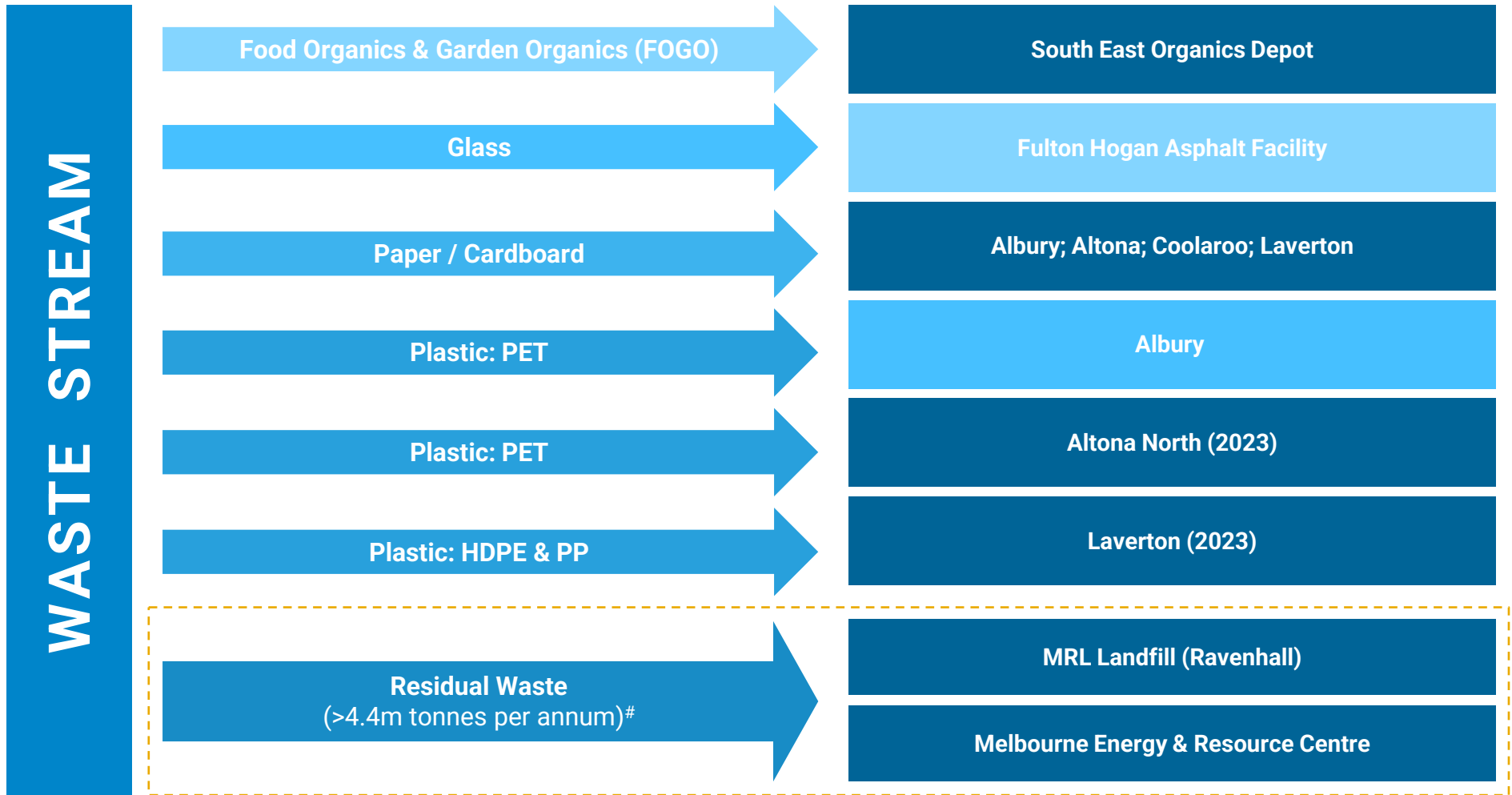
150,000+ Business customers



Cleanaway is investing up the waste hierarchy



Cleanaway waste management streams in Victoria



* Interim facility until Melbourne facility commissioned in 2023

Current waste management

By 2046, Victoria is forecast to send an estimated **5.9 million tonnes of waste** to landfill each year.



Fill 7.8 MCGs



Fill 5,000
Olympic size
swimming pools

- Currently **all general waste goes to landfill** (inclusive of homes, council and Commercial & Industrial collection).
- While essential, landfill capacity is **reducing**, is **hard to replace** and **buries useful resources**.
- Disposal to landfill is **lowest** on the waste hierarchy – we must conserve landfill “airspace”.

