

Genesis Waste Management Facility

**Former Section 75W Modification
Assessment (06_0139 MOD 6)**





Regional Context



Development Background

- Existing waste management facility (WMF) approved in November 2009
- Previously operated by Dial-A-Dump, now acquired by Bingo
- WMF has two main components: resource recovery and a non-putrescible landfill
- Landfill component uses quarry void (1950s-2005)
- Currently accepts 2,000,000 tonnes per annum (tpa) of solid (non-putrescible) and asbestos waste – of this only 700,000 tpa can be landfilled




Western Sydney Employment Area (WSEA)

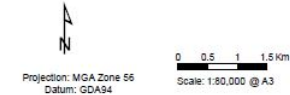
- Area has been zoned for industrial use as part of the WSEA since 2009
- Progressive development has provided a range of employment generating (e.g. warehousing, freight, distribution centres)
- Identifies 2,100 ha of employment land (NSW's largest employment land)
- WSEA extension preserves additional 4,250 ha

State Environmental Planning Policy (Western Sydney Employment Area) 2009

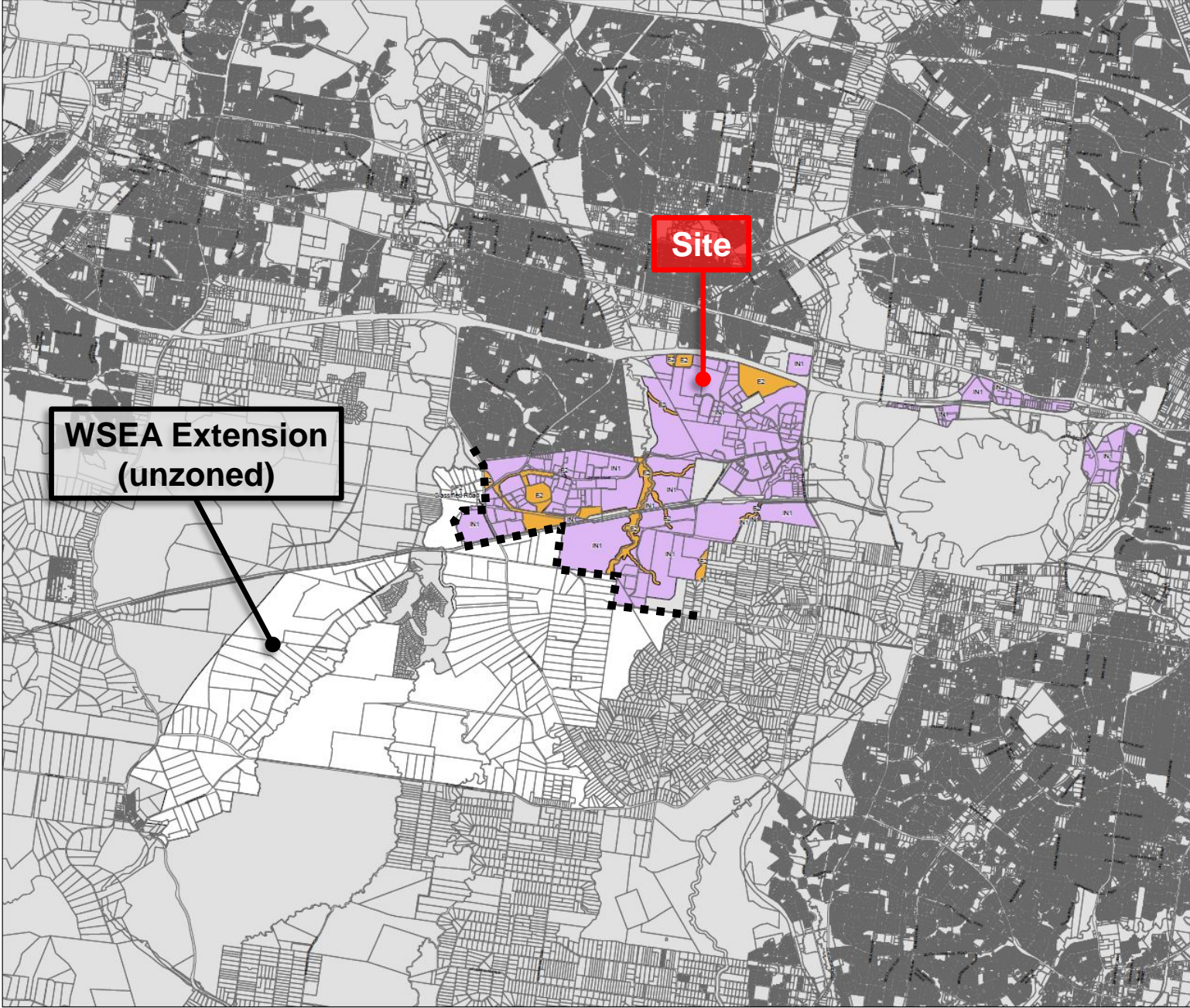
Land Zoning Map

Sheet LZN 001

-  Subject Land
- ZONE**
-  E2 Environmental Conservation
-  IN1 General Industrial
-  IN2 Light Industrial
-  SP2 Infrastructure
- Cadastre**
-  Cadastre 13/02/2018 © NSW LPI



