Kariong Sand and Soil Supplies Facility

SSD-8660

1 November 2021

Department of Planning, Industry and Environment

Overview

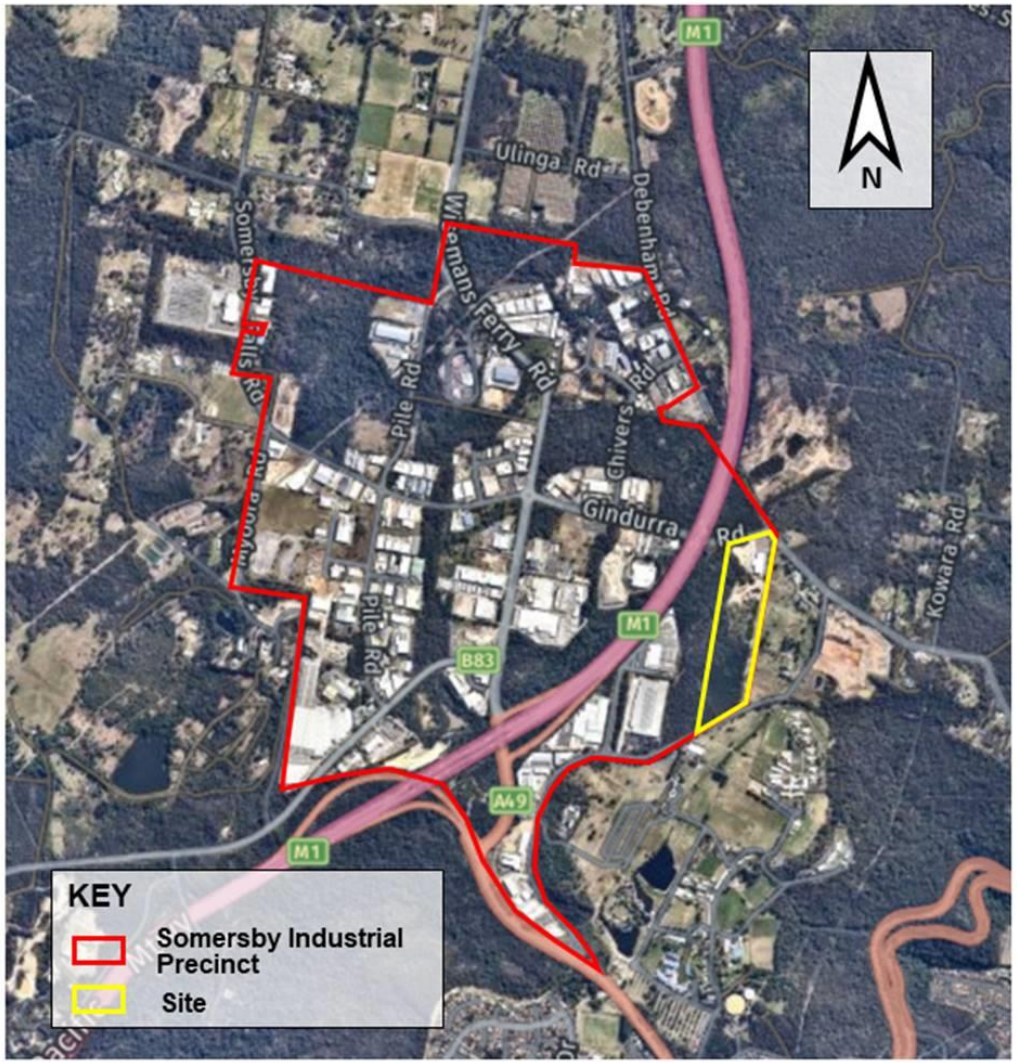
- Department of Planning, Industry and Environment – Industry Assessments Team
- Kariong Sand and Soil Supplies Facility
- State Significant Development
  - resource recovery facility (RRF) with greater than 100,000 tonnes per annum (tpa) waste throughput
- Independent Planning Commission determination
  - > 50 objections
- Key issues (operational impacts):
  - Air quality
  - Noise
  - Traffic and access
  - Water management
- How community concerns are addressed
- Strict conditions, including monitoring and validation of impacts at each stage

