Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning under delegation executed on 11 October 2017, I approve the Development Application referred to in Schedule 1, subject to the conditions specified in Schedule 2.

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 Development.

Sargeant

Anthea Sargeant
Executive Director
Key Sites and Industry Assessments

Sydney 19 December 2017 File: 7520

SCHEDULE 1

Application No:	SSD 7520
Applicant:	Pymore Recyclers International Pty Ltd
Consent Authority:	Minister for Planning
Land:	129 Mitchell Avenue, Kurri Kurri, NSW Lots 796 and 797 in DP 39877
Development:	The construction and operation of a used lead acid battery (ULAB) recycling facility to receive and process up to 60,000 tonnes per year of ULABs.

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DEFINITIONS

Aboriginal object	Has the same meaning as the definition of the term in section 5 of the NP&W Act
AHD	Australian Height Datum
Applicant	Pymore Recyclers International Pty Ltd, or any other person(s) authorised to carry out any development to which this consent applies
APZ	Asset Protection Zone
BCA	Building Code of Australia
CEMP	Construction Environmental Management Plan
Certifying Authority	A person who is authorised by or under section 109D of the EP&A Act to issue Part 4A certificates
Conditions of this consent	The conditions contained in Schedule 2 of this document
Construction	The demolition of and removal buildings or works for the purpose of the development, including earthworks, and erection of buildings and other infrastructure permitted by this consent
Council	Cessnock City Council
Crown Lands and Water	NSW Department of Crown Lands and Water
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development as described in the EIS and RTS, as modified and subject to the conditions of this consent
Development layout	The plan at Appendix A of this consent
Earthworks	Bulk earthworks, site levelling, import and compaction of fill material, excavation for installation of drainage and services, to prepare the site for construction
EIS	The Environmental Impact Statement titled *Kurri Kurri Battery Recycling Facility*, prepared by EMM Consulting dated 11 November 2016
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPL	An Environment Protection Licence issued by the EPA under the POEO Act
Evening	The period from 6 pm to 10 pm
FRNSW	Fire and Rescue New South Wales
Heavy vehicle	Any vehicle with a gross vehicle mass of 4.5 tonnes or more
Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement
Heritage Item	An item as defined under the *Heritage Act 1977,* and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the *National Parks and Wildlife Act 1974*
Incident	A set of circumstances causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this consent
Land	In general, the definition of land is consistent with the definition in the EP&A Act
Management & Mitigation Measures	The Applicant's management and mitigation measures included in Appendix B.
Minister	Minister for Planning (or delegate)
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
NCC	National Construction Code
OEH	Office of Environment and Heritage
OEMP	Operational Environmental Management Plan
PCA	Principal Certifying Authority authorised under section 109D of the EP&A Act
PMF	Probable maximum flood
POEO Act	*Protection of the Environment Operations Act 1997*
Reasonable	Relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
RMS	Roads and Maritime Services

RTS	Response to Submissions titled *Kurri Kurri Battery Recycling Facility, Response to Submissions* prepared by EMM Consulting, dated 24 February 2017 and 13 June 2017
Secretary	Secretary of the Department (or nominee)
Sensitive Receivers	A location where people are likely to work or reside, this may include a dwelling, school, hospital, office or public recreational area
Site	The land listed in Schedule 1
Site Auditor	Has the same meaning as the definition of the term in the *Contaminated Land Management Act 1997*
Site Audit Report	Has the same meaning as the definition of the term in the *Contaminated Land Management Act 1997*
Site Audit Statement	Has the same meaning as the definition of the term in the *Contaminated Land Management Act 1997*
SSD 7520	The development as described in Schedule 1, the EIS and the RTS
TfNSW	Transport for NSW
ULAB	Used Lead Acid Battery
Waste	Has the same meaning as the definition of the term in the Dictionary to the POEO Act
Year	A period of 12 consecutive months

SCHEDULE 2

PART A: ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

A1. In addition to meeting the specific performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the Development.

TERMS OF CONSENT

A2. The Development may only be carried out in:
(a) in compliance with the conditions of this consent;
(b) in accordance with the directions of the Secretary;
(c) in accordance with the EIS and RTS;
(d) in accordance with development layout plans and drawings in the EIS (see Appendix A); and
(e) in accordance with the Management and Mitigation Measures (see Appendix B).

A3. 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 consent shall prevail to the extent of any inconsistency.

LIMITS OF CONSENT

A4. This consent lapses five years after the date from which it was granted, unless the Development has physically commenced on the land to which the consent applies before the date on which the consent would otherwise lapse under section 95 of the EP&A Act.

A5. The Applicant must not receive or process on the site more than 60,000 tonnes per year of used lead acid batteries (ULABs).

A6. The storage of dangerous goods within the Development must be within the quantities provided in Table 1 at all times.

Table 1: Limits to dangerous goods storage within the Development

Hazardous material	Dangerous Goods Class	Total Storage Capacity
Liquid oxygen	2.2 subsidiary risk 5.1	25,000 L
Aqueous hydrogen peroxide	5.1 PG III subsidiary risk 8	12 tonnes
Corrosive substances (ULABs – UN 2794)	8	5,000* tonnes
Corrosive substances (excluding ULABs)	8 PG II	86 tonnes
Toxic substances (lead dross)	6.1 PG III	80 tonnes

** **NOTE:** 5,000 tonnes represents the total mass of ULABs to be stored, of which 20% (1,000 tonnes) is a corrosive substance (acid).*

STAGED SUBMISSION OF PLANS OR PROGRAMS

A7. With the approval of the Secretary, the Applicant may:
(a) submit any strategy, plan or program required by this consent on a progressive basis; and/or
(b) combine any strategy, plan or program required by this consent.

A8. If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program. A clear relationship between the strategy, plan or program that is to be combined must be demonstrated.

EVIDENCE OF CONSULTATION

A9. Where consultation with any public authority is required by the conditions of this consent, the Applicant must:

(a) consult with the relevant public authority prior to submitting the required documentation to the Secretary or the PCA for approval;
(b) submit evidence of such consultation as part of the relevant documentation required by the conditions of this consent;
(c) describe how matters raised by the public authority have been addressed and identify matters that have not been resolved; and
(d) include the details of any outstanding issues raised by the relevant public authority and an explanation of disagreement between any public authority and the Applicant.

STATUTORY REQUIREMENTS

A10. The Applicant must ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.

STRUCTURAL ADEQUACY AND CERTIFICATION

A11. The Applicant must ensure 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.

Note: *Under Part 4A of the EP&A Act, the Applicant 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 Development.*

EXTERNAL WALLS AND CLADDING FLAMMABILITY

A12. The external walls of the building including attachments must comply with the relevant requirements of the NCC. Prior to the issue of a Construction Certificate and Occupation Certificate the Certifying Authority must:
(a) be satisfied that suitable evidence is provided to demonstrate that the products and systems proposed for use or used in the construction of external walls including finishes and claddings such as synthetic or aluminium composite panels comply with the relevant requirements of the NCC; and
(b) ensure that the documentation relied upon in the approval processes include an appropriate level of detail to demonstrate compliance with the NCC as proposed and as built.

A copy of the documentation required under (b) must be provided to the Secretary within 7 days of being accepted by the Certifying Authority.

UTILITIES AND SERVICES

A13. Prior to the construction of any utility works associated with the Development, the Applicant must obtain relevant approvals from service providers.

A14. Prior to operation of the Development, the Applicant shall obtain a Compliance Certificate for water and sewerage infrastructure servicing of the site under section 50 of the *Hunter Water Act 1991*.

PROTECTION OF PUBLIC INFRASTRUCTURE

A15. Prior to the commencement of construction, the Applicant must:
(a) consult with the relevant owner and/or provider of services that are likely to be affected by the Development to make suitable arrangements for access to, diversion, protection, and/or support of the affected infrastructure;
(b) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and
(c) submit a copy of this report to the Secretary and Council.

A16. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
(a) repair, or pay the full costs associated with repairing any public infrastructure that is damaged by the Development; and
(b) relocate, or pay the full costs associated with relocating any infrastructure that needs to be relocated as a result of the Development.

COMPLIANCE

A17. The Applicant must ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.

WORKS-AS-EXECUTED PLANS

A18. Prior to the issue of the final Occupation Certificate, works-as-executed drawings signed by a registered surveyor demonstrating that the stormwater drainage and finished ground levels have been constructed as approved, must be submitted to the PCA.

OPERATION OF PLANT AND EQUIPMENT

A19. The Applicant must ensure that only the plant and equipment listed in Table 7.1 of the Noise and Vibration Assessment report dated 24 October 2016 provided with the EIS is used on site during operation and construction respectively.