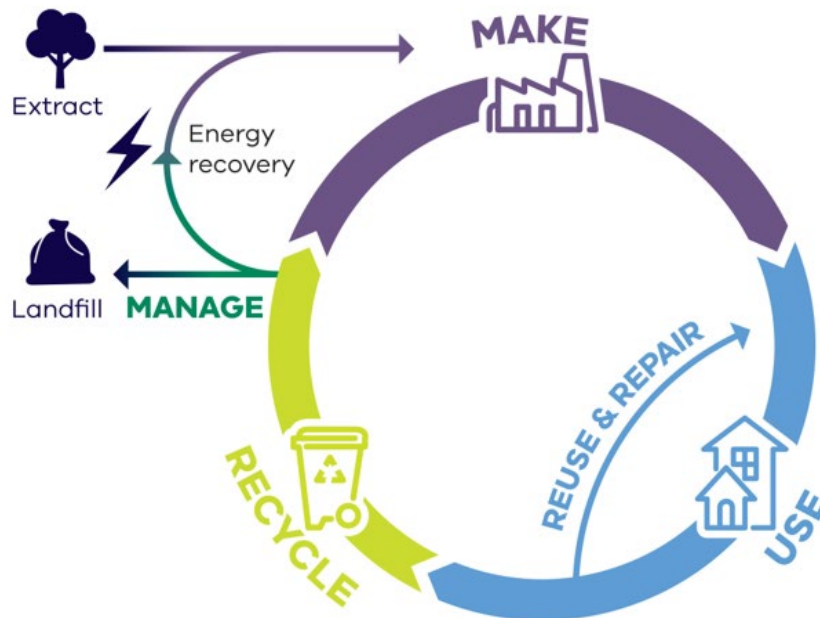
Victorian Circular Economy Plan

- **Dedicated teams and Strategies**

- A new economy 2020, Victoria's Circular Economy Plan
- Established *Recycling Victoria* mid-2022
- *State-wide waste and resource recovery infrastructure plan (2022)*

- **State Government Actions**

- New recycling laws and regulations ([Circular Economy \(Waste Reduction and Recycling\) Act 2021](#))
- Standard 4-bin waste system (glass, food and organics, recyclables, residual)
- Single use plastic ban
- Container Deposit Scheme
- *Waste to Energy Framework*

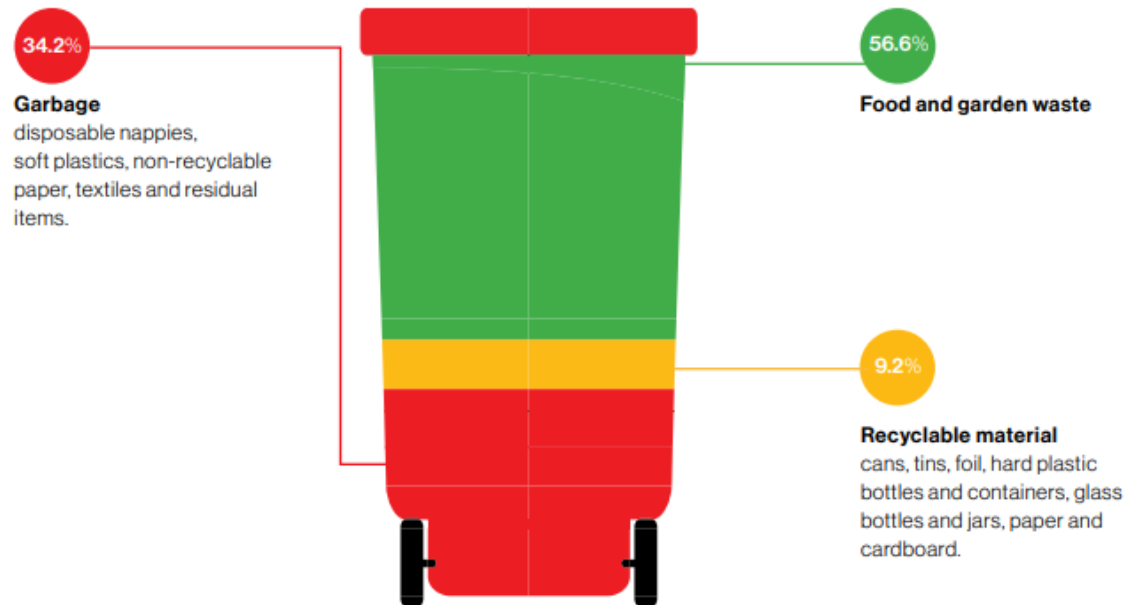


Maximising recycling and resource recovery

The Victorian Waste to Energy Framework only permits acceptance of waste that cannot be recycled.