Proposed Development

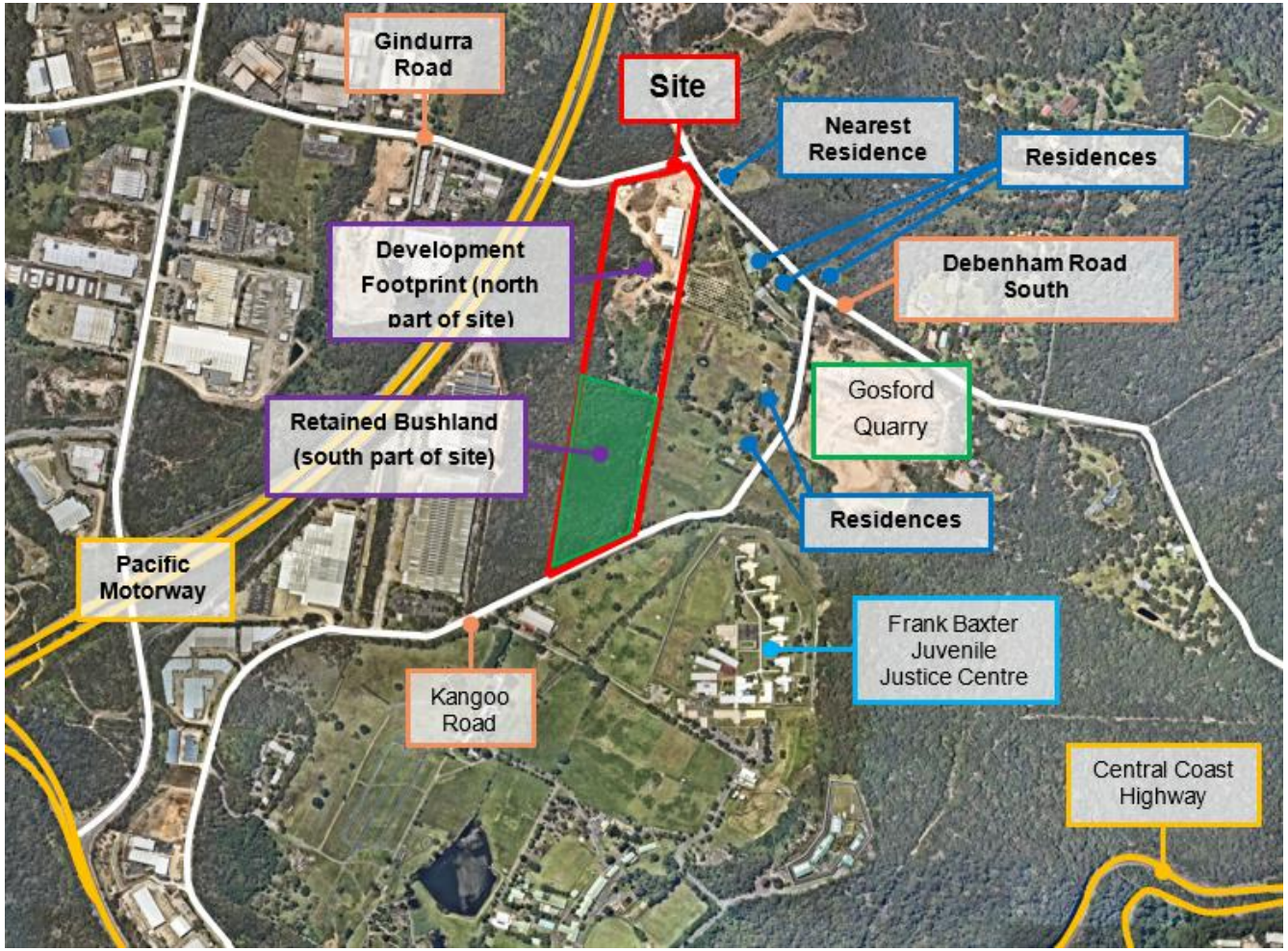
- Davis Earthmoving and Quarrying Pty Ltd
- 90 Gindurra Road, Somersby in Somersby Industrial Park (Central Coast LGA)
- Construction and operation of:
    - RRF- 200,000 tonnes per annum (tpa) of construction and demolition waste
    - Building products and landscaping supplies business (BPLS) - selling the majority of the recycled materials from the RRF
- Operation:
    - 7 am to 6 pm Monday to Saturday (waste delivery and landscape supplies sale)
    - 8 am to 5 pm Monday to Friday (waste processing)
- $14,866,000 million investment
- 20 ongoing operational jobs