A20. The Applicant must ensure that all plant and equipment used for the Development is:
(a) maintained in a proper and efficient condition; and
(b) operated in a proper and efficient manner.

PART B: ENVIRONMENTAL PERFORMANCE AND MANAGEMENT

HUMAN HEALTH

B1. The Applicant shall ensure the Development is carried out in accordance with *Work Health and Safety Regulation 2017* (WHS Regulation) and the requirements of SafeWork NSW.

B2. Prior to operations, the Applicant shall prepare a Health and Safety Plan (HSP) for the Development to the satisfaction of the Secretary. The HSP must:
(a) be prepared in consultation with Hunter New England Population Health and SafeWork NSW;
(b) describe the controls to ensure compliance with the WHS Regulation;
(c) describe specific engineering controls to be implemented to reduce employee exposure to lead dust and other contaminants;
(d) identify personal protective equipment (PPE) required for use onsite;
(e) describe the procedures for training, education, awareness programs and inductions for site personnel to ensure adequate protection from human health risks; and
(f) identify requirements for health monitoring for site personnel and decontamination procedures.

B3. The Applicant must:
(a) not commence operation until the HSP is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the HSP approved by the Secretary.

AIR QUALITY

Operational Procedures

B4. The Applicant must install and operate equipment in line with best practice to ensure the Development complies with all load limits, air quality criteria and air quality monitoring requirements as specified in the EPL for the site.

B5. The production/crystalliser building (Building 5) must be designed and operated under negative pressure to minimise fugitive emissions.

Dust Minimisation

B6. All reasonable steps must be taken to minimise dust generated during all works authorised by the consent.

B7. During construction, the Applicant must ensure that:
(a) exposed surfaces and stockpiles must be suppressed by regular watering;
(b) all trucks entering or leaving the site with loads must have their loads covered;
(c) trucks associated with the Development do not track dirt onto the public road network;
(d) public roads used by trucks associated with the development must be kept clean; and
(e) land stabilisation works must be carried out progressively on site to minimise exposed surfaces.

Operational Air Quality Management Plan

B8. Prior to the commencement of operation, the Applicant must prepare an Air Quality Management Plan (AQMP) to the satisfaction of the Secretary. The AQMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C5. The AQMP must:
(a) be prepared by a suitably qualified and experienced person(s);
(b) include key performance indicators (KPI) for emission controls and responsibilities for demonstrating and reporting achievement of these KPIs;
(c) include monitoring methods, including location, frequency and duration;
(d) detail response mechanisms if KPIs are exceeded; and
(e) include protocols for record keeping and compliance reporting.

B9. The Applicant must:
(a) not commence operation until the AQMP is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the AQMP approved by the Secretary.

Best Management Practice

B10. Prior to construction, the Applicant must prepare a detailed Best Management Practice report (BMP report) to the satisfaction of the Secretary and in consultation with the EPA that demonstrates the air quality management and mitigation measures are consistent with best practice. The BMP report should demonstrate consistency with the *European Commission Integrated Pollution Prevention and Control* (IPPC) *Best Available Technique Conclusion (2016)*.

B11. If the BMP report demonstrates that the air quality management and mitigation measures are not consistent with best practice, the Applicant shall investigate and implement further air quality management and mitigation measures as directed by the Secretary or the EPA.

B12. The Applicant must:
(a) not commence construction until the BMP report is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the BMP report approved by the Secretary.

Air Quality Verification

B13. Within 3 months of the commencement of operation, the Applicant must prepare and submit to the satisfaction of the Secretary a post-commissioning Air Emissions Verification Report (AEVR). The AEVR must:
(a) be undertaken by a suitably qualified expert;
(b) include the analytical results and report of two rounds of post-commissioning sampling for all emission points and air pollutants listed on the EPL; and
(c) include a comparison of the discharge concentrations and emission rates obtained from the analytical results against the prescribed concentrations contained in the *Protection of Environment Operations (Clean Air) Regulation, 2010*, the recommended EPL emission limits, the *Kurri Kurri Battery Recycling Facility Air Quality and Greenhouse Gas Assessment* (AQIA) prepared by Ramboll Environ dated October 2016, and additional information contained in the additional RTS dated 13 June 2017.

B14. If the results of the AEVR identify sampling results higher than the prescribed or recommended limits, the Applicant shall investigate and implement further air emission controls as directed by the Secretary or the EPA.

Odour Management

B15. The Applicant must ensure the Development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).

HAZARDS AND RISK

Pre-construction

B16. At least one month prior to the commencement of construction of the Development (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant must prepare and submit for the approval of the Secretary the studies set out under subsections (a) to (c) (the pre-construction studies). Construction, other than of preliminary works, must not commence until approval has been given by the Secretary in consultation with FRNSW.
(a) A **Fire Safety Study** for the Development, including design of fire safety systems and strategies. This study must cover the relevant aspects of the Department's *Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines'* and the New South Wales Government's '*Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*'. The Applicant must consult with FRNSW prior to the preparation of the Fire Safety Study.
(b) A **Hazard and Operability Study** for the Development, chaired by a qualified person, independent of the Development, approved by the Secretary prior to the commencement of the study. The study must be carried out in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'*. The study report must be accompanied by a program for the implementation of all recommendations made in the report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented. The Hazard and Operability Study must identify the hazards and safeguards applicable to the design on operation of the rotary furnace.
(c) A **Final Hazard Analysis** of the Development, prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'*. The Final Hazard Analysis must include a risk assessment of rotary furnace explosion and specify the safeguards to address this risk, taking into consideration the detailed design of the rotary furnace.

B17. Prior to the commencement of construction, the final design of the development must be finalised in consultation with and to the satisfaction of Fire and Rescue NSW (FRNSW) and include suitable additional provisions for special hazards by specifically addressing Clauses E1.10 and E2.3 of Volume One of the *National Construction Code (NCC) Series*.

Pre-commissioning

B18. The Applicant must develop and implement the plans and systems set out under subsections (a) and (b) below. No later than two months prior to the commencement of commissioning of the Development, or within such further period as the Secretary may agree, the Applicant must submit for the approval of the Secretary documentation describing those plans and systems. Commissioning must not commence until approval has been given by the Secretary.

(a) A comprehensive Emergency Plan and detailed emergency procedures for the Development. The Emergency Plan must include consideration of the safety of all people outside of the Development who may be at risk from the Development. The plan must be prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'*.

(b) A document setting out a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The document must clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records must be kept on-site and must be available for inspection by Secretary upon request. The Safety Management System must be developed in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'*.

Pre-startup

B19. One month prior to the commencement of operation of the Development, the Applicant must submit to the Secretary, a Pre-Startup Compliance Report detailing compliance with Conditions B16 and B18 including:

(a) dates of study/plan/system submission, approval, commencement of construction and commissioning;
(b) actions taken or proposed, to implement recommendations made in the studies/plans/systems; and
(c) responses to any requirement imposed by the Secretary under Condition B23.

Post-startup

B20. Three months after the commencement of operation of the Development, the Applicant must submit to the Secretary, a Post-Startup Compliance Report verifying that:

(a) the Emergency Plan required under Condition B18(a) is effectively in place and that at least one emergency exercise has been conducted; and
(b) the Safety Management System required under Condition B18(b) has been fully implemented and that records required by the system are being kept.

Ongoing

Hazard Audit

B21. Twelve months after the commencement of operations of the Development and every three years thereafter, or at such intervals as the Secretary may agree, the Applicant must carry out a comprehensive Hazard Audit of the Development. The audits must:

(a) be carried out at the Applicant's expense by a qualified person or team, independent of the Development, approved by the Secretary prior to commencement of the audit;
(b) be carried out in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'*; and
(c) include a review of the site Safety Management System and a review of all entries made in the incident register since the previous audit.

B22. Within one month of each audit carried out in accordance with Condition B21, the Applicant must submit a report to the satisfaction of the Secretary for approval. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.

Further Requirements

B23. The Applicant must comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the reports submitted in respect of Conditions B16 to B22 inclusive, within such time as the Secretary may agree.

Bushfire

B24. The Applicant must establish and maintain appropriate Asset Protection Zones (APZ) in a manner that prevents accumulation of fine flammable debris on the ground and locate and install services to appropriately reduce their contribution to fire hazard.

Bunding

B25. All chemicals, fuels, oils, hazardous materials, and dangerous goods, as defined by the *Australian Dangerous Goods Code*, must be stored on the site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Manual* (as may be updated from time to time).

WASTE MANAGEMENT

Statutory Requirements

B26. Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal, except as expressly permitted by an EPL.

B27. The Applicant must record the amount of waste (in tonnes) received at the site on a daily basis.

B28. The Applicant must retain all sampling and waste classification data for the life of the development and keep it readily available for inspection by the EPA and the Secretary.

