Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

The Planning Assessment Commission of New South Wales (the Commission) approves the project referred to in Schedule 1, subject to the conditions in Schedules 2 to 4.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Member of the Commission **Member of the Commission** **Member of the Commission**

Sydney, 14 October 2009

SCHEDULE 1

Application Number:	09_0101	
Proponent:	Knauf Insulation GmbH	
Approval Authority:	The Planning Assessment Commission of New South Wales	
Land:	Lot 79, 80, 81, 82, 89, 90, 91	DP 270249
Project:	The Knauf Insulation Project	

TABLE OF CONTENTS

DEFINITIONS

1% AEP	1 in 100 year
AEMR	Annual Environmental Management Report
AEP	Annual Exceedance Probability
BCA	Building Code of Australia
Council	Newcastle City Council
Cullet	Glass to be recycled
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
DECCW	Department of Environment, Climate Change and Water
Department	Department of Planning
Director-General	Director-General of the Department of Planning, or delegate
EA	Environmental Assessment titled *Knauf Insulation – Glass Wool Manufacturing Plant, Steel River Industrial Estate, Newcastle* prepared by JBA Urban Planning Consultants and dated July 2009
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPL	Environmental Protection Licence for the project
Evening	The period from 6pm to 10pm
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval
KI-EMP	*Knauf Insulation Steel River Owners Environmental Management Plan* prepared by RCA Australia and dated 15 September
Land	Land means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Minister	Minister for Planning, or delegate
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
POEO Act	*The Protection of the Environment Operations Act 1997*
Preferred Project Report	The response to submissions and preferred project report titled "Preferred Project Report, Knauf Insulation – Glass Wool Manufacturing Plant" and dated September 2009, prepared by JBA Urban Planning Consultants
Project	The development as described in the EA
Proponent	Knauf Insulation GmbH, or its successors
Reasonable and Feasible	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements. Feasible relates to engineering considerations and what is practical to build.
Response to Submissions	The Proponent's response to issues raised in submissions
RTA	Roads and Traffic Authority
Site	The land referred to in Schedule 1
Accredited Site Auditor	Site Auditor accredited under the *Contaminated Land Management Act 1997*
Statement of Commitments	The Proponent's commitments in Appendix 2.
Tertiary Containment Cell	The T-Cell

SCHEDULE 2: ADMINISTRATIVE CONDITIONS

Obligation to Minimise Harm to the Environment

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, decommissioning or rehabilitation of the project.

Terms of Approval

2. The Proponent shall carry out the project generally in accordance with the:
   (a) EA;
   (b) Preferred Project Report;
   (c) Site Plans (see Appendix A);
   (d) Statement of Commitments (see Appendix B);
   (e) EPA Exemption Order (if approved); and
   (f) Conditions of this approval.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.

4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
   (a) any strategies, plans, programs, reviews, audits, or correspondence that are submitted in accordance with this approval; and
   (b) the implementation of any actions or measures contained in these documents.

Limits of Approval

5. This approval shall lapse if the Proponent does not substantially commence the building works associated with the project within 5 years of the date of this approval.

6. The Proponent shall:
   (a) not produce more than 72,000 tonnes of insulation a year;
   (b) ensure the product includes at least 80% post consumer cullet, unless otherwise agreed by the Director-General.

   Notes:
   - *In seeking approval to reduce the amount of cullet to be used, the Proponent must provide a market feasibility report to demonstrate that all reasonable and feasible measures have been undertaken to obtain a supply of cullet.*

7. This approval does not approve any development consent granted under Part 4 of the EP&A Act.

Structural Adequacy

8. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

   Notes:
   - *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.*
   - *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.*

Protection of Public Infrastructure

9. The Proponent shall:
   (a) prepare a dilapidation report of the public infrastructure in the vicinity of the site (including roads, gutters, footpaths), in consultation with Council, and submit a copy of this report to the Department prior to the commencement of construction;
   (b) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and
   (c) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.

Operation of Plant and Equipment

10. The Proponent shall ensure that all plant and equipment used on site is:
    (a) maintained in a proper and efficient condition; and
    (b) operated in a proper and efficient manner.

Management Plans/Monitoring Programs

11. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

Service Providers/Additional Approvals

12. Prior to the construction of any utility works, the Proponent shall obtain all relevant approvals from service providers, including Hunter Water.

Section 94 Contributions

13. Prior to the commencement of operations, the Proponent shall pay Council $500,000 as a contribution towards the provision of infrastructure and services.

    Note: This contribution is subject to indexation as described in Newcastle City Council's S94A Development Contributions Plan 2006.

SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS

AIR QUALITY

Odour

1. The Proponent shall not cause or permit the emission of offensive odours from the site as defined under Section 129 of the POEO Act.

Dust

2. The Proponent shall implement all reasonable and feasible measures to minimise dust generated by the project.

3. During construction, the Proponent shall ensure that:
   (a) all trucks entering or leaving the site have their loads covered;
   (b) trucks associated with the project do not track dirt onto the public road network; and
   (c) public roads used by these trucks, in the vicinity of the site, are kept clean.

Emission Limits

4. The Proponent shall ensure the emissions from the stacks do not exceed the emissions limits in Table 1, unless otherwise specified in the EPL.

Table 1: Air Emissions Limits

Emission Point	Pollutant	Unit of measure	100 percentile concentration limit
Furnace – Dry Electrostatic Precipitator	Solid Particles	mg/m^3	20
	Nitrogen Dioxide (NO_2) or Nitric Oxide (NO), or both (as NO_2)	mg/m^3	500
	Sulfur dioxide (SO_2)	mg/m^3	75
	Total of Sb, As, Cd, Pb, Hg, Be, Cr, Co, Mn, Ni, Se, Sn and V	mg/m^3	1
	Cd	mg/m^3	0.2
	Volatile Organic Compounds (VOC) as n-propane equivalent	mg/m^3	20
	Hydrogen chloride	mg/m^3	10
	Fluorine (F2) and any compound containing fluorine, as total fluoride (HF) equivalent	mg/m^3	5
	Opacity	%	20
Furnace – Emergency Stack	Solid Particles	mg/m^3	50*
Forming Hood, Curing Oven and Cooling Section – Wet Electrostatic Precipitator	Solid Particles	mg/m^3	30
	Sulfur dioxide (SO_2)	mg/m^3	300
	Nitrogen Dioxide (NO_2) or Nitric Oxide (NO), or both (as NO_2)	mg/m^3	20
	Volatile Organic Compounds (VOC) as n-propane equivalent	mg/m^3	30
	Ammonia	mg/m^3	50
	Formaldehyde	mg/m^3	5
Facing Pit - Stack	Volatile Organic Compounds (VOC) as n-propane equivalent	mg/m^3	20
	Solid Particles	mg/m^3	20
Blowing Wool Stack	Solid Particles	mg/m^3	20