NSW GOVERNMENT

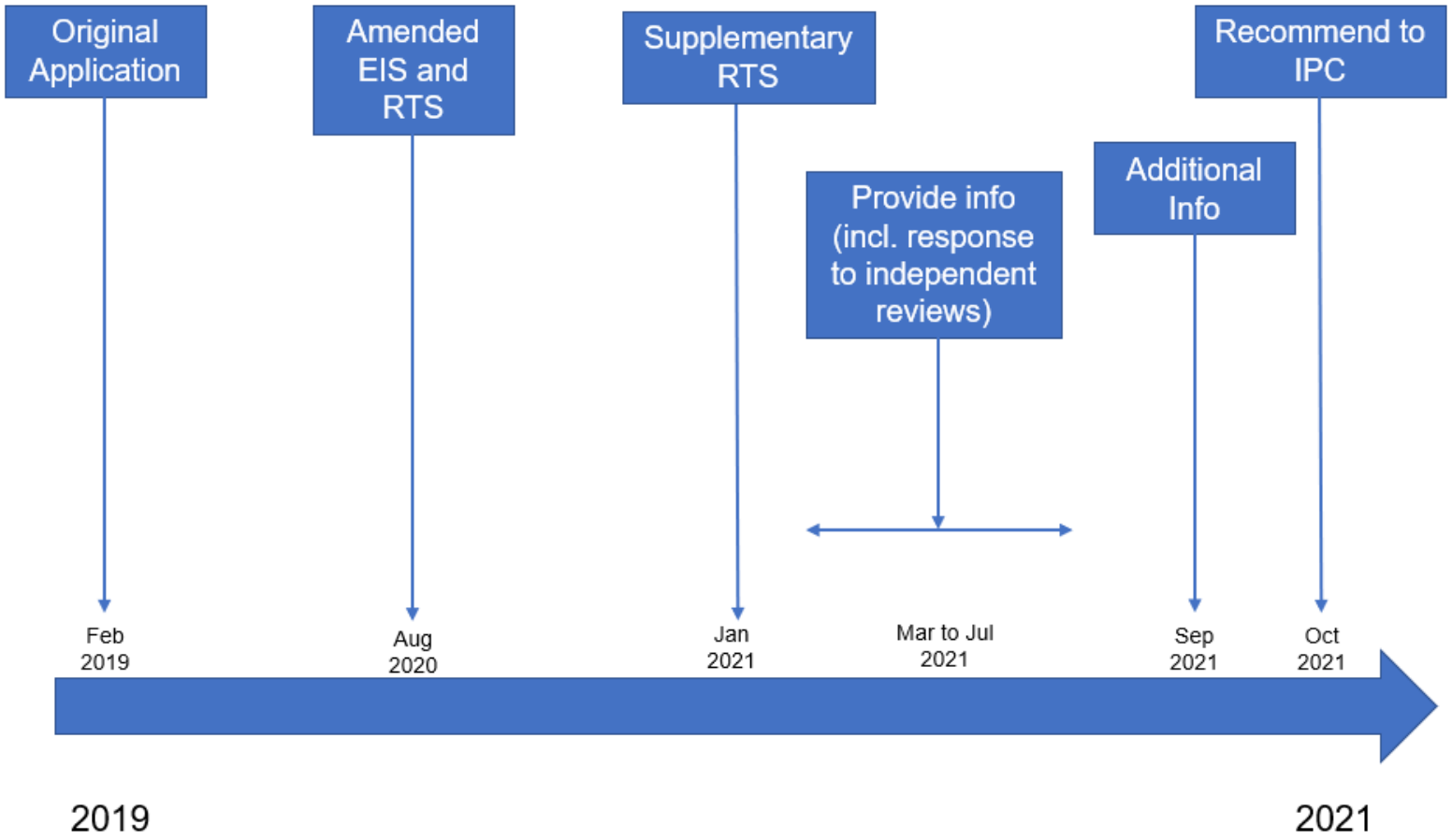
Somersby Industrial Park



Site Context



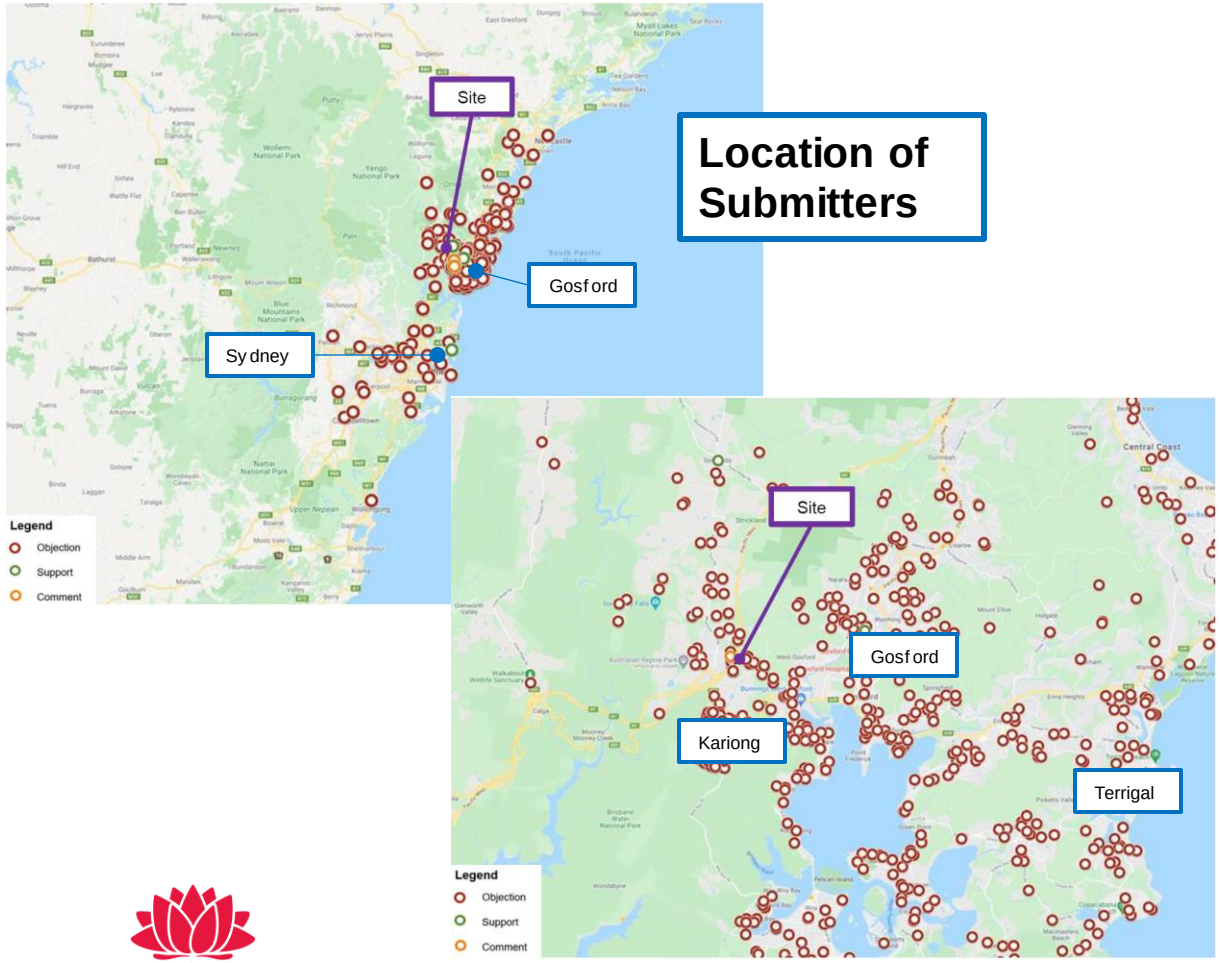
Document Timeline



Original Development (2019)

- Sought approval for an RRF processing up to 200,000 tpa of C&D waste (no staging) + BPLS
- Majority of waste processing areas to be located outdoors and uncovered
- 24/7 - hours of operation
- Public exhibition February/March 2019
    - 419 objections from the public
    - advice from 11 government agencies, including Council

Submissions on Original Development



- Key concerns raised in submissions:
- **Air impacts** - reduced air quality, emission of silica dust, airborne asbestos, potential odour impacts
- **Noise and vibration impacts** - construction, operation, and traffic noise
- Additional **heavy vehicle movements** and their impacts on the **local road network** safety and efficiency.

Amended Development (2020)

- Reducing hours of operation to 7 am to 6 pm, Monday to Saturday
- Reducing initial waste throughout to 100,000 tpa (Stage 1), subsequent increases in throughput in a staged manner :
    - up to 150,000 tpa for Stage 2
    - up to 200,000 tpa for Stage 3
    - progression to Stage 2 and Stage 3 contingent on environmental performance criteria being met once operation commences
- Enclosure of certain additional waste operations within buildings (waste receival, crushing, mulching)
- Upgrading site access, including a right-turn lane and measures to prevent vehicles using Debenham Road South
- Additional weighbridge and improved onsite traffic control
- Improved stormwater management

NSW GOVERNMENT

Amended Development

Engagement on Amended Development

- Applicant consultation during preparation of the amended EIS:
  - dedicated project website
  - community information sessions, two site open days (October and November 2019), meetings with community groups, local business, Council, government agencies, and MP for Gosford