B29. The Applicant must retain all weighbridge records as required by the *POEO (Waste) Regulation* and for the life of the development. The weighbridge records must be made immediately available on request by the Secretary and/or the EPA.

Receipt, Storage & Handling of Waste

B30. The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the EPA's *Waste Classification Guidelines Part 1: Classifying Waste, November 2014*, or its latest version and dispose of all waste materials at a waste management facility or premises lawfully permitted to accept the materials.

B31. All waste must be stored wholly within the designated waste storage areas.

B32. All waste must be loaded and unloaded within the designated loading and unloading areas.

Waste Monitoring Program

B33. From the commencement of operation, the Applicant must implement a Waste Monitoring Program for the Development. The program must:
- (a) be prepared by a suitably qualified and experienced person(s) prior to the commencement of operation;
- (b) include suitable provision to monitor the:
  - (i) quantity, type and source of waste received on site; and
  - (ii) quantity, type and quality of the outputs produced on site; and
- (c) ensure that:
  - (i) all incoming waste loads are screened so the site does not accept wastes that are prohibited;
  - (ii) all waste that is controlled under a tracking system has the appropriate documentation prior to acceptance at the site; and
  - (iii) staff receive adequate training in order to be able to recognise and handle any unanticipated hazardous or other prohibited waste including asbestos.

Waste Management Plan

B34. Prior to the commencement of construction, the Applicant must prepare a Waste Management Plan (WMP) for the Development to the satisfaction of the Secretary. The WMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C5. The WMP must:
- (a) detail the type and quantity of waste to be generated during construction and operation of the Development;
- (b) include details of stockpile limits of incoming ULABs; and
- (c) include procedures to be followed during unexpected processing machinery shut down.

B35. The Applicant must:
(a) not commence operation until the WMP is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the WMP approved by the Secretary.

Construction Waste Management

B36. The Applicant shall ensure any waste generated on the site during construction is classified in accordance with the EPA's *Waste Classification Guidelines, 2014* or its latest version, and disposed of to a facility that may lawfully accept the waste.

B37. Prior to the commencement of construction, the Applicant must prepare a Construction Waste Management Plan (CWMP) for the Development to the satisfaction of the Secretary. The plan must form part of the CEMP required by Condition C1 and must:
(a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and
(b) be implemented for the duration of construction works.

B38. The Applicant must:
(a) not commence construction until the CWMP is approved by the Secretary; and
(b) implement the most recent version of the CWMP approved by the Secretary.

BIODIVERSITY

B39. Prior to any clearing or construction works, the Applicant must purchase and retire 58 ecosystem credits and 518 species credits to offset the removal of native vegetation and threatened species habitat on site, in accordance with the assessment presented in the EIS and RTS. The ecosystem and species credits must be determined in accordance with the OEH's *Framework for Biodiversity Assessment* (FBA) and the *Biobanking Assessment Methodology 2014* (BBAM).

Note: *If the Applicant seeks a variation to the offset rules, the Applicant must describe and justify these and demonstrate that reasonable steps have been taken to find like-for-like offsets in accordance with Section 10.5.4.2 of the FBA and Appendix A of the OEH's NSW Biodiversity Offsets Policy for Major Projects 2014.*

Biodiversity Management Plan

B40. Prior to commencement of construction, the Applicant must prepare a Biodiversity Management Plan (BMP) for the site to the satisfaction of the Secretary. The BMP must:
(a) be prepared in consultation with OEH;
(b) describe the measures that would be implemented to manage and protect any remnant vegetation and fauna habitat on the site;
(c) include a detailed description of the measures that would be implemented to:
(i) minimise the impacts on fauna, including the carrying out of pre-clearance surveys by a suitably trained handler;
(ii) control weeds and feral pests;
(iii) control erosion; and
(iv) manage bushfire risk.
(d) include details of who would be responsible for monitoring, reviewing, and implementing the BMP.

B41. The Applicant must:
(a) not commence construction until the BMP is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the BMP approved by the Secretary.

TRAFFIC AND ACCESS

Roadworks and Access

B42. Prior to the commencement of operation of the Development, upgrades to Mitchell Avenue in the vicinity of the site access intersection and Johnson Avenue to facilitate the Development must be completed in accordance with the plans prepared by Transport and Urban Planning, Figures 1 to 3 Ref. 17018 dated 9 February 2017 to the satisfaction of the relevant roads authority. The Applicant must obtain approval for the works under Section 138 of the *Roads Act 1993*.

B43. Prior to the commencement of operation of the Development, the Applicant must obtain approval from the relevant roads authority which demonstrate that the proposed access to the Development is designed to accommodate the turning path of B-double and semi-trailer trucks.

Intersection Works

B44. The Applicant must meet the requirements of the relevant roads authority for a new intersection, incorporating the existing intersection of Mitchell and Johnson avenues and the site entrance in accordance with the plans prepared by Transport and Urban Planning, Figures 1 to 3 Ref. 17018 dated 9 February 2017.

B45. Within six months of commencement of construction, the Applicant must provide written evidence to the satisfaction of the Secretary demonstrating that an agreement has been made with the relevant roads authority for construction and payment of the intersection upgrade works.

B46. The Applicant must complete the intersection upgrade works on the existing intersection of Mitchell and Johnson avenues and the site entrance prior to operation.

Parking

B47. The Applicant must:
- (a) provide 46 parking spaces on-site (including one accessible space); and
- (b) ensure that traffic associated with the Development does not utilise public and residential streets or public parking facilities.

Operating Conditions

B48. The Applicant must ensure:
- (a) internal roads, driveways and parking (including grades, turn paths, sight distance requirements, aisle widths, aisle lengths and parking bay dimensions) associated with the Development are constructed and maintained in accordance with the latest version of AS 2890.1 and AS 2890.2;
- (b) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant AUSTROADS guidelines;
- (c) the Development does not result in any vehicles queuing on the public road network;
- (d) heavy vehicles associated with the Development are not parked on local roads or footpaths in the vicinity of the site;
- (e) all vehicles are wholly contained on site before being required to stop;
- (f) all loading and unloading of materials is carried out on-site;
- (g) all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network; and
- (h) the proposed turning areas are kept clear of any obstacles, including parked cars, at all times.

Operational Traffic Management Plan

B49. Prior to the commencement of operation, the Applicant must prepare an Operational Traffic Management Plan (OTMP) for the Development to the satisfaction of the Secretary. The OTMP must form part of the OEMP required by Condition C4 and be prepared in accordance with Condition C5. The OTMP must:
- (a) be prepared by a suitably qualified and experienced person(s) in consultation with Council;
- (b) detail the measures that are to be implemented to ensure road safety and network efficiency including ensuring no queuing or parking of vehicles occur on the surrounding road network;
- (c) detail heavy vehicle routes, access and parking arrangements, including arrangements for controlling traffic in the site access road;
- (d) include a Driver Code of Conduct to:
  - (i) minimise the impacts on the local and regional road network;
  - (ii) minimise conflicts with other road users;
  - (iii) minimise road traffic noise;
  - (iv) ensure truck drivers use specified haul routes; and
  - (v) include a program to monitor the effectiveness of these measures.

B50. The Applicant must:
- (a) not commence operation until the OTMP is approved by the Secretary; and
- (b) carry out the Development in accordance with the most recent version of the OTMP approved by the Secretary.

STORMWATER AND FLOODING

Discharge Limits

B51. The Development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL.

Erosion and Sediment Control

B52. Prior to the commencement of construction, the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the *Managing Urban Stormwater: Soils and Construction Guideline*.

Waterfront Works

B53. The Applicant shall conduct all works on waterfront land (within 40 m of Swamp Creek) in accordance with Crown Lands and Water's *Guidelines for Controlled Activities on Waterfront Land 2012*.

Riparian Works

B54. Prior to the commencement of construction, the Applicant shall prepare a Vegetation Management Plan (VMP) in consultation with Crown Lands and Water and to the satisfaction of the Secretary, for riparian revegetation works to offset the development works located within the riparian corridor. The VMP shall include a schedule for implementing and maintaining the riparian revegetation works.

B55. The Applicant must:
(a) not commence construction until the VMP is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the VMP approved by the Secretary.

Stormwater Design

B56. The Applicant shall prepare a final stormwater design plan for the development. The stormwater design plan shall:
(a) be prepared in consultation with Council and in accordance with Council's Engineering Requirements for Development and the latest version of *Managing Urban Stormwater: Council Handbook*;
(b) be generally in accordance with the conceptual design in the EIS;
(c) include a system to capture, contain and dispose of contaminated firewater, which meets the requirements of *Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines'*, for inclusion within the development's Fire Safety Study.