Notes:

- **this concentration limit applies from the third year of operations onwards*
- *Reference conditions – Dry, 273 K, 101.3 kPa, x% oxygen (O_2) (oxygen reference conditions will be based on the proper and efficient operation of the plant.*
- *Averaging periods – as per test method, except for opacity which is 6 minute block*
- *Sampling methods are specified in the EPL.*

5. The Proponent shall only emit from the emergency stack in accordance with an exemption order made by the EPA (a part of DECCW) during the first 2 years of operations. Any reports and correspondence sent to DECCW as part of the requirements of the exemption order must also be sent to the Department.

Air Emissions Management Plans

6. The Proponent shall prepare and implement an Air Emissions Management Plan to the satisfaction of the Director-General. This program must be:
   (a) approved by the Director-General prior to the commencement of operations on site;
   (b) be updated to incorporate the Maintenance Air Emissions Maintenance Plan (in condition 7) and approved by the Director-General within 2 years of the commencement of operations;
   (c) identify the air emission limits for the project, including during Dry EP maintenance works;
   (d) describe the treatments, controls and operational practices to be implemented to manage air emissions; and
   (e) include:
      i. a program for the ongoing monitoring and reporting of air emissions from the project, describing the location, frequency, method and pollutants to be monitored; and
      ii. a maintenance protocol to manage air emissions during Dry EP maintenance and/or shutdown and a program to reduce emissions during these maintenance periods, including:
         - identifying the meteorological conditions and times of year when the impacts of Dry EP maintenance works would be minimised;
         - a practical protocol to schedule Dry EP maintenance to best coincide with least risk weather conditions;
         - a means for early identification of factors that could preclude compliance during scheduled Dry EP maintenance; and
      iii. a basic protocol to manage cullet quality in order to reduce potential air pollutant emissions.

   Note: Monitoring must be undertaken in accordance with the EPL and DECCW's Approved Methods for Sampling and Analysis of Air Pollutants in NSW, the facility must include sampling positions that comply with TM-1 as set out in the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW.

7. The Proponent shall prepare and implement a Dry EP Maintenance Air Emissions Management Plan to the satisfaction of the Director-General. This program must be:
   (a) prepared in consultation with DECCW, and be approved by the Director-General within 2 years of the commencement of operations;
   (b) integrated with the Air Emissions Management plan (in condition 6 above) upon approval;
   (c) identify the air emission limits for the project during Dry EP maintenance works;
   (d) describe the treatments, controls and operational practices to be implemented to manage air emissions during Dry EP maintenance works; and
   (e) include:
      i. a program for the ongoing monitoring and reporting of air emissions from the project, during Dry EP maintenance works, describing the location, frequency, method and pollutants to be monitored; and,
      ii. a detailed Dry EP maintenance protocol to manage air emissions during plant maintenance and/or shutdown and a program to reduce emissions during these maintenance periods.

Air Emissions Validation Reports

8. The Proponent shall prepare Air Emissions Validation Reports to the satisfaction of the Director-General. These reports must:
   (a) be prepared, in consultation with DECCW, by a suitably qualified expert whose appointment has been endorsed by the Director-General;
   (b) be undertaken:
      i. within 90 days of the commencement of operations and while operating under a full range of normal plant operating conditions, and raw material feeds;
      ii. during Dry EP maintenance works in the first year of operations; and
      iii. from 60 days prior to 30 days after the commencement of the first maintenance period, in the 3rd year of operations;
   (c) be submitted to the Director-General and DECCW within 1 month of the dates referred to in (b) above;
   (d) include a program for a campaign of detailed monitoring of:
      i. metals in the incoming cullet (if it is practical to reliably measure metals in the cullet);
      ii. in-stack air emissions from the project, describing the location, frequency, method and pollutants to be monitored, including metals testing when processing any corresponding batch of cullet that has been tested for metals;
      iii. PM10 levels in the surrounding area;
      iv. odour from the project (or on the project site) and odour in the surrounding area;
      v. the program must consider the following:

- A round of post commissioning monitoring of all discharge points (furnace stack, blowing wool stack, downstream stack and maintenance bypass stack), in accordance with the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales, (DECC 2005)* and for the pollutants identified in Schedule 2 of the POEO (Clean Air) Regulation 2002 for glass production;
- Collection of ambient particulate (PM_{10}) using two high volume air samplers, run continuously during the 6 days of maintenance (filters changed every 24-hours) and one sampler run on a one-day-in-six cycle during regular operations, for one year;
- Analysis of metal concentrations in the collected particulate, in addition to gravimetric determination;
- Consideration of microscopic analysis for particle type / shape differentiation;

(e) be undertaken to validate;
   i. in-stack air emissions from the project, and also ambient PM_{10} levels in the surrounding area; and,
   ii. odour from the premises and in the surrounding area (for the first report only);

(f) validate the predictions made in the EA and Preferred Project Report by conducting the following:
   i. comparing in-stack emission rates applied in the EA and preferred project report modelling with actual measured in-stack emission rates;
   ii. comparing TAPM meteorological data applied in the EA and preferred project report modelling with actual local meteorological data;
   iii. Compare the predicted cumulative ambient pollutant levels in the EA and preferred project report with measured ambient pollutant levels (where possible to reasonably do so);
   iv. Compare predicted pollutant levels attributable project alone (incremental glc) in the EA and preferred project report with derived/calculated incremental pollutant levels based measured ambient pollutant levels (where possible to reasonably do so);
   v. Where any environmentally adverse discrepancy in i to iv above is found, conducting revised modelling using actual emissions data and local weather data and assessing compliance to the applicable ambient criteria (current at the time of the comparison, and also current at the time of the EA). To allow appropriate assessment of pollutants with annual average criteria, any such revised modelling must be extended to cover a minimum 1 year period;

(g) demonstrate that:
   i. the air emissions comply with the relevant emission limits in the proponents Environmental Protection Licence;
   ii. no adverse ambient air quality impact is attributable to the operation; and
   iii. the pollution controls are working effectively;

(h) include an odour audit, undertaken by an appropriately qualified and experienced person, that demonstrates that the project does not cause offensive odour impact at sensitive nearby receptors;

(i) If any non-compliance or odour impact is found, or if pollution controls are not working effectively, the report must describe in detail the measures that would be implemented to ensure compliance.