  - letterbox drops of a fact sheet to properties in Kariong and Somersby
- The Department notified previous submitters of the exhibition by letter
- Publicly exhibited in August/September 2020
  - 36 **objections** from the public
  - 114 submissions of **support** from the public
  - advice from 12 government agencies, including Council

Submissions on Amended Development

- Key concerns raised in objecting submissions:
  - Air quality and silica dust deposition
  - Noise and vibration impacts
  - Heavy vehicle movements and impacts on local and regional roads
  - Potential pollution of downstream rivers and creeks
- Key reasons for support in submissions:
  - Increase in recycling and reduction in landfill for C&D waste
  - Creation of local construction and operational jobs

Key Issues

- **Operational air quality**
- **Operational noise**
- **Operational traffic and access**
- **Water management**
- Other issues:
  - Biodiversity, construction impacts, groundwater, Aboriginal cultural heritage, contamination, hazards, bushfire management, visual impacts

Receiver locations

Air Quality

- Key community concern
- Applicant's assessment:
  - Contaminants of concern: Total Suspended Particulates (TSP), deposited dust, and particulate matter (PM_{10}) and ($PM_{2.5}$)
  - Key emission sources: waste unloading, waste processing, stockpile wind erosion, vehicle movements and emissions
  - Meets criteria at all receivers at 200,000 tpa

Receiver	Max incremental (PM_{10})	Max incremental ($PM_{2.5}$)	Max Cumulative (PM_{10})	Max Cumulative ($PM_{2.5}$)[1]	Respirable Crystalline Silica (annual cumulative)
Rural Residential	22.6 µg/m^3	3.5 µg/m^3	42.9 µg/m^3	14.0 µg/m^3	0.8 µg/m^3 – 1 µg/m^3
Industrial	20.7 µg/m^3	3.1 µg/m^3	42.8 µg/m^3	13.6 µg/m^3	0.8 µg/m^3
Criteria	**N/A**	**N/A**	**50 µg/m^3**	**25 µg/m^3**	**3 µg/m^3**