Water Management Plan

B57. Prior to the commencement of construction, the Applicant shall prepare a Water Management Plan for the Development. The Water Management Plan must:
(a) be prepared in consultation with Crown Lands and Water;
(b) be approved by the Secretary prior to commencement of construction;
(c) include a stormwater monitoring program including:
  (i) continuous monitoring of water levels in the stormwater capture basin;
  (ii) monitoring of stormwater water quality prior to discharge from site;
  (iii) a trigger action response plan including trigger levels for investigating adverse impacts and procedures for implementing mitigation and contingency measures;
(d) include a groundwater monitoring program including:
  (i) installation of monitoring bores to establish baseline conditions;
  (ii) frequency of monitoring of groundwater levels and quality;
  (iii) impact assessment criteria and trigger levels for investigating and responding to adverse groundwater impacts.

B58. The Applicant must:
(a) not commence construction until the Water Management Plan is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the Water Management Plan approved by the Secretary.

Flooding

B59. The Applicant shall ensure all buildings, structures and retaining walls, located below the PMF level, are constructed from flood compatible materials and are built to withstand flooding.

B60. Within 2 months of completion of construction, the Applicant shall provide a structural engineer's report to the Secretary demonstrating that the buildings, structures and retaining walls have been constructed from flood compatible materials and are built to withstand the forces of flood waters, debris and buoyancy forces up to the PMF event. This shall include any proposed weir gates on doors of the building/s.

B61. The Applicant shall develop procedures for routine inspection, testing and maintenance of flood protection structures, to ensure on-going structural and operational integrity.

B62. All hazardous materials must be stored and processed in fully enclosed and bunded buildings that have a minimum finished floor level of 15.6m AHD with bunding and flood gate/weirs at openings to provide protection to 18.1m AHD.

B63. Prior to the commencement of operation, the Applicant must prepare a Flood Emergency Response Plan (FERP) to the satisfaction of the Secretary. The FERP must:
(a) be prepared by a suitably qualified and experienced person(s) in consultation with Council;
(b) address the provisions of OEH's Floodplain Risk Management Guidelines;
(c) detail flood emergency response procedures, including training, notification, warning times, assembly points and evacuation routes and protocols;
(d) detail procedures and frequency for operation and testing of the flood weir gates; and
(e) include procedures for inspection and repair of retaining walls and the on-site detention basin as soon as practicable after flood events.

B64. The Applicant must:
(a) not commence operation until the FERP is approved by the Secretary; and
(b) carry out the Development in accordance with the most recent version of the FERP approved by the Secretary.

NOISE

Hours of Work

B65. The hours of work detailed in **Table 2** must be complied with.

Table 2: Hours of Work

Activity	Day	Time
Earthworks and construction	Monday – Friday Saturday	7 am to 6 pm 8 am to 1 pm
Operation	Monday – Sunday	24 hours

B66. Works outside of the hours identified in Table 2 may be undertaken in the following circumstances:
(a) the works are inaudible at the nearest sensitive receivers;
(b) for the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or
(c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

B67. In such circumstances, the Applicant must notify the Secretary and the affected residents prior to undertaking the activities or as soon as possible thereafter in the case of Condition B66(c) above.

Construction Noise Limits

B68. The Development must be constructed to achieve the construction noise management levels detailed in the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures in the EIS.

Operational Noise Limits

B69. The Applicant must ensure that noise generated by operation of the Development does not exceed the noise limits in **Table 3.**

Table 3: Noise Limits dB(A)

Location	Day $L_{Aeq(15\ minute)}$	Evening $L_{Aeq(15\ minute)}$	Night $L_{Aeq(15\ minute)}$	Night $L_{A1(1\ minute)}$
All residential receivers in a residential zone	36	36	36	52

Note: *Noise generated by the Development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy. Refer to the plan in Appendix C for the location of residential sensitive receivers.*

Note: *Industrial amenity criteria apply to isolated residences located in an industrial zone.*

Noise Mitigation

B70. The Applicant must:
(a) implement best practice, including all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated by the development;
(b) minimise the noise impacts of the development during adverse meteorological conditions;
(c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; and
(d) regularly assess noise emissions and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.

ABORIGINAL HERITAGE

Unexpected Finds Protocol

B71. If any item or object of Aboriginal heritage significance is identified on site:
(a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately;
(b) a 10 m wide buffer area around the suspected item or object must be cordoned off; and
(c) the OEH must be contacted immediately.

Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the *National Parks and Wildlife Act 1974.*

HISTORIC HERITAGE

Unexpected Finds Protocol

B72. If any archaeological relics are uncovered during the course of construction work, all works must cease immediately in that area and an archaeologist contacted to assess the find and recommend further investigations.

CONTAMINATION

B73. Prior to the commencement of construction, the Applicant must prepare an unexpected finds protocol to ensure that potentially contaminated material is appropriately managed. The protocol must form part of the CEMP required by Condition C1 and must ensure any material identified as contaminated must be disposed off-site, with the disposal location and results of testing submitted to the Secretary, prior to its removal from the site.

VISUAL AMENITY

Landscaping

B74. Prior to the commencement of operation, the Applicant must prepare a Landscape Management Plan (LMP) to manage the revegetation and landscaping works on-site, to the satisfaction of the Secretary. The plan must form part of the OEMP in Condition C4 and be prepared in accordance with Condition C5. The plan must:
(a) be prepared by a suitably qualified and experienced person(s) in consultation with Council;
(b) detail the species to be planted on-site;
(c) describe the monitoring and maintenance measures to manage revegetation and landscaping works; and
(d) be consistent with the Applicant's Management and Mitigation Measures at Appendix B.

B75. The Applicant must:
(a) not commence operation until the LMP is approved by the Secretary;
(b) carry out the Development in accordance with the most recent version of the LMP approved by the Secretary; and
(c) maintain the landscaping and vegetation on the site in accordance with the approved LMP for the duration of the development.

Pests, Vermin and Noxious Weed Management

B76. The Applicant must:
(a) implement suitable measures to manage pests, vermin and declared noxious weeds on the site; and
(b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in the surrounding area.

Note: *For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.*

Lighting

B77. The Applicant must ensure the lighting associated with the Development:
(a) complies with the latest version of *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 or the public road network.

Signage and Fencing

B78. All signage and fencing must be erected in accordance with the Development plans included in the EIS and RTS.

Note: *This condition does not apply to temporary construction and safety related signage and fencing.*

PART C: ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

C1. The Applicant must prepare a Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The CEMP must:
- (a) be approved by the Secretary prior to the commencement of construction;
- (b) identify the statutory approvals that apply to the Development;
- (c) outline all environmental management practices and procedures to be followed during construction works associated with the Development;
- (d) describe all activities to be undertaken on the site during construction of the Development, including a clear indication of construction stages and construction traffic impacts;
- (e) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;
- (f) describe the roles and responsibilities for all relevant employees involved in construction works associated with the Development; and
- (g) include the management plans required under Condition C2 of this consent.

C2. As part of the CEMP required under Condition C1 of this consent, the Applicant must include the following:
- (a) Erosion and Sediment Control Plan;
- (b) Construction Waste Management Plan (see Condition B36); and
- (c) Biodiversity (see Condition B40).

C3. The Applicant must:
- (a) not commence construction of the Development until the CEMP is approved by the Secretary; and
- (b) carry out the construction of the Development in accordance with the CEMP approved by the Secretary (and as revised and approved by the Secretary from time to time).

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

C4. The Applicant must prepare an Operational Environmental Management Plan (OEMP) to the satisfaction of the Secretary. The OEMP must:
- (a) be submitted to the Secretary for approval prior to the commencement of operation;
- (b) be prepared by a suitably qualified and experienced expert;
- (c) provide the strategic framework for environmental management of the Development;
- (d) identify the statutory approvals that apply to the Development;
- (e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Development;
- (f) describe the procedures that would be implemented to:
  - (i) keep the local community and relevant agencies informed about the operation and environmental performance of the Development;
  - (ii) receive, handle, respond to, and record complaints;
  - (iii) resolve any disputes that may arise;
  - (iv) respond to any non-compliance;
  - (v) respond to emergencies; and
- (g) include the following environmental management plans:
  - (i) Air Quality (see Condition B8);
  - (ii) Waste (see Condition B34);
  - (iii) Operational Traffic Management Plan (see Condition B49);
  - (iv) Flood Emergency Response (see Condition B63); and
  - (v) Water (see Condition B57).

The Applicant must:
- (a) not commence operation until the OEMP is approved by the Secretary; and
- (b) operate the Development in accordance with the OEMP approved by the Secretary (and as revised and approved by the Secretary from time to time).