9. The Proponent shall maintain access to local meteorological data that is suitable for use in air dispersion modelling, per section 4 of the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, NSW DEC (2005),* or otherwise operate a meteorological station per section 4.2 of the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, NSW DEC (2005).*

NOISE

Construction and Operation Hours

10. The Proponent shall comply with the construction and operation hours in Table 2.

Table 2: Construction and Operation Hours

Activity	Day	Time
Construction and Demolition	Monday – Friday	7am to 6pm
	Saturday	8am to 1pm
	Sunday and Public Holidays	Nil
Operations	All Days	All Hours

Notes:

- *Construction and demolition activities may be conducted outside the hours in Table 2 provided that the activities are not audible at any residence beyond the boundary of the site; and*
- *Emergency work to avoid the loss of life, property and/or prevent environmental harm may be undertaken outside the hours in Table 2.*

Noise Limits

11. The Proponent shall ensure that noise generated by the project's operation does not exceed the noise limits presented in Table 3.

Table 3: Operation Noise Limits (dB(A))

Location	Day	Evening	Night	
	$L_{Aeq,\ 15\ min}$	$L_{Aeq,\ 15\ min}$	$L_{Aeq,\ 15\ min}$	L_{Amax}
Any residence on Decora Cresent (north of Mabellae Place), Warabrook	43	42	42	53
Any residence on O'Learia Cresent, Warabrook; or on Stevenson Avenue, Travers Avenue, Norris Avenue or Thornton Avenue, Mayfield West	35	35	35	45
Any residence on Mabellea Place, Decora Cresent (south of Mabellae Place), Angophora Drive or Bakeri Crescent, Warabrook	35	35	35	47
Any residence on Mangrove Road, Sandgate; or Maitland Road	38	38	38	48

Notes – Unless otherwise specified in the EPL:

- *Noise emission limits apply under all meteorological conditions except for any of the following:*
  - *a) wind speeds greater than 3 m/s at 10 metres above ground level; or*
  - *b) stability category G temperature inversions conditions; or*
  - *c) stability category F temperature inversions conditions and wind speeds greater than 2 m/s at 10 m above ground level.*
- *To determine compliance with this condition, noise from the development must be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary and within 1 m of a dwelling façade, to determine L_{Amax} noise limits.*
- *However, where it can be demonstrated that direct measurement of noise from the development is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.*

Noise Validation Report

12. The Proponent shall prepare a Noise Validation Report, to the satisfaction of the Director-General. The report must:
    (a) be prepared by a suitably qualified and experienced expert, whose appointment has been endorsed by the Director-General;
    (b) be undertaken within 3 months of the commencement of operations, while operating under normal conditions;
    (c) be submitted to DECCW and the Director-General within 4 months of the commencement of operations;
    (d) validate the predictions made in the EA;
    (e) demonstrate compliance with the limits in this approval;
    (f) demonstrate the noise controls are working effectively; and,
    (g) if any non-compliances are detected, describe the measures that would be implemented to ensure compliance.

SOIL AND WATER

Water Pollution

13. The Proponent shall not cause or permit any waters to be polluted, as defined under Section 120 of the POEO Act.

Wastewater Discharges

14. The Proponent shall ensure that all of the wastewater discharged from the site is discharged to sewer under a trade waste agreement with Hunter Water.

Bunding

15. All chemicals shall be stored in:
    (a) appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund. The bund(s) shall be:
        - designed in accordance with:
            - the requirements of all relevant Australian Standards; and
            - the DECC's *Storing and Handling Liquids: Environmental Protection – Participants Manual*;
    (b) accordance with Australian Standard *AS1940-2004 The storage and handling of flammable and combustible liquids*; and
    (c) areas above the 1% AEP flood level so as not to cause pollution or hazards during any flood.

16. The Proponent must implement suitable measures to ensure the integrity of the bunds is maintained, and to prevent and manage spills on site. These measures must include:
    (a) an inventory system to accurately measure and report on production losses;
    (b) an early warning leak detection and prevention system, certified by a site auditor accredited under the *Contaminated Land Management Act, 1997*;
    (c) a bund, tank and pipeline integrity assessment program; and
    (d) a spill prevention and management system, including:
        - a Spill Response and Prevention Plan;
        - a Monitoring Program;
        - a Site Security Plan; and
        - staff training.

Groundwater

17. Groundwater extraction is only permitted for monitoring purposes and must be undertaken in accordance with DECCW's (now including the Office of Water) licence requirements under the *Water Act 1912*.

Fill

18. Any fill material brought to site must be Virgin Excavated Natural Material or material subject to a Resource Recovery Exemption that is permitted to be used as a fill material, in accordance with the provisions of the *Protection of the Environment (Waste) Regulation 2005*.

    Note: Any fill material subject to a Resource Recovery Exemption received at the site must be accompanied by documentation demonstrating that material's compliance with the conditions of the exemption, and this documentation must be provided to the Department, Council or the Principle Certifying Authority on request.

Remediation

19. Prior to the commencement of any works, the Proponent shall demonstrate to the satisfaction of the Director-General that the *KI-EMP* has been reviewed, assessed and endorsed by an Accredited Site Auditor. Once endorsed by an Accredited Site Auditor, all remediation works must be undertaken in accordance with the endorsed *KI-EMP*.

    Note: a copy of the endorsed KI-EMP must be submitted to the Department and Council within one month of the KI-EMP being endorsed.

20. Prior to the commencement of construction, the Proponent shall demonstrate, to the satisfaction of an Accredited Site Auditor, that the construction procedures and detailed building plans would:
    (a) ensure risks of potential vapour ingress into buildings and trenches that may arise from piling and other construction works are appropriately managed; and
    (b) ensure the ongoing integrity of the Primary Containment Cell.

21. Prior to the commencement of construction of the tertiary containment cell, the Proponent shall revise the *Operational and Long Term Management Plan*. The revised plan must:
    (a) be reviewed and endorsed by an Accredited Site Auditor;
    (b) be submitted to the Director-General for approval at least one month prior to the commencement of construction of the Tertiary Containment Cell;
    (c) include the cell technical specifications including details such as final footprint, cell size and containment volumes, capping materials, thickness and permeability details, source of capping material and transportation method, and specifications for subsurface drainage; and
    (d) include a monitoring program to ensure that the integrity of the Primary and Tertiary Containment Cells are maintained. The monitoring program shall include procedures for reporting the results of the monitoring to the Department and Council.