NSW GOVERNMENT

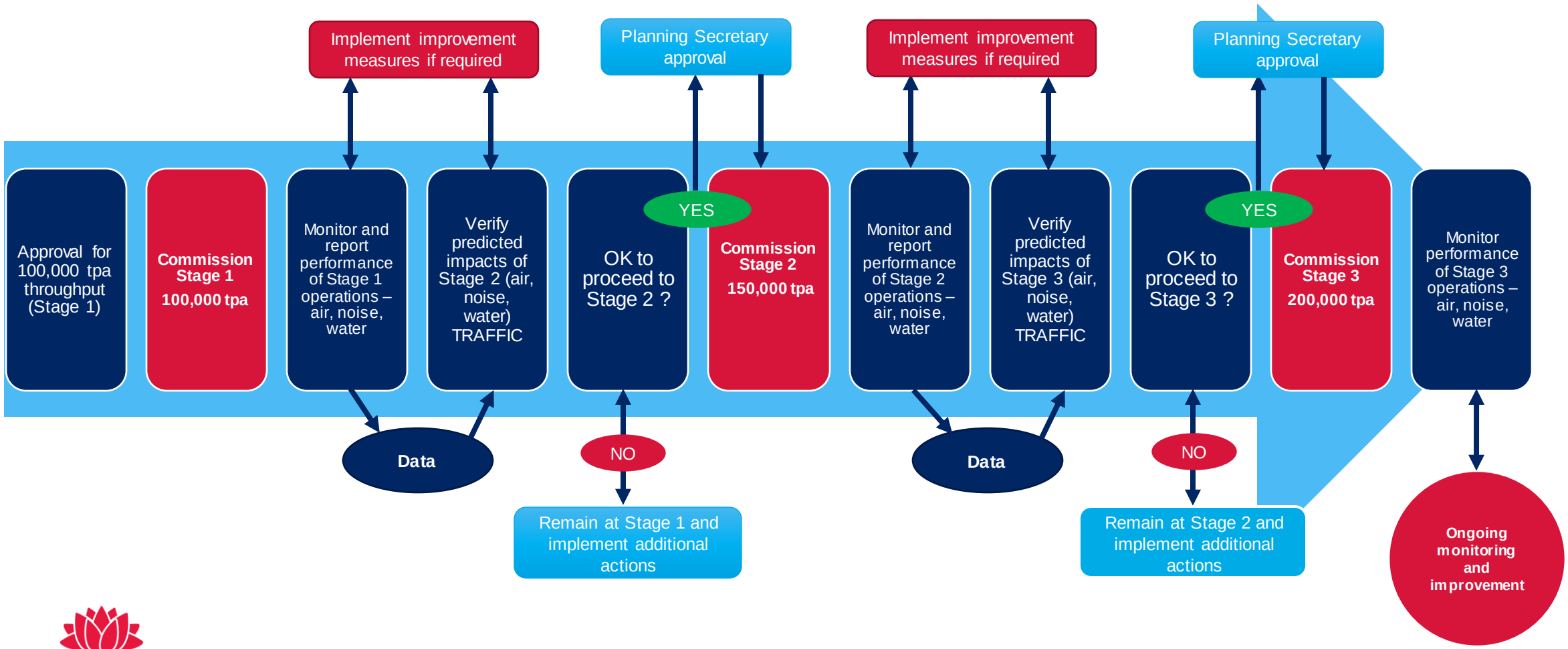
Air Quality

- Emission reduction measures:
  - Limiting stockpile height, dust suppression outdoors (using water carts and misting systems), covering waste loads with a tarpaulin, undertaking continuous air quality monitoring, ceasing crushing, screening and grinding activities in windy conditions
- Independent studies:
  - Community (TAS) – modelling and dust sources
  - Applicant (ERM) – additional study
  - Department (EMM) – robust assessment, modelling appropriate
- EPA satisfied
- Assessment was conservative - impacts verified prior to increasing to a higher processing capacity

Air Quality

- Strict conditions:
  - Onsite meteorological station
  - Operate to air quality criteria, limits and monitoring requirements from the relevant guidelines and the EPL
  - Operational Air Quality Management Plan, including an air quality monitoring strategy
  - Performance monitoring following commissioning of Stages 1-3, plus actions to address any air quality limit exceedances
  - Prior to proceeding from Stage 1 to Stage 2 and from Stage 2 to Stage 3 - verification of predicted air impacts using actual air quality monitoring data