MANAGEMENT PLAN REQUIREMENTS

C5. The Applicant must ensure that the environmental management plans required under Condition C4 of this consent are prepared by a suitably qualified person or persons in accordance with best practice and include:
- (a) detailed baseline data;
- (b) a description of:
  - (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);
  - (ii) any relevant limits or performance measures/criteria; and

(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Development or any management measures;

(c) a description of the management measures that would be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;

(d) a program to monitor and report on the:
   (i) impacts and environmental performance of the Development; and
   (ii) effectiveness of any management measures (see (c) above);

(e) a contingency plan to manage any unpredicted impacts and their consequences;

(f) a program to investigate and implement ways to improve the environmental performance of the Development over time;

(g) a protocol for managing and reporting any:
   (i) incidents;
   (ii) complaints;
   (iii) non-compliances with statutory requirements; and
   (iv) exceedances of the impact assessment criteria and/or performance criteria; and

(h) a protocol for periodic review of the plan.

Revision of Strategies, Plans and Programs

C6. Within three months of:
   (a) approval of a modification;
   (b) approval of an annual review under Condition C7;
   (c) submission of an incident report under Condition C8; or
   (d) completion of an audit under Condition C11,

the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.

Note: *This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Development.*

ANNUAL REVIEW

C7. Within 12 months from the commencement of operation, and each year thereafter, unless otherwise agreed by the Secretary, the Applicant must review the environmental performance of the Development to the satisfaction of the Secretary. This review must:
   (a) describe the development that was carried out in the previous reporting period, and the Development that is proposed to be carried out over the next reporting period;
   (b) include a comprehensive review of the monitoring results and complaints records of the Development over the previous reporting period, which includes a comparison of these results against the:
      (i) the relevant statutory requirements, limits or performance measures/criteria;
      (ii) requirements of any plan or program required under this consent;
      (iii) the monitoring results of previous reporting periods; and
      (iv) the relevant predictions in the EIS;
   (c) identify any non-compliance over the last reporting period, and describe what actions were (or are being) taken to ensure compliance;
   (d) identify any trends in the monitoring data over the life of the Development;
   (e) identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and
   (f) describe what measures will be implemented over the next reporting period to improve the environmental performance of the Development.

REPORTING

Incident Reporting

C8. Within 24 hours of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment, a report must be supplied to the Department outlining the basic facts. A further detailed report must be prepared and submitted following investigations of the causes and identification of necessary additional preventive measures. That report must be submitted to the Secretary no later than 14 days after the incident or potential incident.

C9. The Applicant must maintain a register of accidents, incidents and potential incidents. The register must be made available for inspection at any time by the independent Hazard Auditor and the Department.

Regular Reporting

C10. The Applicant must provide regular reporting on the environmental performance of the Development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

AUDITING

Independent Environmental Audit

C11. Within one year of the commencement of operation, and every three years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit (audit) of the Development. Division 2B of Part 6 of the EP&A Act applies to these audits, which are for the purposes of ascertaining information in relation to the environmental performance of the Development and the adequacy of strategies, plans and programs. Audits must:

(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
(b) include consultation with the relevant agencies;
(c) assess the environmental performance of the Development and assess whether it is complying with the requirements in this consent, and any other relevant approvals, relevant EPL(s) (including any assessment, plan or program required under these approvals);
(d) review the adequacy of any approved strategy, plan or program required under the abovementioned consents; and
(e) recommend measures or actions to improve the environmental performance of the Development, and/or any strategy, plan or program required under these consents.

Note: *This audit team must be led by a suitably qualified auditor, and include relevant experts in any other fields specified by the Secretary.*

C12. Within three months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The Applicant must implement these recommendations to the satisfaction of the Secretary.

ACCESS TO INFORMATION

C13. Prior to the commencement of construction and for the duration of the Development, the Applicant must:

(a) make copies of the following publicly available on its website:
  (i) the documents referred to in Condition A2;
  (ii) all current statutory approvals for the Development;
  (iii) all approved strategies, plans and programs required under the conditions of this consent;
  (iv) a comprehensive summary of the monitoring results of the Development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
  (v) a complaints register updated on a monthly basis;
  (vi) the annual reviews of the Development;
  (vii) any independent environmental audit of the Development and the Applicant's response to the recommendations in any audit;
  (viii) any other matter required by the Secretary; and
(b) keep this information up to date, to the satisfaction of the Secretary.

APPENDIX A
DEVELOPMENT LAYOUT PLANS

PLANT BUILDING

1. The contractor shall verify the necessity of an air natural drafting system in order to maintain the inner temperature in according to the Australian safety and occupational rules. During the hot season the hourly heat generated in the plant in operation is the following :

-Furnace area	280000 Kca l/h;
-Slag demolition area	150000 Kca l/h;
-Refinery area	100000 Kca l/h;
-Crystallizer tower	100000 Kca l/h;

2. The building design shall include louvers capable to allow the following air intake :

-Battery breaker room	16000 Nm3/h;
-Charge preparation room	25000 Nm3/h;
-Furnace and refinery room	95000 Nm3/h;
-Slag demolition room	12000 Nm3/h;

3. The control room shall be equipped with the hvac system and the light shall have an intensity of 500 lux

4. The drawing shows the main doors. Those access shall be of to kinds: the swinging type and the rolling type. The main doors shall have a glass window, spring return closing mechanism, and anti panic handle device. the drawing does not show any type of windows, however the window may be foreseen in according to the civil engineer design.

5. The building diffused lighting shall have an intensity of 250-300 lux. Emergency light are also required to maintain safe work conditions during the possible power black out. The emergency lighting intensity will be granted of 150 lux. The machinery equipments lighting and services (where it is required) will be part of detailed engineering.

6 Each column of the building shall be sized for an extra load equal to 2500 kg due to the support of the air duct. The electric cables and the equipment piping. This extra load will be max at 600mm from the column surface. The roof beam shall be sized for an extra load equal to 1500 kg (building centre line) due to the support of air duct.

7. Building walls: the non concrete structures unless otherwise indicated shall be realised as follows:

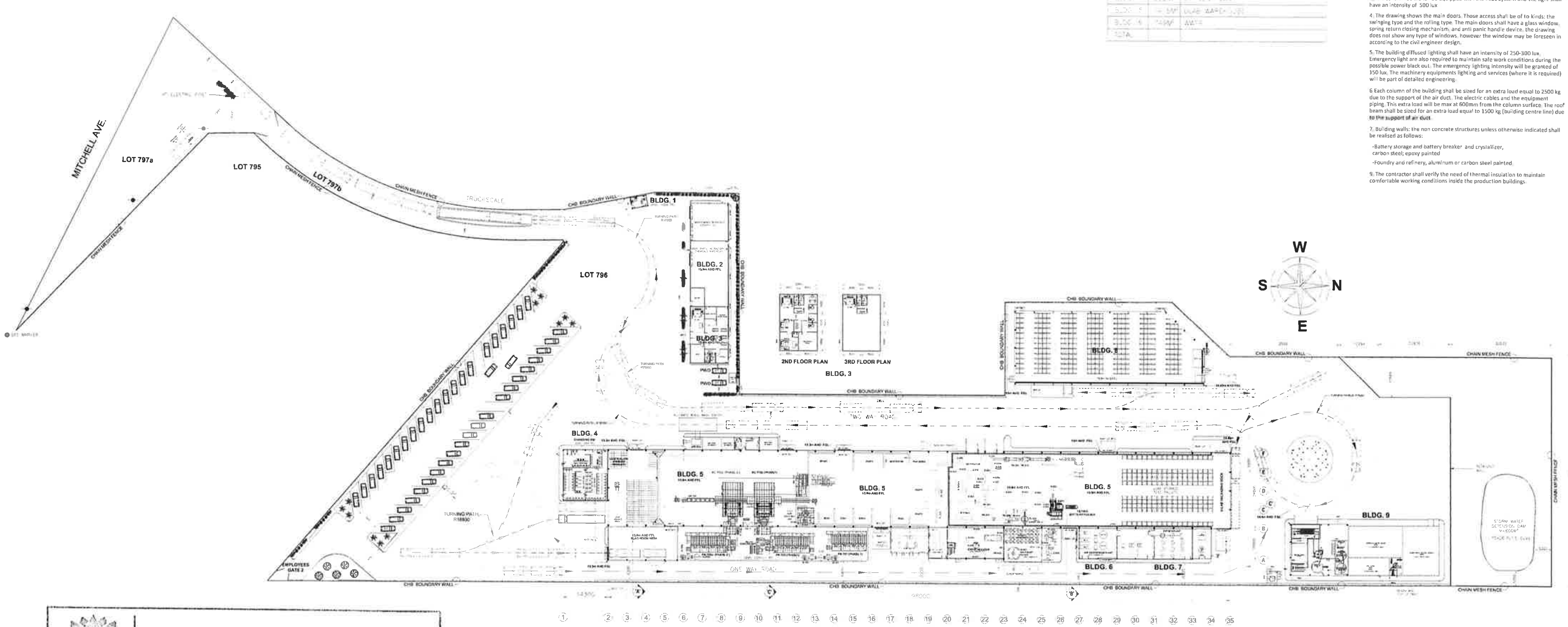
-Battery storage and battery breaker and crystallizer, carbon steel; epoxy painted

-Foundry and refinery, aluminum or carbon steel painted

9. The contractor shall verify the need of thermal insulation to maintain comfortable working conditions inside the production buildings.