- Municipal residual waste from councils with **at least a three-bin** kerbside collection system
- Commercial & Industrial waste resulting from a **source-separation system** or not practicable to recycle
- Rejects from recycling or FOGO collection due to contamination

Composition of the **garbage bin**:



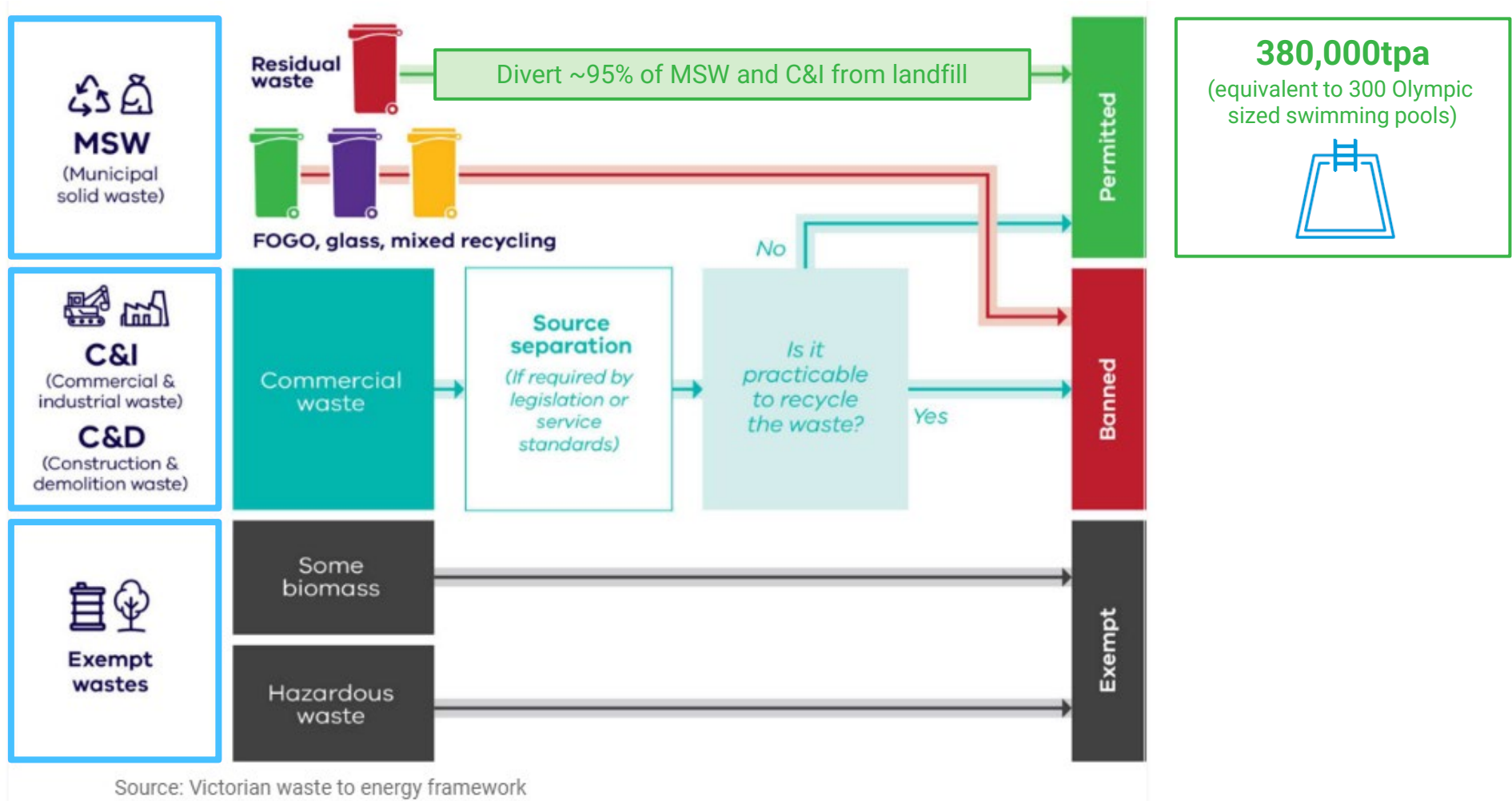
Source: Whittlesea Rethinking Waste Plan 2021-2030



MERC Proposal

Arup

What waste will MERC process?