Map Identification Number
SEPP_WSEA_LZN_001_080_20180222



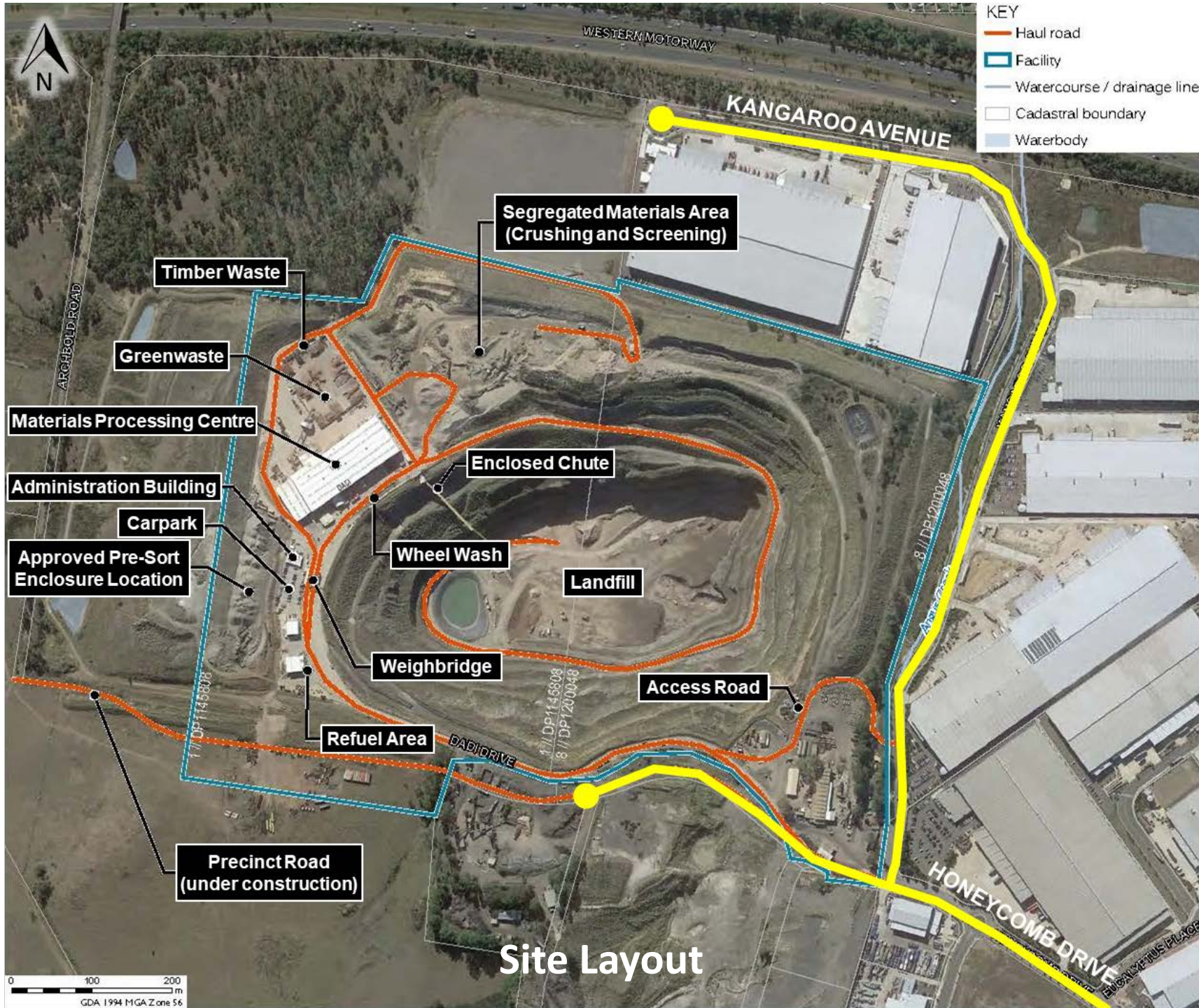
WSEA Land Zoning Map

Modification Request

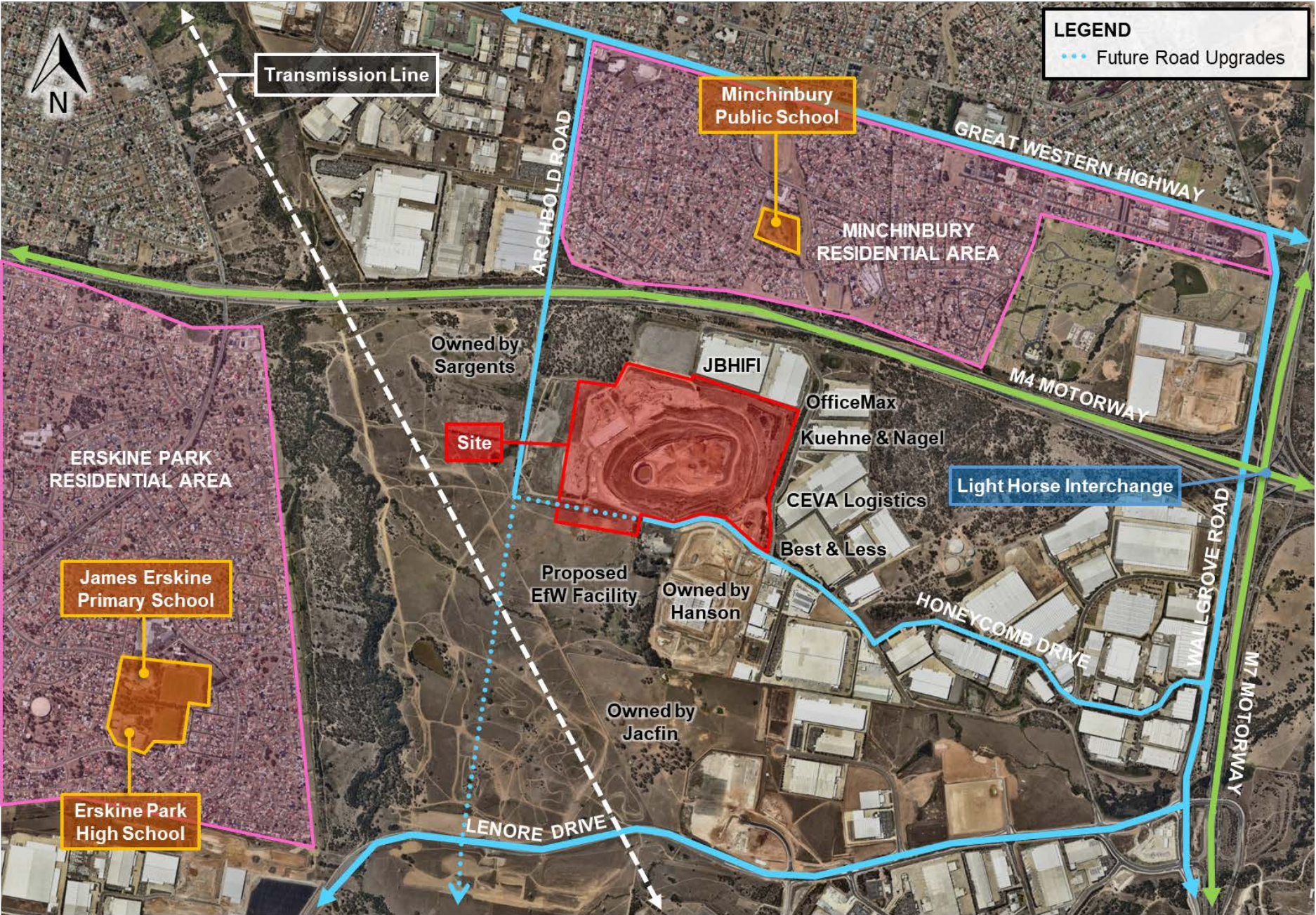
- 1,000,000 tpa direct-to-landfill, not including residual waste from MPC
- Increase the hours of operation of certain activities (enclosed processing works, landfilling and ancillary works)
- Revised noise limits to reflect the contemporary noise environment