KKBR BUILDINGS BUILDING AREAS

BUILDING	AREA	DESCRIPTION
BLDG. 1	[illegible]	[illegible]
BLDG. 2	[illegible]	[illegible]
BLDG. 3	[illegible]	[illegible]
BLDG. 4	[illegible]	CHANGING ROOM
BLDG. 5	[illegible]	[illegible]
BLDG. 6	[illegible]	AIR COMPRESSOR ROOM
BLDG. 7	[illegible]	[illegible]
BLDG. 8	[illegible]	[illegible]
BLDG. 9	[illegible]	WWTP
TOTAL		



GENERAL SITE LAYOUT & MACHINE ARRANGEMENT

NO.	DATE	DESCRIPTION	DRAWN	CHECK'D	APPR'D
0	09/06/16	First Issue	AAM	[illegible]	
1	09/13/16	Delete bldg. 10 (slag block holding)	AAM	[illegible]	
2	09/23/16	1 Furnaces made closer to the building 5 wall 2 Furnaces burners have been shifted on the external side of the building with rain protection shelter to be installed 3 Flue dust unit has been located in a corner of the charge preparation room 4 Burner cooling water unit has been located outdoor	AAM	[illegible]	
3	[illegible]	1 Revised Floor level 2 Revised Storm Water Detention Dam 3 Add Diesel Tank beside WWTP building 4 Add Septic tank at the front of PWD parking	AAM	[illegible]	
4	[illegible]	[illegible]	AAM	[illegible]	
5	[illegible]	[illegible]	AAM	[illegible]	

REVISIONS

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: [illegible] BATTERY RECYCLING PROJECT		DESIGN BY:	[illegible]
CLIENT: [illegible]		DRAWN BY:	AAM/MC
TITLE: [illegible] SITE LAYOUT & MACHINE ARRANGEMENT		CHECKED BY:	[illegible]
DRAWING NO: [illegible]	REV. 5	APPROVED BY:	VW
NOTE: [illegible]		DATE:	[illegible] 2016
		SCALE: [illegible]	[illegible]

NSW GOVERNMENT
Planning

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No. 7520

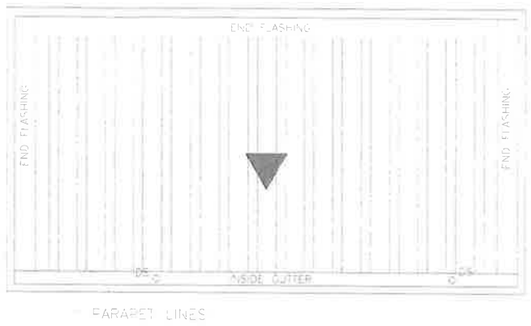
granted on the 19/12/17

Signed [signature]

Sheet No..................of..................

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED

BUILIND 1- FLOOR PLAN
SCALE: 1:50



ROOF PLAN
SCALE: 1:50

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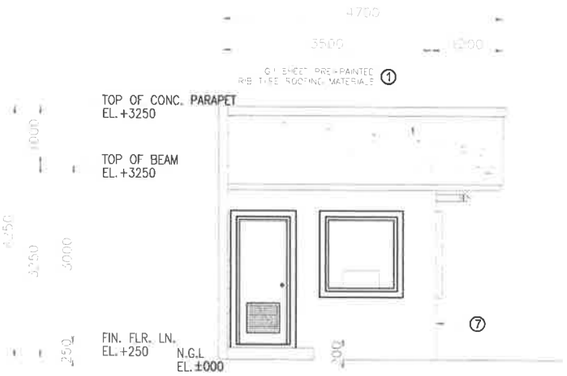

FRONT ELEVATION
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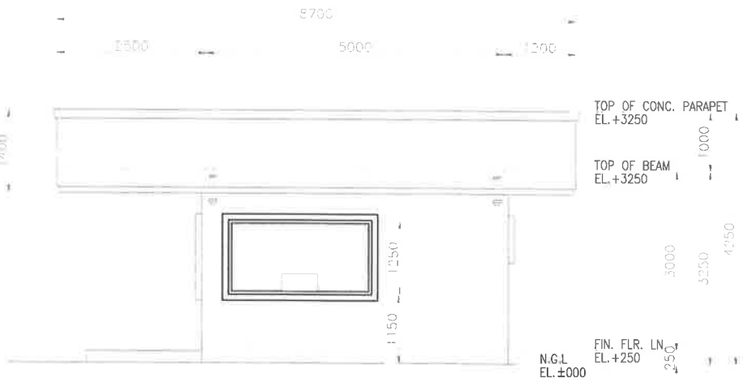

RIGHT SIDE ELEVATION
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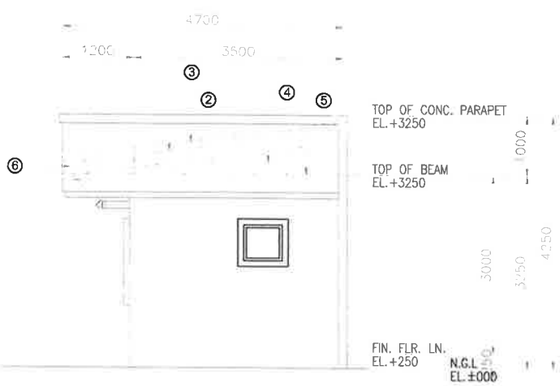

REAR ELEVATION
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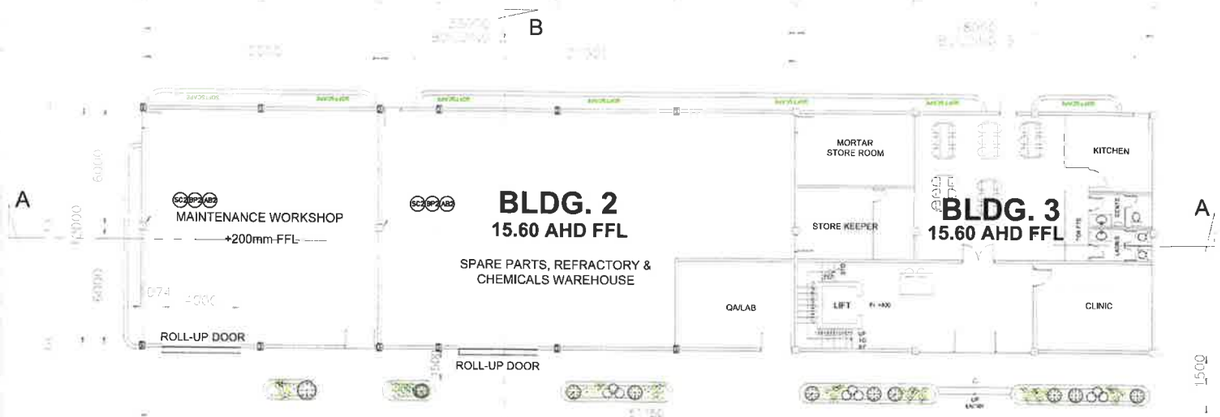
ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT		DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.		DRAWN BY:	MDB
TITLE: BUILDING 1- GUARD HOUSE		CHECKED BY:	LCC
DRAWING NO: KKBR-0010	REV.0	APPROVED BY:	
NOTE:		DATE:	NOV. 8, 2016
		SCALE:1:50	SHT NO: 1/1



BUIILDING 2 & 3- FLOOR PLAN
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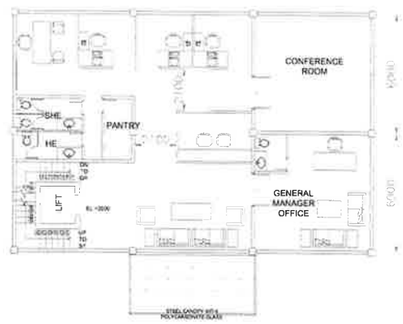