Our Site: 510 Summerhill Road, Wollert



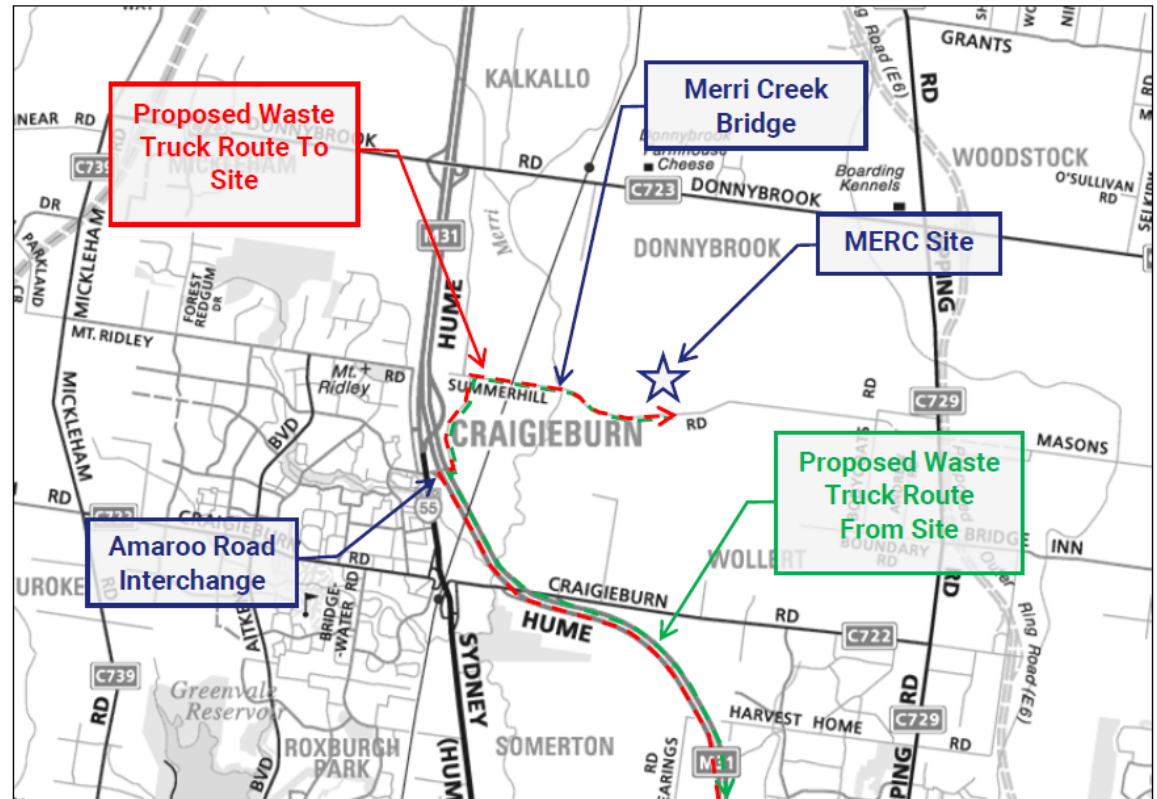
Construction / operation of MERC

Construction

- 3-year construction period

Operation

- 24 hours per day, 7 days per week
- Delivery hours 6am – 6pm (Mon – Sat)
- Two entry points on Summerhill Road (separate entrance for visitors and trucks)



Technical environmental assessments to inform the design

- Air Quality & Odour
- Biodiversity
- Cultural Heritage
- Greenhouse Gas Emissions
- Climate change
- Hazard and Risk
- Human Health
- Hydrology and Flooding
- Land and Groundwater
- Landscape and Visual
- Noise and Vibration
- Socioeconomic
- Town Planning
- Traffic and Transport
- Waste Management
- Waste Flow and Feedstock

What we've heard from the community and stakeholders will also inform design.

Architectural design (facing north-west)

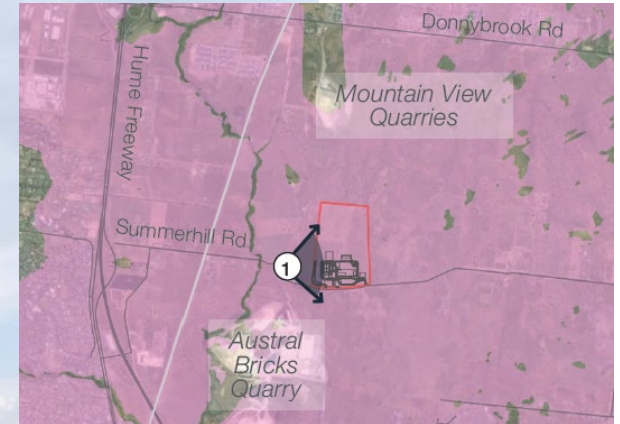


Visitor and Education Centre (front view)



What will MERC look like from surrounding viewpoints?

570 Summerhill Road, ~330m away, looking east



Artist impression, subject to change

What will MERC look like from surrounding viewpoints?