Proponent's Justification

- Projected market growth for resource recovery and landfill disposal due to large-scale infrastructure projects and major development in Western Sydney
- Residual waste from other Bingo facilities
- Increase in contaminated material, such as asbestos and soil contaminated with heavy metals
- Queensland waste levy



Site Layout



Developments in the Site Vicinity

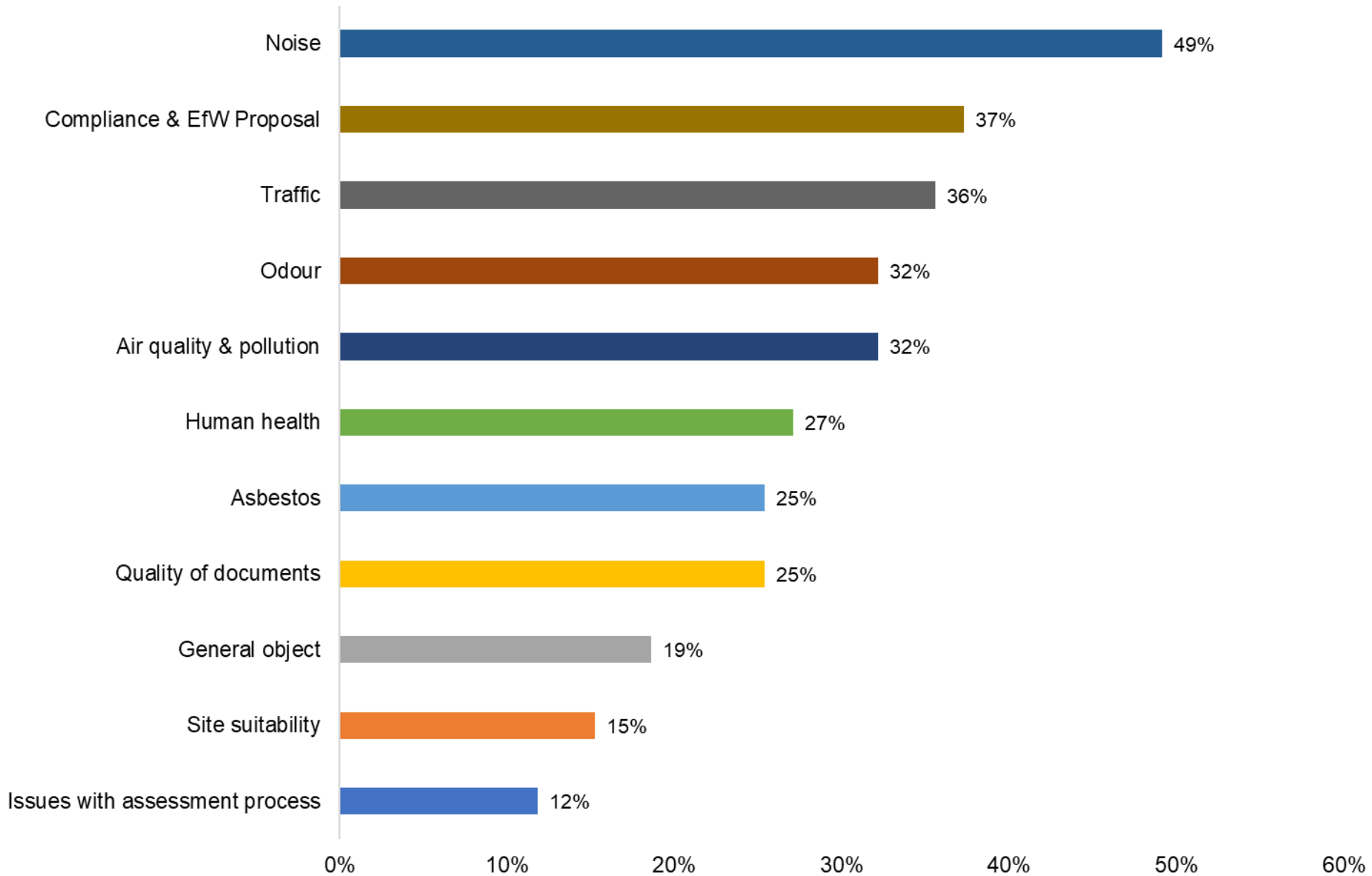
Waste Hierarchy

- Residual waste from other resource recovery facilities operated by the Proponent
- Disposal for problem wastes, such as asbestos contaminated waste and bushfire waste
- Shorten landfill lifespan by up to 7 years
- Resource recovery arm of the operation
- Utilising and rehabilitating a former quarry site