    Note: a copy of the endorsed plan must be submitted to Council within one month of the plan being approved.

22. Upon completion of the tertiary containment cell, the Proponent must:

(a) commission a survey of the Tertiary Containment Cell, and submit the survey to Council, for notification on the Section 149 Certificate for the site;
(b) submit a certificate prepared by an independent and suitably qualified structural (or other suitably qualified) engineer or a compliance certificate issued by an accredited certifier, to the Director-General certifying that the cell structure, where relevant, has been completed in accordance with plans and specifications approved in the revised *Operational and Long Term Management Plan*; and
(c) provide a Validation Report, including the results of groundwater monitoring, to an Accredited Site Auditor for endorsement. The Validation Report must be prepared in accordance with guidelines made or approved by DECCW under Section 105 of the *Contaminated Land Management Act 1997*.

23. Upon completion of the earthworks, piling and hardstands for each stage of the project, the Proponent shall provide copies of the Site Audit Report and Statement, to the Department, DECCW and Council, certifying:
(a) the adequacy of the completed remediation works for the proposed site use: and
(b) that buildings and other structures, including stormwater drainage infrastructure and services, have not reduced the effectiveness of the Primary and Tertiary Containment Cells onsite.

Management

24. The Proponent shall prepare and implement a Soil and Water Management Plan for the project to the satisfaction of the Director-General. This plan must:
(a) be submitted to the Director-General for approval prior to the commencement of any works on site;
(b) be prepared in consultation with Council and DECCW (including the Office of Water);
(c) include :
- a Sediment and Erosion Control Plan;
- an Acid Sulfate Soils Management Plan;
- a Stormwater Management Scheme;
- a Groundwater Management Plan; and
- a Water Use Management Plan.

25. Sediment and Erosion Controls for the project must:
(a) be consistent with the requirements of Landcom's (2004) *Managing Urban Stormwater: Soils and Construction* manual and the drawing #H59657 C Drainage Works;
(b) manage activities that could cause soil erosion and generate sediment;
(c) minimise soil erosion and the potential for the transport of sediment to downstream waters; and
(d) be implemented prior to the commencement of remediation and be maintained for as long as necessary to control erosion and sediment on site.

26. The Acid Sulfate Soils Management Plan must:
(a) be consistent with the NSW State Government's Acid Sulfate Soils Manual (ASSMAC 1998); and
(b) include details of measures to be implemented in relation to the management and handling of any acid sulfate soils identified during construction works.

27. The Stormwater Management Plan must:
(a) be prepared in accordance with the DECCW's *Managing Urban Stormwater: Council Handbook*;
(b) include details of:
- pre and post development flows;
- water quality;
- the rainwater harvesting and reuse infrastructure to be installed;
- the stormwater treatment, drainage and control infrastructure, ensuring there is sufficient capacity to handle the 5 % AEP event;
- management measures to ensure overland flow during a 1% AEP event would not impact on the integrity of the capping layer; and
- the measures to be implemented to monitor and manage the stormwater quality and quantity and maintain the stormwater infrastructure over time.

28. The Groundwater Management Plan must:
(a) be reviewed and endorsed by a DECCW Accredited Site Auditor prior to lodgement;
(b) be implemented prior to any remediation works occurring onsite;
(c) include:
- detailed baseline data to benchmark the natural variation in groundwater levels and quality at the site;
- groundwater impact assessment criteria;
- a program to:
  - sample and analyse any groundwater encountered during construction;

- monitor, detect, and quantify any leakage from the primary and tertiary containment cells;
- procedures to manage groundwater encountered during construction to prevent contamination of the onsite capping layer including details of any treatment required;
- a contingency plan for potential groundwater contamination during operation; and
- procedures for reporting the results of the monitoring.

29. The Water Use Management Plan must:
    (a) include a comprehensive water balance for the project;
    (b) ensure that suitable measures are implemented to minimise water use, especially potable water; and
    (c) detail the water supply (including rainwater harvesting), reuse and recycling infrastructure to be provided onsite.

TRAVEL, TRANSPORT AND TRAFFIC

Design

30. The Proponent shall ensure that:
    (a) the internal road network and parking on site complies with Australian Standards *AS 2890.1:2004* and *AS 2890.2:2002*;
    (b) all parking generated by the project is accommodated on site;
    (c) bicycle parking and shower facilities are provided on site;
    (d) a pedestrian/cycle path is provided with a minimum width of 2.5m and linking the site frontage, building entrance and staff car park.

Emergency Access

31. The Proponent shall:
    (a) ensure that the existing vehicle access point on the western boundary of the site to the Pacific Highway is maintained for emergency vehicles during emergency situations; and
    (b) within 6 months of the date of this consent and in consultation with the Steel River Owners Corporation, develop an Emergency Exit Plan to allow other occupants to exit the Steel River Estate from the vehicle access point on the western boundary to the Pacific Highway, during emergency situations.

Travel plan

32. The Proponent shall prepare and implement a Sustainable Travel Plan for the project, within 6 months of the commencement of operations. The plan must:
    (a) be prepared in consultation with Council and the RTA and approved by the Director-General within 6 months of the commencement of operations;
    (b) describe the measures that are to be put in place to reduce vehicle movements, such as the provision of a shuttle bus linking with appropriate public transport during peak periods;
    (c) include a rail transport feasibility study, any decision not to use rail transport must be justified and regularly reviewed, to the satisfaction of the Director-General;
    (d) monitor the effectiveness of the plan over time; and
    (e) ensure the findings of the monitoring are used to improve the effectiveness of the plan.

Traffic Assessment

33. The Proponent shall commission an Independent Traffic Assessment and implement the recommendations of the assessment to the satisfaction of the Director-General. The assessment must:
    (a) be undertaken by a suitably qualified, experienced and independent expert who's appointment has been endorsed by the Director-General;
    (b) be undertaken in consultation with the RTA and Council, and approved by the Director-General, prior to the commencement of operations;
    (c) assess the traffic levels, delays and levels of service on all roads and intersections around the estate, including the predicted levels once any vacant land in the estate has been developed;
    (d) consider any alternative transport options available or in use, and assess the feasibility of implementing these options;
    (e) consider the need for direct access to Maitland Road from the site or for the existing estate entrance to be upgraded ; and, if necessary,
    (f) recommend measures to be implemented to ensure acceptable levels of performance on the roads used in and around the estate, such as the construction of an access road to Maitland Road, upgrade of the existing estate entrance or connection to the Kooragang Island Goods Rail Line, including the cost of the proposed works and a description of the arrangements that would be put in place to ensure the proposed works are implemented in a timely manner.