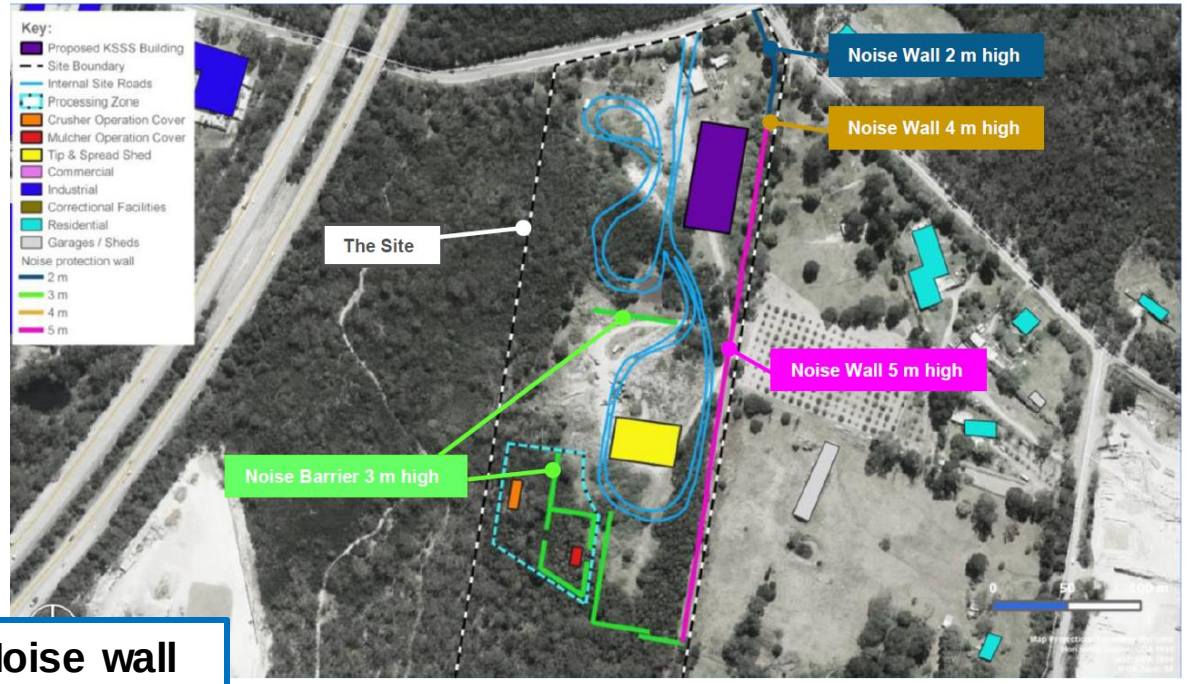
Conditions for Staging of Operations



NSW GOVERNMENT

Noise

- Applicant's assessment:
  - Heavy vehicles, front-end loaders, crushing and grinding works, plant and equipment - working simultaneously
  - Full enclosure of certain activities, noise walls and barriers, no night-time operation



Noise wall and noise barrier locations

Noise

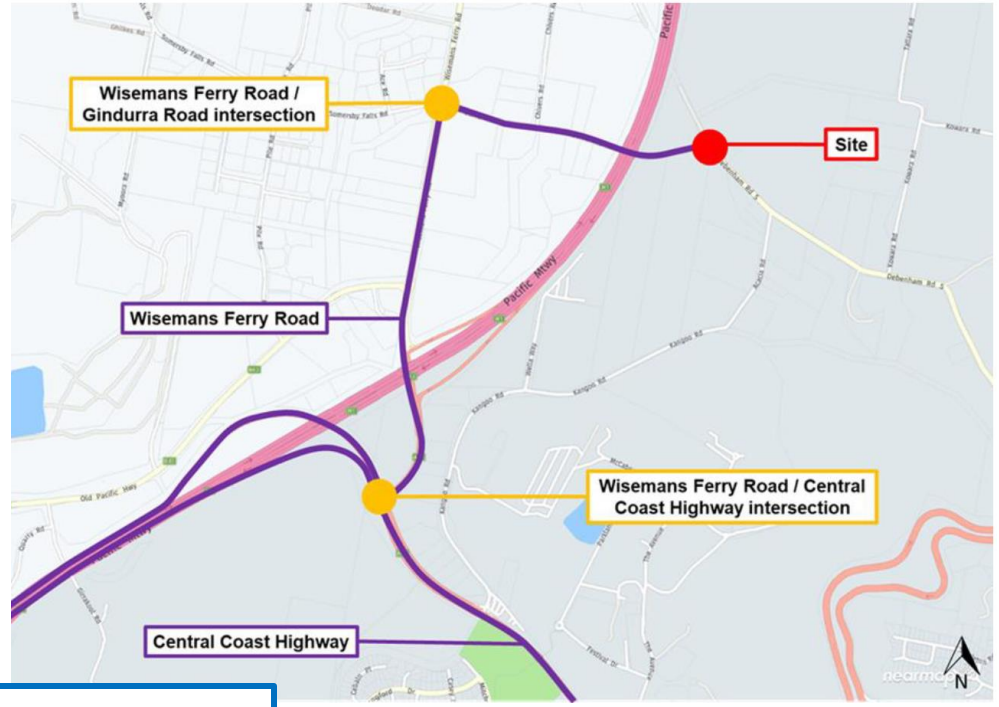
- Independent study (community): Muller Acoustic Consulting
- Revised modelling – more conservative:
  - Increased sound power levels for machinery
  - Reversing beepers included
  - +5 dB penalties for impulsive and tonal noise
  - Amended values for building sound proof rating
- With conservative modelling, results at 200,000 tpa:
  - Equal to PNTL at 242 Debenham Rd South (PNTL = 48 dB(A))
  - All other receivers under the PNTL
- Conservative, worst-case scenario – likely lower and to be verified prior to increasing to a higher processing capacity

Noise

- Conditions:
  - Install the noise wall and barriers
  - Operate the development in compliance with operational noise limits
  - Operational Noise and Vibration Management Plan
  - Performance monitoring following commissioning of Stages 1-3, plus actions to address any noise limit exceedances
  - Prior to proceeding from Stage 1 to Stage 2 and from Stage 2 to Stage 3 - verification of predicted noise impacts using actual noise monitoring data

Traffic and Access

- Applicant's assessment:
  - 164 vehicle trips (82 in and 82 out) per day
  - Max of 23 movements per hour (12 in, 11 out)
- Haul routes to and from the site
- Modelling - key intersections not impacted