Exhibition

- Modification request exhibited between 3 October 2018 until 17 October 2018
- 70 submissions received, including 62 objections
- Blacktown City Council objected

Summary of issues raised in community submissions



Response to Submissions

- First iteration provided in May 2019
- DPIE and EPA requested additional information on several occasions
- Adjacent business owner provided numerous submissions that included advice from experts engaged to peer review the Proponent's assessments
- Final consolidated RTS provided in November 2019

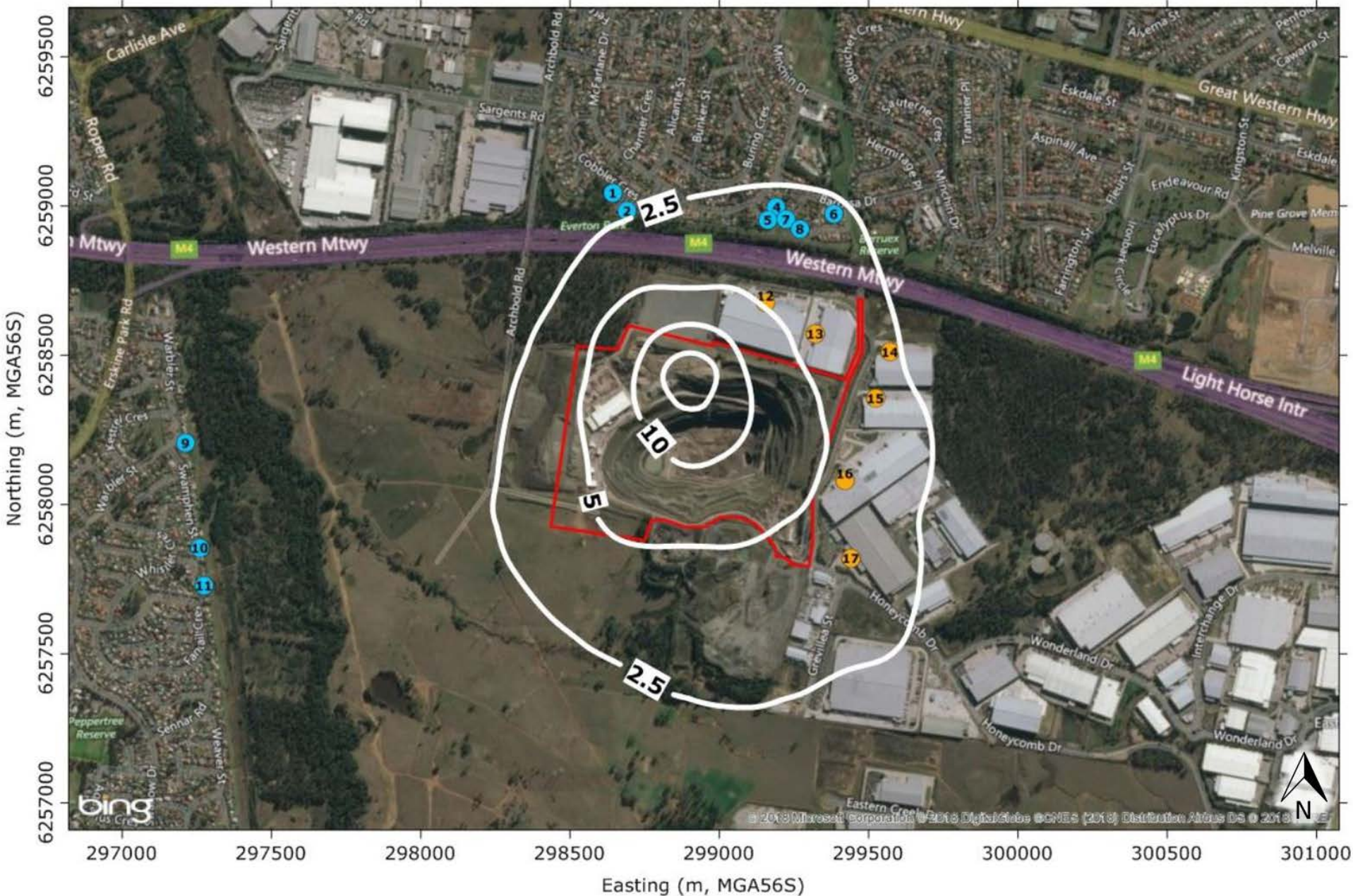
Air Quality

- Proponent prepared an air quality impact assessment (AQIA) which identified dust as the key pollutant
- Dust is measured in total suspended particulate matter (TSP), PM₁₀ and PM_{2.5}
- AQIA concluded the modification would result in minor increases in PM, with the PM_{2.5} criteria being exceeded
- Proponent argues approach is conservative as it assumes a lower resource recovery rate than currently experienced

Note: $\mu\text{g}/\text{m}^3$ = micrograms per cubic metre

Average peak day 24-hour and annual PM_{2.5} modelling predictions for the modification

Receptor	Receptor Type	PM _{2.5} Mod Increment	PM _{2.5} Cumulative	PM _{2.5} Mod Increment	PM _{2.5} Cumulative
Criterion		24 hour (25µg/m ³)		Annual (8µg/m ³)	
R01	Residential	2.1	24.8	0.4	9.0
R02		2.4	24.8	0.5	9.1
R03		2.6	25.1	0.5	9.1
R04		2.8	25.3	0.6	9.2
R05		3.0	25.4	0.6	9.2
R06		2.6	25.2	0.5	9.1
R07		2.9	25.3	0.6	9.2
R08		2.9	25.3	0.6	9.2
R09		0.5	24.4	0.1	8.7
R10		0.6	24.4	0.1	8.7
R11		0.7	24.4	0.1	8.7
R12	Commercial/ industrial	4.8	26.5	1.2	9.8
R13		4.1	26.9	1.1	9.7
R14		2.7	26.2	0.7	9.3
R15		3.3	26.4	0.9	9.5
R16		4.2	26.8	1.1	9.7
R17		3.8	25.5	0.7	9.3



Mod Increment 24 Hour Average PM_{2.5} Concentration (µg/m³)

Air Quality

- Background PM_{2.5} concentrations ranged from 8.7-9.7 µg/m³, which already exceeds the criteria of 8 µg/m³
- AQIA attributed high levels of background PM to vehicle emissions, bushfire, hazard reduction and dust storms
- Use of haul roads identified as largest dust generator from the site

Recommended Conditions

- Review and update the Chute Management and Maintenance Plan