34. The Proponent must implement any recommendations of the Traffic Assessment required in condition 33, and provide a program for this implementation, with 6 months of the commencement of operations, to the

satisfaction of the Director-General. Any works undertaken to satisfy this condition shall be at no cost to the RTA or Council.

VISUAL IMPACT

Design and Landscaping

35. The Proponent must prepare and implement detailed design and landscape management plans for the project. The plans must:
    (a) be prepared in consultation with Council and approved by the Director-General prior to the commencement of construction;
    (b) demonstrate the building treatments are of sufficient design quality to minimise the visual impacts of the project, and include a variety of materials and external finishes;
    (c) illustrate the location, species and mature heights of plants to be established on site;
    (d) use endemic species only in the landscaping, ensuring seed and propagule sources are from local botanical provenance;
    (e) provide for the maintenance of the landscaping on site; and
    (f) illustrate how the design of the buildings would integrate with the landscaping proposed, ensuring landscaping is used to minimise views of the site.

Lighting

36. The Proponent shall ensure that lighting associated with the project:
    (a) complies with the latest version of Australian Standard *AS 4282(INT)-Control of Obtrusive Effects of Outdoor Lighting*; and
    (b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties, conservation areas or the public road network.

Signage and Fencing

37. The Proponent shall not install any signage or fencing on site without the written approval of the Director-General. In seeking this approval the Proponent shall:
    (a) submit detailed plans of the proposed signage or fencing, which have been prepared in consultation with Council; and
    (b) demonstrate that the proposed signage or fencing is consistent with the relevant requirements in any relevant Council Development Control Plan.

38. Any proposed landscaping, fencing or signage is not to impede the desired sight lines of all road users including pedestrians and cyclists.

ENERGY AND WATER EFFICIENCY

39. The Proponent shall ensure the project is energy and water efficient, in accordance with industry best practice, to the satisfaction of the Director-General.

40. The Proponent shall prepare and implement an Energy Efficiency Plan for the project, to the satisfaction of the Director-General. The program must:
    (a) be approved by the Director-General prior to the commencement of operation;
    (b) describe the energy efficiency measures that would be implemented onsite, quantify the savings made and demonstrating the use of best available technology;
    (c) demonstrate all reasonable and feasible measures to minimise greenhouse gas emissions would be implemented; and
    (d) include a program to monitor and report on the effectiveness of the measures implemented and a protocol for periodic review of the plan to ensure the project would continue to operate efficiently.

WASTE

41. Hazardous or industrial waste must be stored and disposed of in a manner to minimise its impact on the environment including appropriate segregation for storage and separate disposal by a waste transporter licensed by DECCW.

Construction Waste Management Plan

42. The Proponent shall prepare and implement a Construction Waste Management Plan for the project, to the satisfaction of the Director-General. The plan must:
    (a) be approved by the Director-General prior to the commencement of construction;
    (b) detail the measures to be implemented to minimise waste generation on site;
    (c) describe the waste reuse and recycling program to be implemented; and
    (d) include a program to monitor the waste streams, and identify and implement measures to improve the effectiveness of the plan.

Product Design and Manufacture

43. The Proponent must prepare and implement a Product Management Plan, to the satisfaction of the Director-General. The Plan must:
    (a) be prepared in consultation with the DECCW and approved by the Director-General prior to the commencement of operations;
    (b) identify the types and sources of materials and resources used in the production process, including a procurement plan demonstrating that options to reuse and recycle materials, (including the use of plate cullet) are maximised;
    (c) identify potential environmental impacts and liabilities at each stage of the products life cycle;
    (d) detail the measure to be implemented to improve the design and reduce the liabilities identified in (c) above, including:
        - the material intensity of the product; and
        - hazardous materials contained in the product;
    (e) include a product stewardship scheme to maximise the recovery, reuse and refurbishment of components and materials;
    (f) describe and quantify the waste produced in the production process and include measures to maximise the reduction, reuse and recycling of this waste;
    (g) describe how the effectiveness of the plan would be monitored and reported; and
    (h) be revised and updated every 5 years to the satisfaction of the Director-General.

SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

Environmental Management Strategy

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:
   (a) be approved by the Director-General prior to the commencement of any works on site;
   (b) be updated and approved by the Director-General prior to the commencement of operations;
   (c) provide the strategic context for environmental management of the project;
   (d) identify the statutory requirements that apply to the project;
   (e) describe in general how the environmental performance of the project would be monitored and managed;
   (f) describe the procedures that would be implemented to:
      - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
      - receive, handle, respond to, and record complaints;
      - resolve any disputes that may arise during the course of the project;
      - respond to any non-compliance;
      - manage cumulative impacts (including odour during earthworks); and
      - respond to emergencies; and
   (g) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the project.

Pre Operation Compliance Audit

2. Prior to the commencement of operations, the Proponent shall submit work as executed plans to the Department for all the development associated with the project. These plans must be prepared by a suitably qualified and experienced expert, and include plans showing the work as executed plans laid over the approved plans to demonstrate that the development has been carried out in accordance with the approved plans.

3. The Director-General may require an update on compliance with all, or any part, of the conditions of this approval. Any such update shall meet the reasonable requirements of the Director-General and be submitted within such period as the Director-General may agree.

Incident Reporting

4. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident, and with 24 hours. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed written report on the incident and any action that has subsequently been taken in relation to this incident.

Annual Review

5. Each year, the Proponent shall review the environmental performance of the facility, to the satisfaction of the Director-General. This review must:
   (a) identify the standards and performance measures that apply to the project;
   (b) describe the works and operations carried out in the last year and the works and operations proposed to be carried out over the next year;
   (c) include a comprehensive review of the monitoring results and complaints records of the facility over the past year, which includes a comparison of these results against the:
      - the relevant statutory requirements, limits or performance measures/criteria;
      - monitoring results of previous years; and
      - predictions in the EA;
   (d) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
   (e) identify any trends in the monitoring results over the life of the project;
   (f) identify any discrepancies between the predicted and actual impacts of the facility, and analyse the potential cause of any significant discrepancies; and
   (g) describe what measures will be implemented over the next year to improve the performance of the facility.