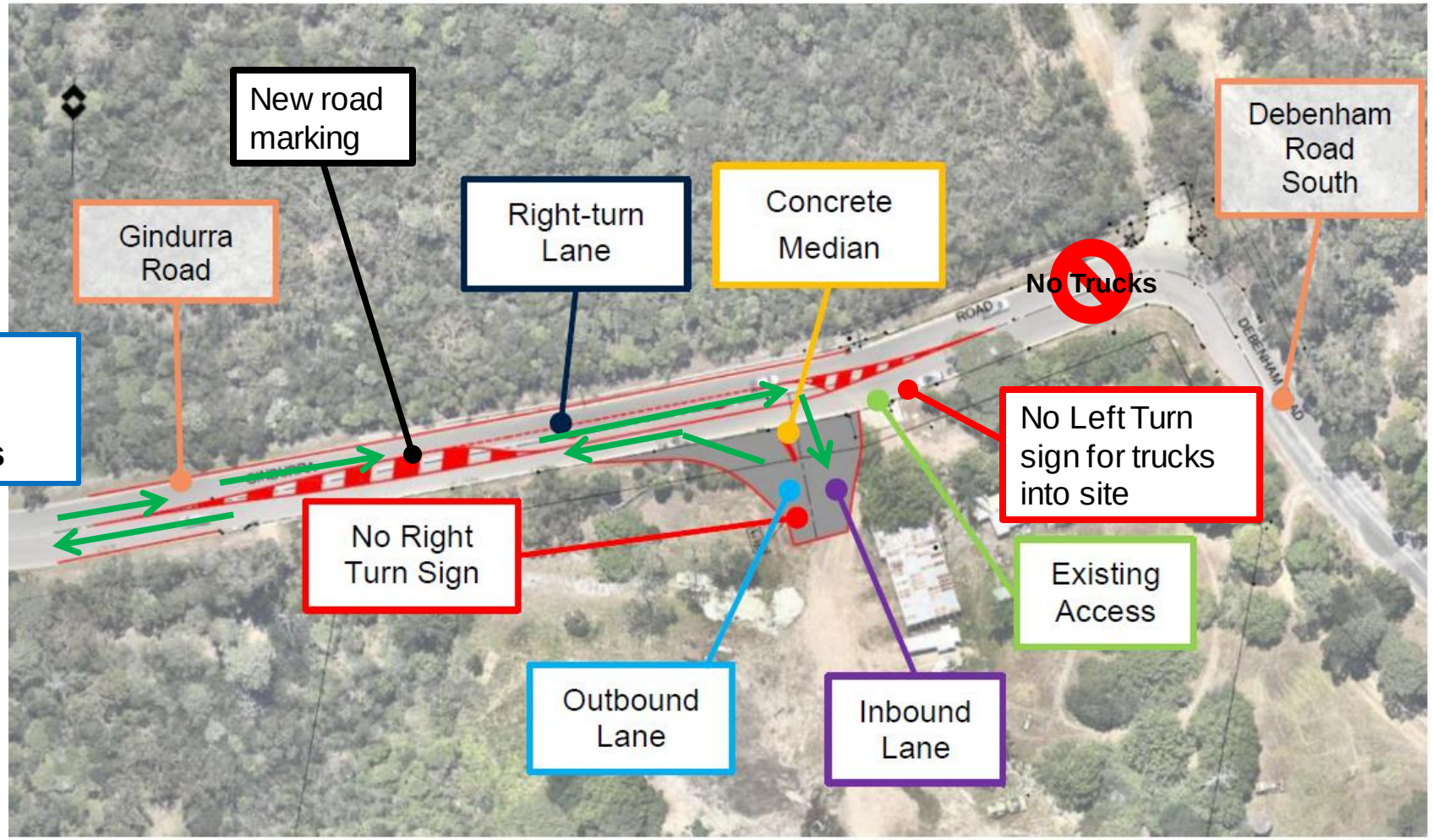


Vehicle Routes and Key Intersections

Traffic and Access

- Independent study (community): Intersect Traffic
- Main concerns:
  - Impacts on residents on Debenham Road South and Kangoo Road
  - Queuing on Gindurra Road
- Site access and Gindurra Road designed to address this:
  - Right in – left out
  - Space for queuing at weighbridge
- Manoeuvring within the site
  - Site is sufficiently large to accept and manage trucks onsite