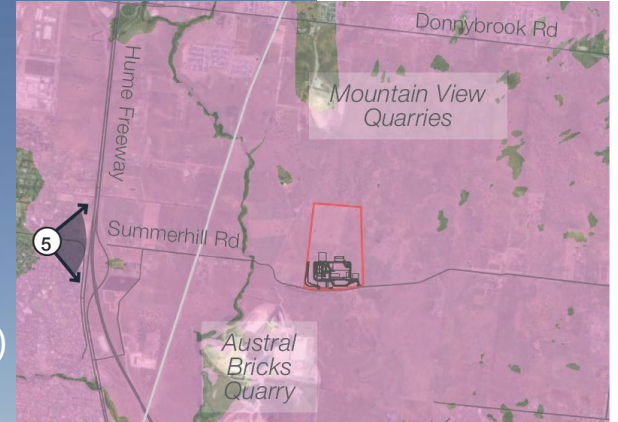
620 Summerhill Road, ~1km away, looking south



Artist impression, subject to change

What will MERC look like from surrounding viewpoints?

Mount Ridley lookout, ~3.7 km away, looking east



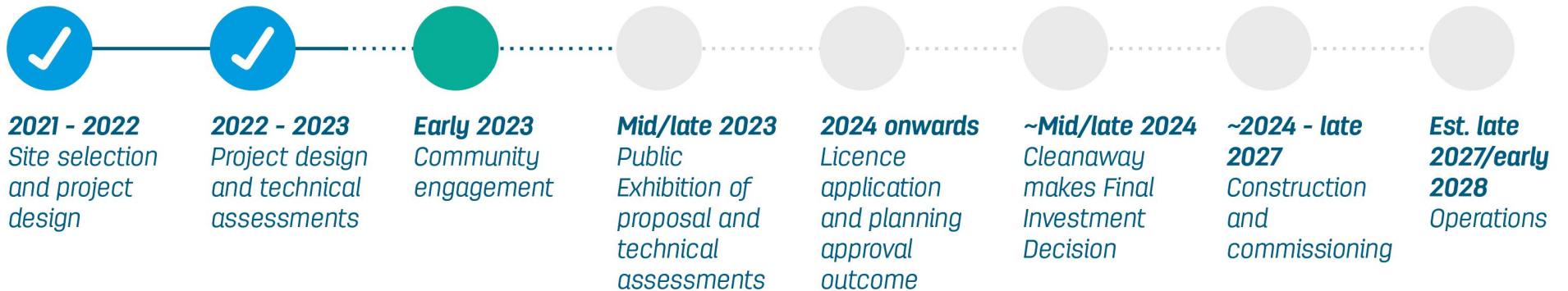
Your views are important in this design process.



Collaboration to date has included:

- Traditional Owners (Wurundjeri People)
- Local community ([your voice is important!](#))
- Local Government (Whittlesea & Hume)
- Victorian Planning Authority
- Department of Environment, Land, Water & Planning
- Department of Transport and Planning
- Department of Energy, Environment and Climate Action
- Department of Jobs, Skills, Industry and Regions
- Environment Protection Authority Victoria
- Sustainability Victoria
- Recycling Victoria
- VicRoads
- Waste & Resource Recovery Groups
- Surrounding landowners

Where are we now in the process?