Independent Environmental Audit

6. Within 1 years of the commencement of operations, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
   (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;

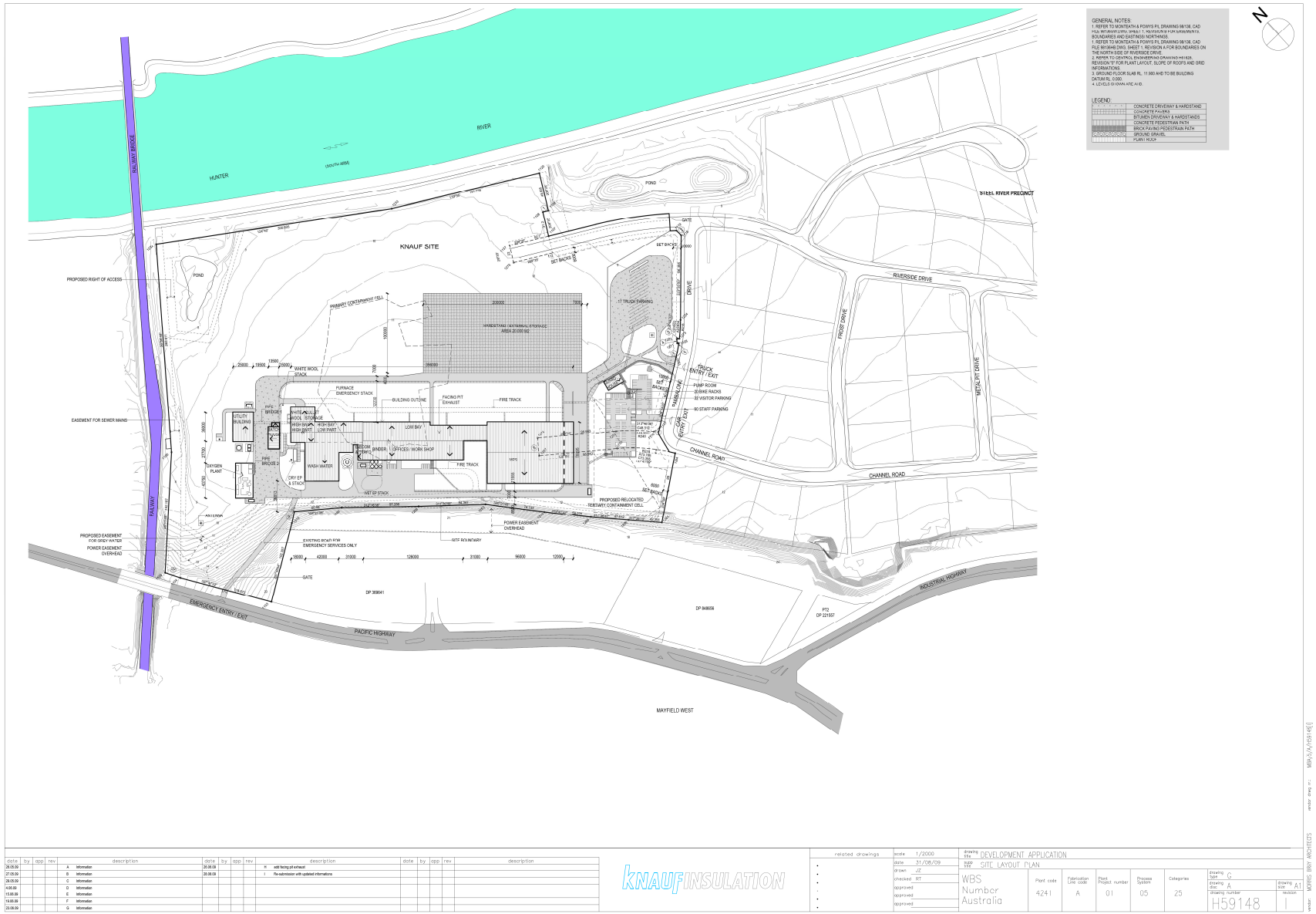
(b) include consultation with the relevant agencies;
(c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any relevant EPL (including any assessment, plan or program required under these approvals);
(d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate,
(e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Director-General.

7. Within 6 weeks of completing of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.

8. Within 3 months of submitting the audit report to the Director-General, the Proponent shall review and if necessary revise the strategies, plans and programs required under this approval, to the satisfaction of the Director-General.

APPENDIX 1: PROJECT LAYOUT PLAN



date	by	app	rev	description
26.05.09			A	Information
27.05.09			B	Information
28.05.09			C	Information
4.06.09			D	Information
15.06.09			E	Information
19.06.09			F	Information
23.06.09			G	Information
20.06.09			H	add facing pit exhaust
20.06.09			I	Re-submission with updated informations