- Update the Air Quality Management Plan to include real-time boundary monitoring and trigger levels for remedial action
- Within 6 months, submit a site-wide air quality audit conducted by an independent expert and prepared in consultation with the EPA

Noise

- Proponent prepared a noise impact assessment (NIA) which demonstrated ambient noise levels currently exceed the noise limits set in the Project Approval
- Modification aims to align noise limits consistent with current noise policies for managing the amenity of noise catchments surrounding developing industrial estates (such as the WSEA)



Rapid development within the WSEA over the past ten years, combined with the nearby M4 and M7 Motorways, have altered the surrounding noise environment



Noise

- Proponent conducted additional noise monitoring at the request of DPIE and EPA to confirm estimates in the NIA
- EPA recommended noise limits based on the Proponent's predicted noise levels
- Revised noise limits will more accurately reflect the contemporary noise environment and the project's impact on nearby receivers
- Project predicted to meet INP derived noise objectives

Recommended Conditions

- Revised noise limits
- Post-commissioning report to validate the noise predictions of the NIA
- Review and update the existing Environmental Management Strategy and Noise Monitoring Program

Other Assessment Matters

Traffic

- Council and several public submissions raised increased traffic as a concern
- Proponent's traffic impact assessment estimated an additional 492 truck movements, for a daily total of 1,284 movements, however these additional movements would occur during the evening and night time periods
- WSEA has been developed to accommodate large volumes of traffic

Other Assessment Matters

Odour

- Putrescible waste is not processed or landfilled
- Modification does not introduce new waste streams or operational activities on the site

Leachate

- Capacity of existing leachate treatment system is 325,850 m³ per annum
- Maximum discharge permitted under Trade Waste Agreement is 237,250 m³ per annum
- Estimated maximum volume of leachate that would be generated at completion of landfilling is 185,000 m³ per annum