Pause for questions

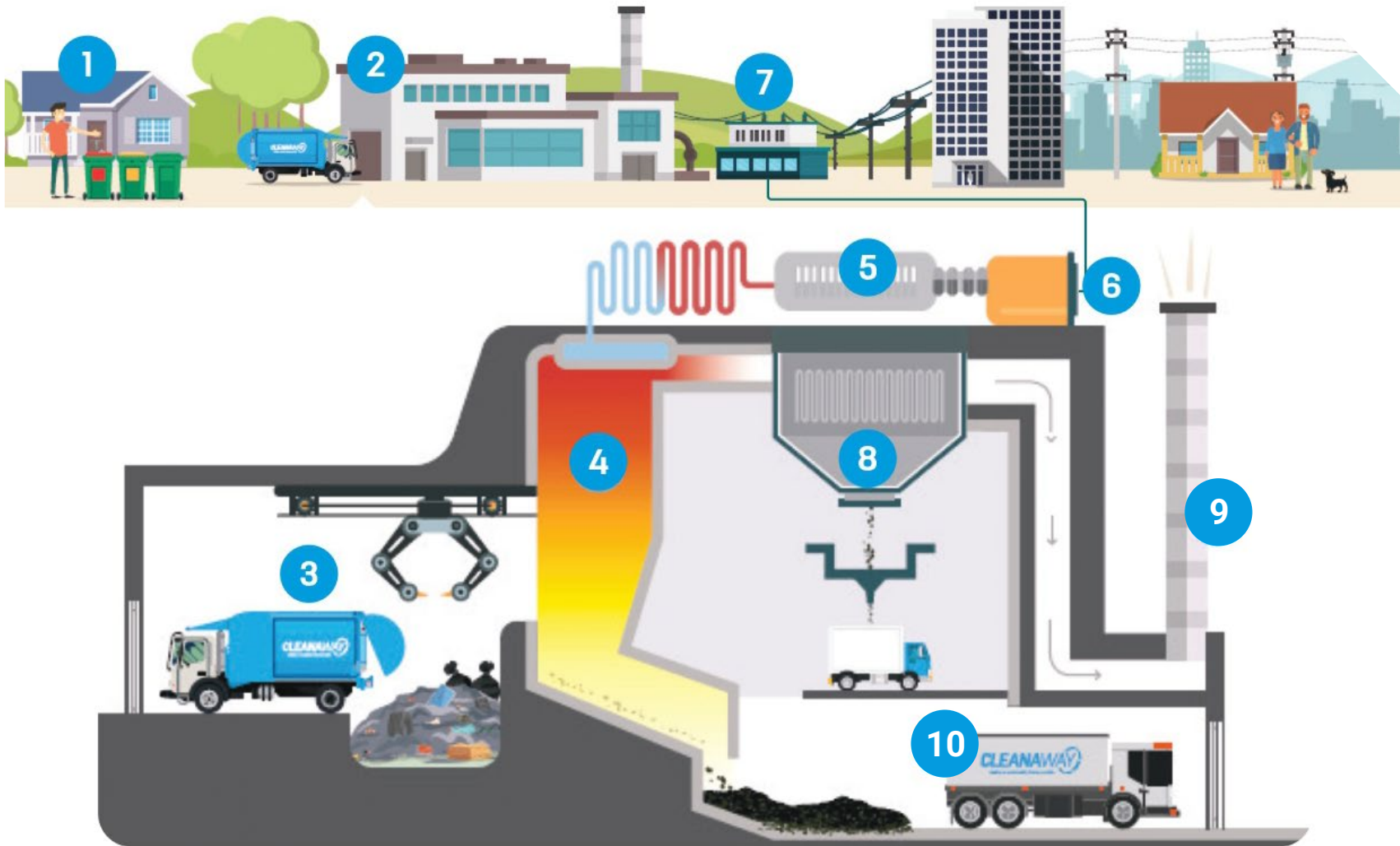


How does it work?

Ramboll

CLEANAWAY 

How does it work?



Key design features of the MERC

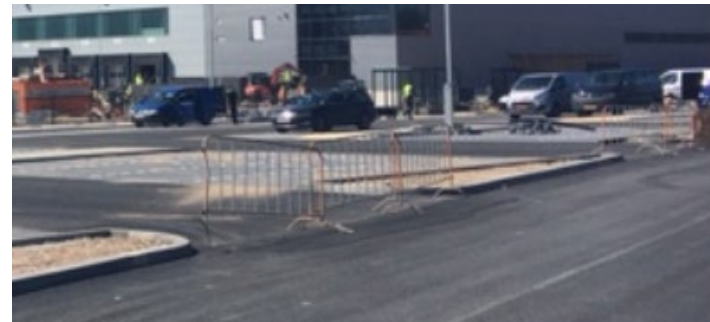
- **Feedstock controls**
 - Primary Controls (e.g. Waste Acceptance Protocol)
 - Secondary feedstock controls.
- **Air emissions will comply with EPA Victoria's Guidelines and air quality standards:**
 - Use of benchmark European Union's Industrial Emissions Directive and Best Available Techniques Reference Document (BREF) for Waste Incineration & BAT Conclusions (2019) for design & operation
 - Monitoring – Emissions data to be regularly updated on MERC website
 - Independent Air Quality Assessment to confirm compliance with EPA air quality standards (Air Pollution Assessment Criterion)
 - Independent Human Health Risk Assessment

Key design features of the MERC continued

- **Zero process wastewater discharge**
- **Stormwater will be collected on-site for reuse and attenuation**
- **Bottom Ash treated on-site** to recovery metals and produce a secondary aggregate suitable for civil construction applications
- **Air Pollution Control residue (APCr) treated on-site** prior to disposal off-site