KNAUF INSULATION

related drawings

scale 1/2000
date 31/08/09
drawn JZ
checked RT
approved
approved
approved

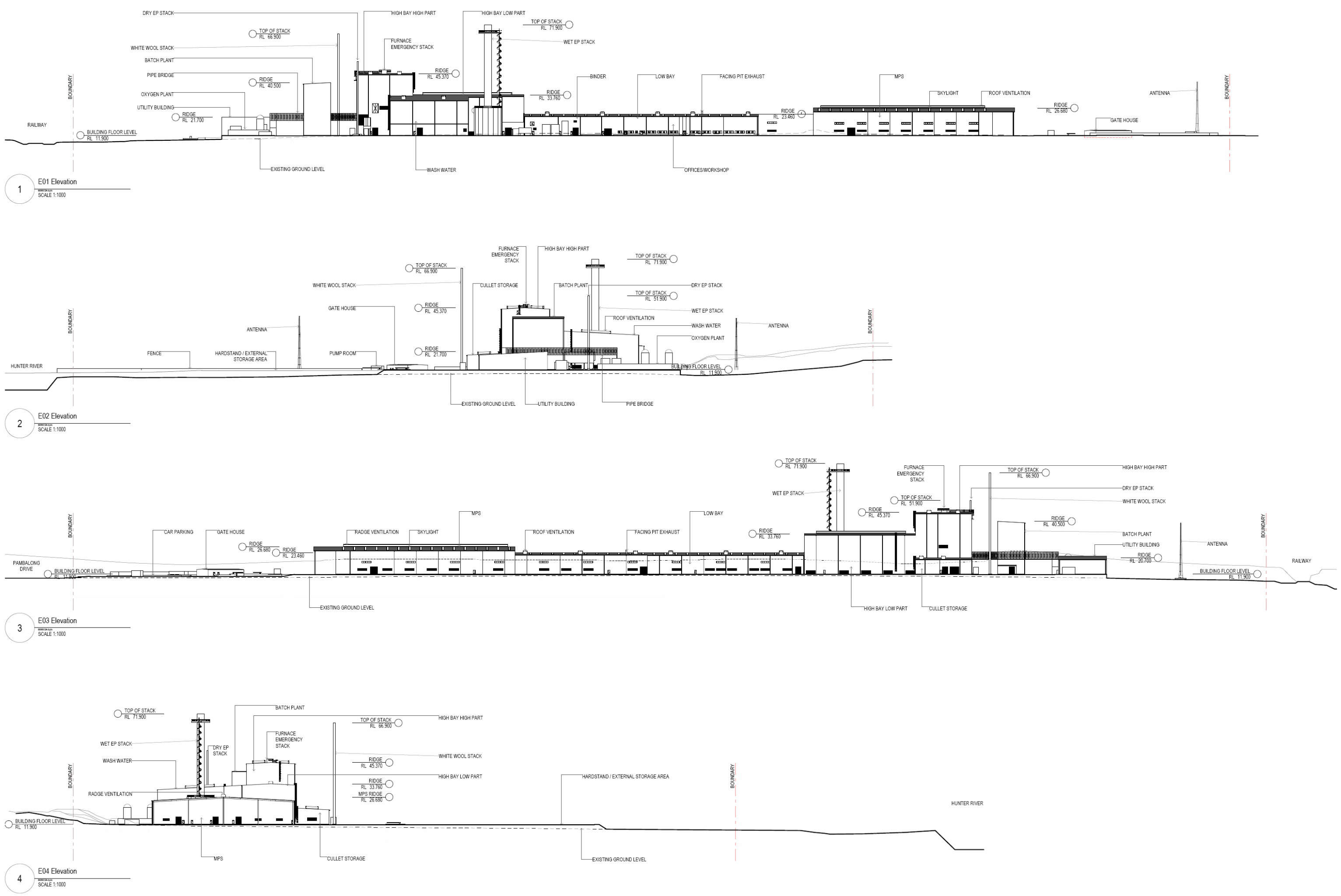
drawing title DEVELOPMENT APPLICATION
sheet title SITE LAYOUT PLAN

WBS Number Australia

Plant code	Fabrication Line code	Plant Project number	Process System	Categories
4241	A	01	05	25

drawing type C
drawing disc A
drawing number H59148
drawing size A1
revision 1

vendor MORRIS BRAY ARCHITECTS
vendor drwg nr. MBA/JA/H59148



date	by	app	rev	description	date	by	app	rev	description	date	by	app	rev	description
19.06.09				A Information										
23.06.09				B Information										
26.06.09				C add facing pit exhaust & contour lines										
28.08.09				D Re-submission with updated informations										
31.08.09				E 3D model of oxygen plant										

KNAUF INSULATION

related drawings

scale 1/1000
date 31/08/2009
drawn JZ
checked RT
approved
approved
approved

drawing title DEVELOPMENT APPLICATION
supp title ELEVATIONS

WBS Number Australia	Plant code	Fabrication Line code	Plant Project number	Process System	Categories
	4241	A	01	05	25

drawing type G
drawing disc A
drawing size A1
drawing number H59151
revision E

APPENDIX 2: STATEMENT OF COMMITMENTS

In accordance with Part 3A of the Environmental Planning and Assessment Act 1979, the following commitments are made by KI to manage and minimise potential impacts arising from the plant. These commitments replace the draft commitments included with the EAR.

1 Construction Management

KI will undertake construction in accordance with the Construction Management Plan attached at Appendix I of this report. Noise, traffic, dust and erosion, and waste arising from construction will be managed in accordance with the Plan.

2 Air Quality

- KI will prepare a Construction Environmental Management Plan (CEMP) prior to commencement of works which will incorporate the following environmental safeguards into the during the construction processes to address air monitoring and management:
  - use of water sprays during dry, windy conditions, to dampen soils prior to excavation and handling;
  - spraying, watering and covering of stockpiles as relevant;
  - loading of construction vehicles up to (not over) the side and tailboards. All loads will be covered, and the undercarriages and wheels of all trucks will be removed prior to exiting the site;
  - stabilisation of long-term stockpiles using fast-seeding grass or synthetic cover spray;
  - sealing of major access roads into the site, or alternatively controlled speeds on unsealed roads to minimise dust; and
  - standard dust control mitigation measures ordinarily carried out during construction works.
- During scheduled maintenance, KI will significantly reduce production to ensure reduced PM_{10} emissions.
- Within the first 2 years of operation, KI will investigate and implement alternative processes and technologies to further reduce PM_{10} emissions during Emergency Scenarios.
- KI will comply with the 2 OU criteria.

3 Contamination

- To ensure that the redevelopment of the site is managed in a way to prevent any contamination in the future, KI will prepare a construction management plan that requires construction activities to be undertaken in accordance with the Managing Stormwater Volume 1 Soils and Construction (Landcom, 2004).
- KI will obtain the required Site Auditor Statements for all proposed contamination works.

4 Primary Containment Area

- Development will be generally in accordance with the Steel River Construction Guidelines and Operational and Long Term Environmental Management Plan Proposed Tertiary Containment Cell Steel River Site.
- KI will prepare a site specific Operational and Long Term Environmental Management Plan for the Proposed Tertiary Containment Cell Steel River Site, which will adopt amongst other things, the alternative control measures recommended by RCA Australia at Section 2.3 of its report (Appendix I of the exhibited EAR);
  - all relevant site construction management guidelines will be followed to ensure the protection of both site workers and the integrity of the remediation strategy for the site;
  - the pile system will be designed to ensure infiltration of surface waters into the primary containment area does not occur;
  - contingencies will be made for pile protection or corrosion loss given the ground may be chemically aggressive to buried structures.

5 Tertiary Containment Cell

Following approval of the tertiary containment cell KI will incorporate the recommended alternative control measures to suit the specific site constraints of the new location, namely:

- construction of a diversion drain around the foot of the residual clay embankment to divert any surface water that infiltrates the soil profile;
- provision of an additional layer of coarse drainage gravel overlain by ‘bidim’ (a geotextile) to allow dissipation and lateral groundwater discharge to the surrounding strata rather than into the lower levels of the containment cell;
- fill and residual clay should be situated beneath the proposed tertiary containment cell base to avoid localised groundwater flow;

- incorporation of the alternative control measures outlined in Section 2.3 of RCA Australia's report (Appendix I);
- verification of the soil profiles, groundwater levels and the likely extent of contaminated material at the new location during the construction works.