BUIILDING 3- SECOND FLOOR PLAN
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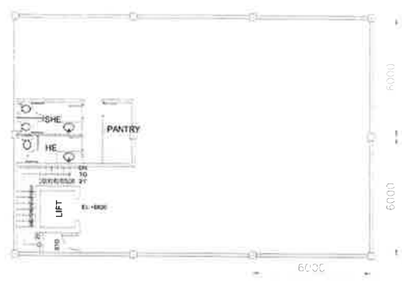
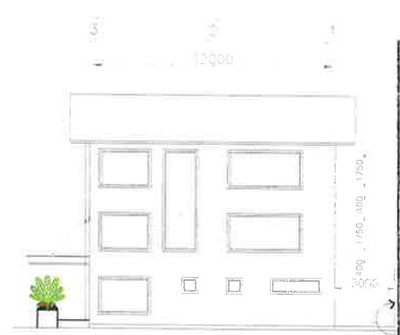


BUIILDING 3- THIRD FLOOR PLAN
SCALE: 1:150

FRONT ELEVATION
SCALE: 1:150



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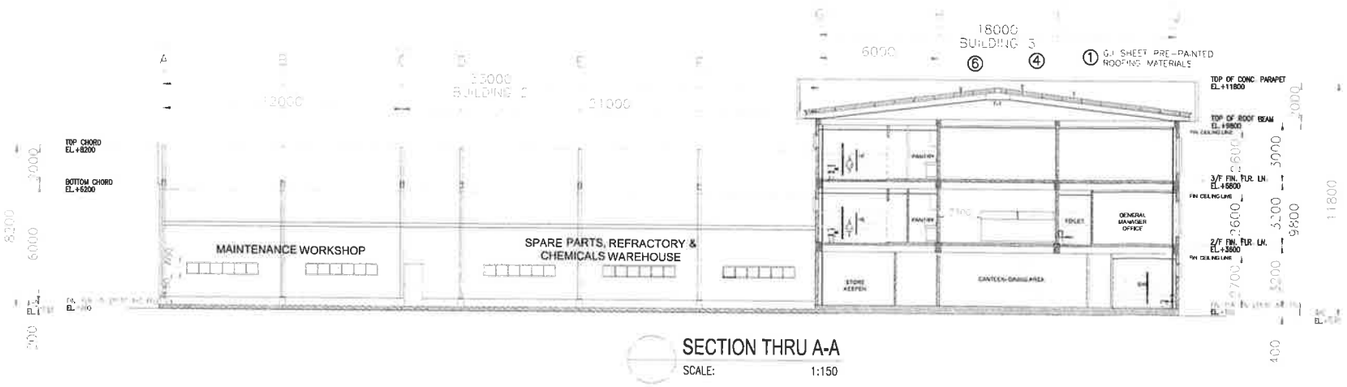

SECTION THRU A-A
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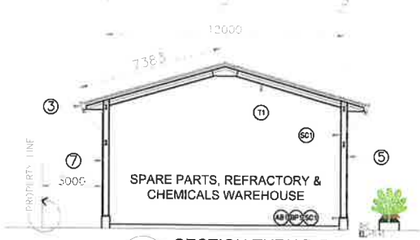

SECTION THRU B-B
SCALE: 1:150

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Sheet No.....of.....

Item	Specification	Qty	Unit	Description
1	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	146	PCS	ROOFING
2	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	90	PCS	SIDINGS
3	G.I SHEET PRE-PAINTED GUTTER 20FT	18	PCS	ROOF GUTTER
4	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	180	PCS	ROOF PURLINS
5	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	82	PCS	SIDINGS PURLINS
6	Ø12mm x 20ft ROUND BAR	65	PCS	ROOF SAGROD
7	Ø12mm x 20ft ROUND BAR	40	PCS	SIDINGS SAGROD
8	Ø16 x 20ft ROUND BAR	46	PCS	CROSS BRACING
9	M16 TURNBUCKLES	64	PCS	TURNBUCKLES
SC1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	12	PCS	STEEL COLUMN
SC2	W 6" X 6" X 15.5 Lbs/FT. X 20ft	3	PCS	STEEL COLUMN
SB	W 8" X 4" X 13 Lbs/FT. X 20ft	26	PCS	STEEL BEAM
BP1	300mmx350mmx20mm	12	PCS	BASE PLATE
BP2	200mmx200mmx10mm	2	PCS	BASE PLATE
AB1	25mmØx400mm A325 ANCHOR BOLTS	48	PCS	ANCHOR BOLT
AB2	16mmØx300mm A325 ANCHOR BOLTS	8	PCS	ANCHOR BOLT
T1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	14	PCS	STEEL TRUSS
-	396M²	-	M²	FLOOR AREA

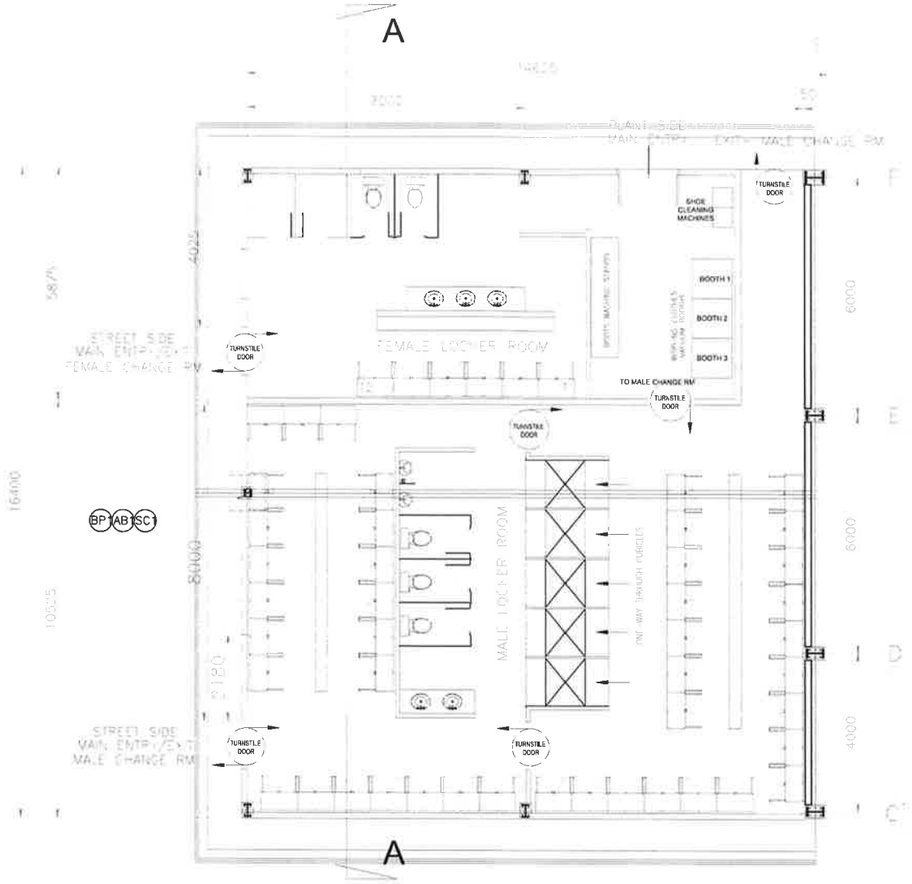
PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD
TITLE: BUILDING 2 & 3
DRAWING NO: KKBR-0011 REV.0