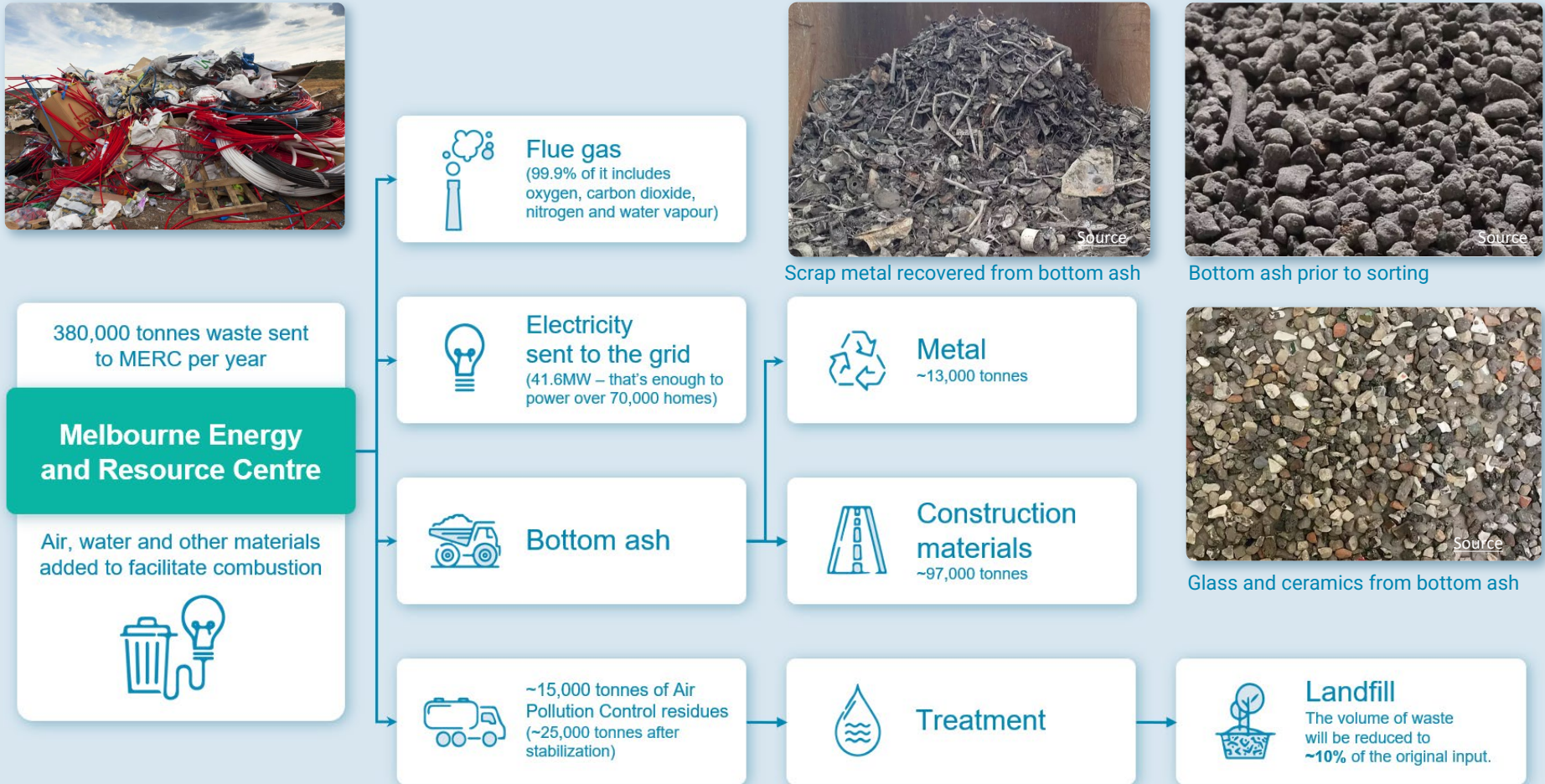


30,000t IBAA used for road construction and embankment (UK)



55,000t IBAA used for road network and infrastructure (UK)

Key inputs and outputs from MERC



Are waste-to-energy facilities located elsewhere?

- The MERC uses modern technology that is used in hundreds of facilities in Denmark, Germany, UK, USA, Singapore and Japan.
- Facilities in Europe and Japan are often located less than 400m from the local community.