6 Soils

KI will prepare an Acid Sulphate Soils Management Plan in accordance with the NSW Government's Acid Sulphate Soil Manual which will include:

- A description of mitigation strategies for the treatment of soil, including the application of lime to disturbed soils.
- A monitoring program – outlining the parameters to be monitored, the number of locations, monitoring frequency, and analyses to be conducted.
- Contingency procedures for remedial and restoration action in the case of unexpected events or the failure of management procedures.

7 Traffic Management

KI will develop the following plans:

- A detailed Transport Plan (including obtaining approvals) for the transportation of facility components and equipment.
- A Traffic Management Plan for the operational phase, detailing traffic management measures for:
    - safety for all modes of transport;
    - potential hazards;
    - maintenance of road network; and
    - cumulative impacts of traffic movements.

KI will also:

- Construct internal roads in accordance with Australian Standards.
- Provide alternative emergency vehicle access from the Pacific Highway to the western boundary of the site via a gravel driveway for the use of emergency vehicles and KI staff. KI will permit emergency vehicles and KI staff to access and exit the site from the access driveway on the KI site. In exception circumstances, KI will also allow Steel River occupants to exit the Estate via the same emergency access driveway.
- Investigate future opportunities to extend the rail siding into the KI site.
- KI will provide bicycle facilities, showers and bike lockers on site to encourage staff to use non-car based modes of transport to and from work.

8 Noise and Vibration

8.1 Construction Noise and Vibration

KI will prepare a Construction Noise and Vibration Management Plan in accordance with the (former) DECC Environmental Management – Noise Assessing Vibration:
A Technical Guideline (2006), and Interim Construction Noise Guideline (prepared by DECCW and dated 2009.

8.2 Operational Noise

- KI will apply the following acoustic treatments to the plant:
    - 0.48mm thick Colorbond steel cladding wall to the external walls of the MPS, Low Bay, Wash Water, White Wool, Utility and oxygen plant;
    - Colorbond steel cladding external walls in the High Bay with acoustic insulation to achieve a minimum STC rating of 30;
    - 0.48mm thick Colorbond steel sheeting to the roof of the plant over the MPS, Low Bay, Wash Water, Utility and oxygen plant;
    - Colorbond steel cladding of the roof above the White Wool and High Bay with acoustic insulation to achieve a minimum STC rating of 30; and
    - Noise attenuation of roof ventilations to an STC rating of 7.
- KI will comply with the Predicted Operation Noise Levels identified in Table 5-4 of the Revised Noise Assessment attached at Appendix D of this PPR.

9 Landscaping

All landscaping works will be provided in accordance with the SIAS Landscape Development guidelines.

10 Water Cycle Management

KI commits to implement the following measures to manage any impacts associated with the water cycle on site:

3.10.1 Operational

- Water quality devices will be incorporated into the drainage system once the development becomes operational.
- Where practical rainwater harvesting will be used for use in toilets.
- Spill control measures will be adopted around all potential spill sites including specific sump and clean out measures.

10.2 Construction

- A Construction Environmental Management Plan will be prepared to ensure all construction works are undertaken in a manner to minimise the potential for soil erosion and sedimentation. As a minimum, the measures outlined in the Managing Urban Stormwater – Vol 1 Soils and Construction should be implemented.
- Construction will be planned to minimise the time that disturbed land is exposed and appropriate erosion prevention and sedimentation devices will be installed and maintained where areas are disturbed.
- Construction of Water Quality Pond 1 in the northern corner of the site will be undertaken generally in accordance with the conceptual plans prepared by Patterson Britton (Figures 1-4 of Appendix H of this PPR), and will be subject to detailed design by an appropriately qualified engineer.
- Sediment basins will not be used as their construction may expose the underlying material to additional infiltration of water, possibly mobilising the contaminated material capped on the site.
- Construction will be undertaken in accordance with the conceptual erosion and sedimentation plan (see Drawing number H59657 of Appendix B of the exhibited EAR).
- Staff facilities will be installed and maintained so that pollutants, including wash water, are not conveyed from the Site in stormwater. All wastewater during the construction period will be disposed of either via a connection to the existing Hunter Water sewerage system and / or offsite to a licensed facility.
- Spills will be minimised through the application of protocols for the handling of hazardous materials. If any spill occurs, it is likely to be of a small volume and contaminate only a small area. All possible pollutant materials will be stored clear of site boundaries and stormwater drainage lines and in a designated covered area. Containment bunds will be constructed with provision for collection of any spilt material.

11 Visual Impact

KI commits to mitigate any potential lighting impacts by complying with Control of Obtrusive Effects of Outdoor Lighting (Standards Australia, AS 4282.

12 Waste Management

- KI will implement and monitor procedures and practices to manage solid and liquid waste from operations.
- Within 2 years of operations commencing, KI will investigate opportunities to uptake greater proportions of cullet from the market.

13 Hazards

KI commits to undertaking the following mitigation measures to manage potential hazards on site:

- Storage and unloading areas will be designed in accordance with AS3780 for corrosive substances (incl. bunding).
- Hot work permit system will be established for all hot work such as welding, grinding etc.
- HAZOP or other structured hazard identification technique will be used to determine adequacy of process controls, trips and alarms.
- Location of natural gas isolation valve will be determined to allow for rapid isolation from a safe location in case of an incident.
- Hazardous Area Classification (zoning) required in accordance with Australian Standards. Electrical equipment will be determined in accordance with Hazardous Zones.
- The burner controls will adhere to international codes and standards.
- Spill kits will be available on the site for incidental spillage or leakage from the domestic fuel storage and handling.
- AS1940 Storage and Handling of Flammable and Combustible Liquids and AS 1596 The storage and handling of LP Gas to be referred to in the design of LPG and fuel storages.
- KI will prepare a Fire Risk Management Plan or other fire risk study for a detailed determination of required fire systems.
- Ensure hydrants and hoses comply with standards and code requirements.

- Location of fire hose reels to be determined in accordance with the requirements in AS1940, AS2419.1 and Building Code of Australia. Hose reel needs to be compliant with AS1221 and AS2441.
- At least two emergency access points for the fire brigade are required to access the site.
- All fire protection equipment will be maintained to AS1851.
- The site fire protection drawings will be prepared to show the exact location of all forms of fire protection once the detail design has finished.