Site Access and Right Turn Lane

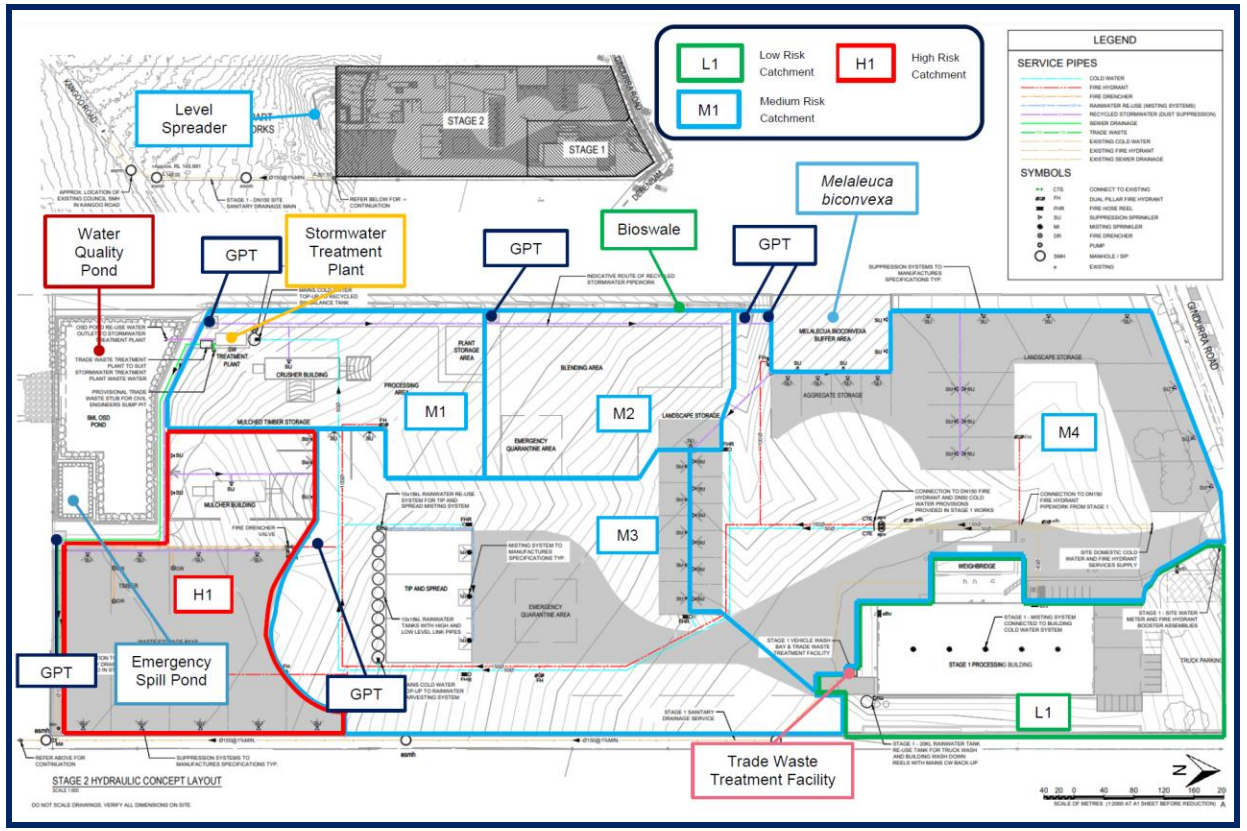


Traffic and Access

- Conditions:
  - Finalise the design of the right-turn treatment on Gindurra Road
  - Install road upgrades and site access infrastructure, including signage
  - Prepare an Operational Traffic Management Plan
    - specifying haul routes (in DCC), access, onsite manoeuvring, and parking arrangements
  - Prior to proceeding from Stage 1 to Stage 2 and from Stage 2 to Stage 3 - verification of predicted traffic numbers, plus actions to manage any additional impacts

Water Management

- Water Management System (WMS):
  - Collect, treat, recycle and reuse
  - Low, medium, high risk catchments
  - Swales and GPTs drain to WQ pond
- WQ pond and water tanks - reuse for dust suppression and irrigation
- Use of ES pond for high-risk catchment if water is highly contaminated
- Water for onsite reuse treated in STP by ultrafiltration, UV and chlorination
- Irrigation of retained vegetation
- Level spreader



Water Management

- Applicant's assessment:
  - Contaminants: TSS, P, N, heavy metals
  - MUSIC model
    - WMS effectively reduces contaminant loads (by approx. 78%-92%)
    - Exceeds best practice target reduction levels
  - Water for reuse meets human health criteria
  - DRAIN model
    - Three overflow events per year
    - Level spreader is effective in reducing discharge water velocity during rain events
- EPA and Council satisfied

Water Management

- Conditions:
  - Install and operate the WMS in accordance with the conceptual design
  - Trade waste agreement with Council to discharge to Council's sewer
  - Operational Soil and Water Management Plan - water quality monitoring strategy and control, maintenance, and contingency measures
  - Performance monitoring following commissioning of Stages 1-3, plus actions to address any ANZECC Guideline criteria exceedances
  - Prior to proceeding from Stage 1 to Stage 2 and from Stage 2 to Stage 3 - verification of predicted water quality impacts using actual water monitoring data

Other Assessment Issues

- Contamination
  - Applicant submitted a Preliminary Site Investigation (PSI)
    - Identified non-friable asbestos cement
  - PSI considered the site suitable
  - Department recommended conditions including:
    - Preparation of Asbestos Management Plan
    - Obtain Asbestos Clearance Certificate prior to operation
    - Preparation of an Unexpected Contamination and Finds Procedure

Recommendations and Conclusion

- Strict conditions in consultation with agencies and Council:
  - Staging – no increase unless environmental criteria met
  - Monitoring of impacts at each stage
  - Verification of predictions for air, noise, traffic, water following commissioning of Stage 1 and Stage 2
  - Management plans – to ensure effective management
- Staging is crucial and ensures progressive and controlled operational growth
- Listened to community concerns:
  - Enclosure of key operational areas
  - Removed 24/7 operations
  - No use of Debenham Road South
  - Noise walls

NSW GOVERNMENT

Key Outcomes