Lakeside Energy from Waste, UK



Amager Bakke, Denmark



Kwinana Waste to Energy, Perth

Proximity to residential area – international examples



In Paris there are 3 WtE plants close to the centre (20,000 inhabitants/square km)

Isseane 480,000tpa



L'etoile verte 600,000tpa



Ivry/Paris XIII 350,000tpa

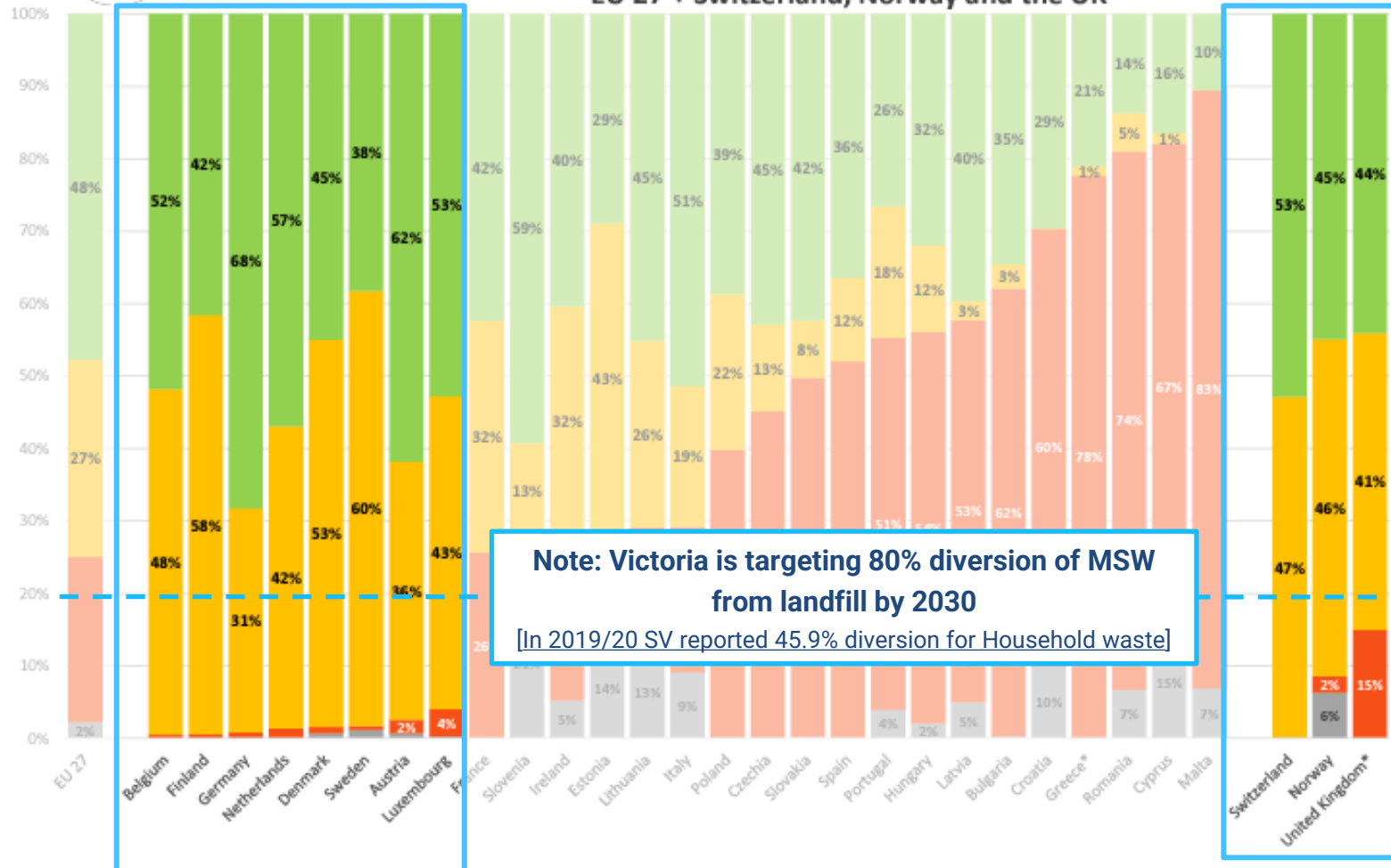


Waste management regimes in Europe and the UK



Municipal waste treatment in 2020

EU 27 + Switzerland, Norway and the UK



Note: Victoria is targeting 80% diversion of MSW from landfill by 2030
 [In 2019/20 SV reported 45.9% diversion for Household waste]

- Landfill
- Waste-to-Energy
- Recycling + Composting
- Missing data



Percentages are calculated based on the municipal waste reported as generated in the country

*: last available data

Benefits to the local community

GENERATING 40MW
ENERGY TO POWER OVER
70,000
HOMES

CREATING OVER
800
JOBS DURING
CONSTRUCTION

PLUS
50
LOCAL HIGHLY SKILLED
JOBS DURING OPERATION

GREENHOUSE GAS SAVINGS
EQUIVALENT UP TO
50,000
CARS OFF THE ROAD

RECOVERING AN
ESTIMATED
>10,000TPA
OF RECYCLABLE METALS



Q&A

How to engage?

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Thank you

CLEANAWAY 