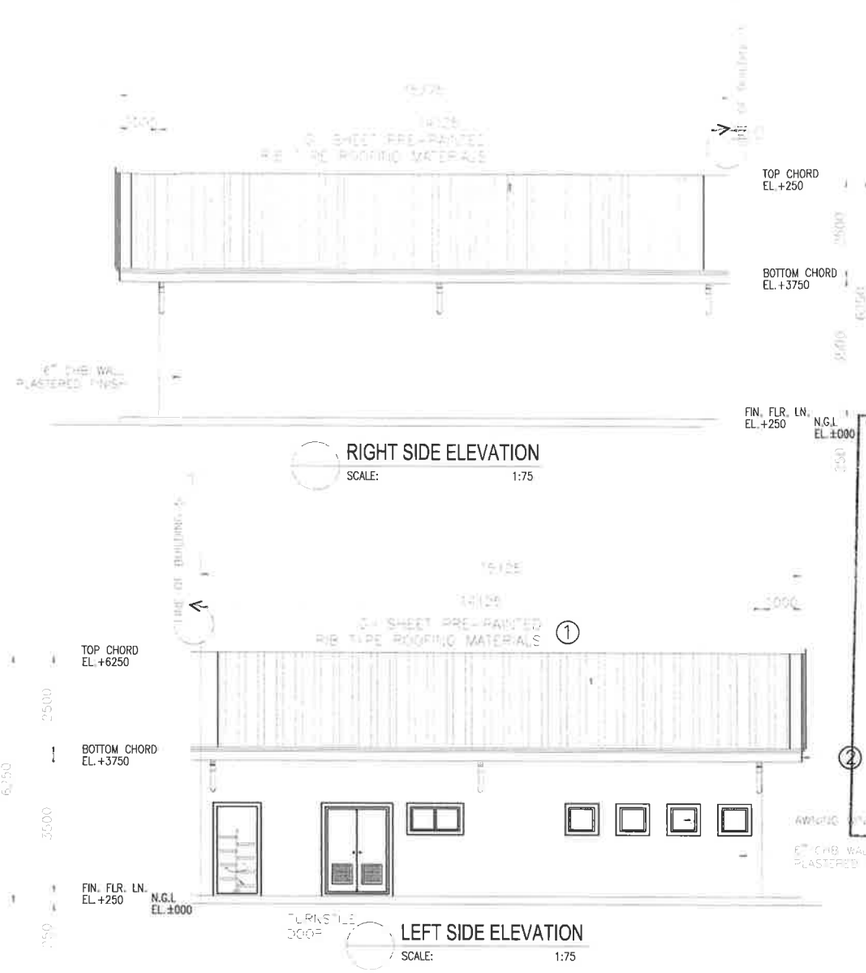
DESIGN BY:	LCC
DRAWN BY:	MBN
CHECKED BY:	LCC
APPROVED BY:	MW
DATE:	NOV. 8, 2016
SCALE:	1:150 SHT NO. 1/1

NOTE:

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.

Item	Specification	Qty	Unit	Description
1	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	47	PCS	ROOFING
2	G.I SHEET PRE-PAINTED GUTTER 20FT	5	PCS	ROOF GUTTER
3	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	55	PCS	ROOF PURLINS
4	Ø12mm x 20ft ROUND BAR	17	PCS	ROOF SAGROD
5	Ø16 x 20ft ROUND BAR	30	PCS	CROSS BRACING
6	M16 TURNBUCKLES	8	PCS	TURNBUCKLES
SC1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	3	PCS	STEEL COLUMN
SC2	W 6" X 6" X 15.5 Lbs/FT. X 20ft	1	PCS	STEEL COLUMN
SB1	W 8" X 4" X 13 Lbs/FT. X 20ft	8	PCS	STEEL BEAM
BP1	300mmx350mmx20mm	4	PCS	BASE PLATE
BP2	200mmx200mmx10mm	1	PCS	BASE PLATE
AB1	25mmØx400mm A325 ANCHOR BOLTS	16	PCS	ANCHOR BOLT
AB2	16mmØx300mm A325 ANCHOR BOLTS	4	PCS	ANCHOR BOLT
T1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	3	PCS	STEEL TRUSS
-	228.8M²	-	M²	FLOOR AREA

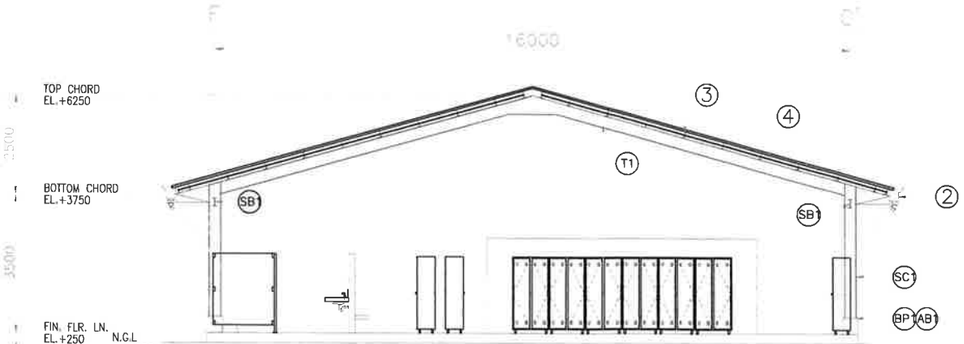




RIGHT SIDE ELEVATION
SCALE: 1:75

LEFT SIDE ELEVATION
SCALE: 1:75

FRONT ELEVATION
SCALE: 1:75



SECTION A-A
SCALE: 1:75

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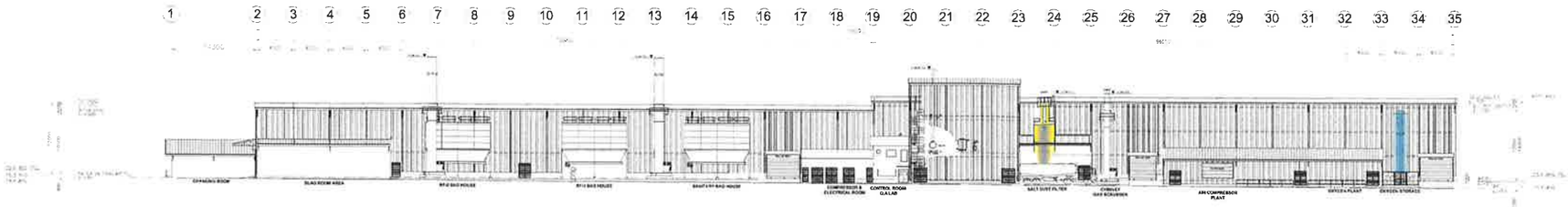
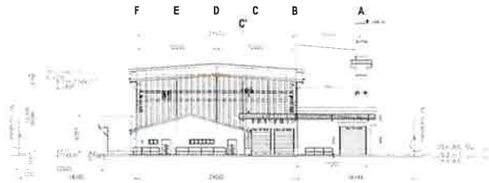
EVERGREEN ENVIRONMENTAL RESOURCES INC

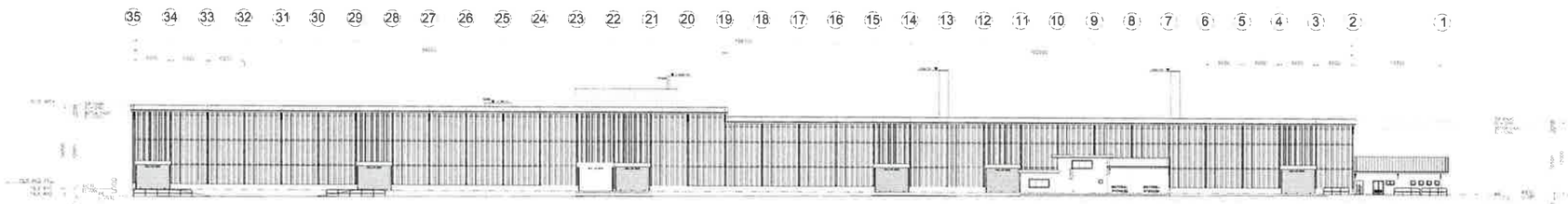
PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT		DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.		DRAWN BY:	MBN
TITLE: BUILDING 4- CHANGING ROOM		CHECKED BY:	LCC
DRAWING NO: KKBR-0012	REV.0	APPROVED BY:	VW
		DATE:	NOV. 8, 2016
		SCALE:1:75	SHT NO: 1/1



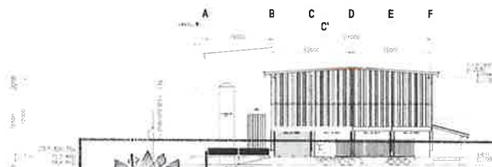
SECTIONAL ELEVATION @ GRID LINE A/ 1-35



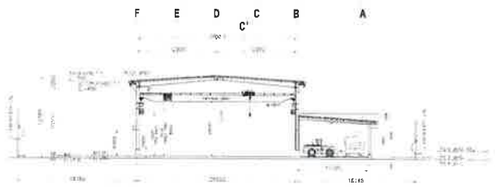
SECTIONAL ELEVATION @ GRID LINE 1/ F-A



SECTIONAL ELEVATION @ GRID LINE F/ 35-1



SECTIONAL ELEVATION @ GRID LINE 35/ A-F



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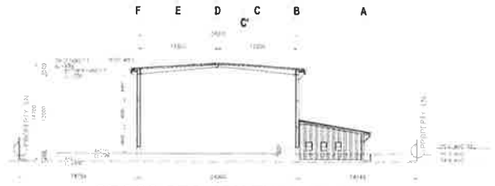
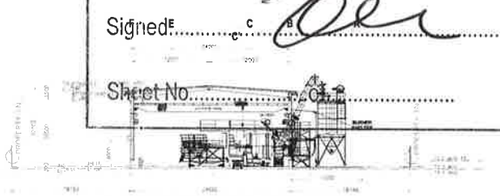


CROSS SECTION THRU 'B'-'B'



CROSS SECTION THRU 'C'-'C'

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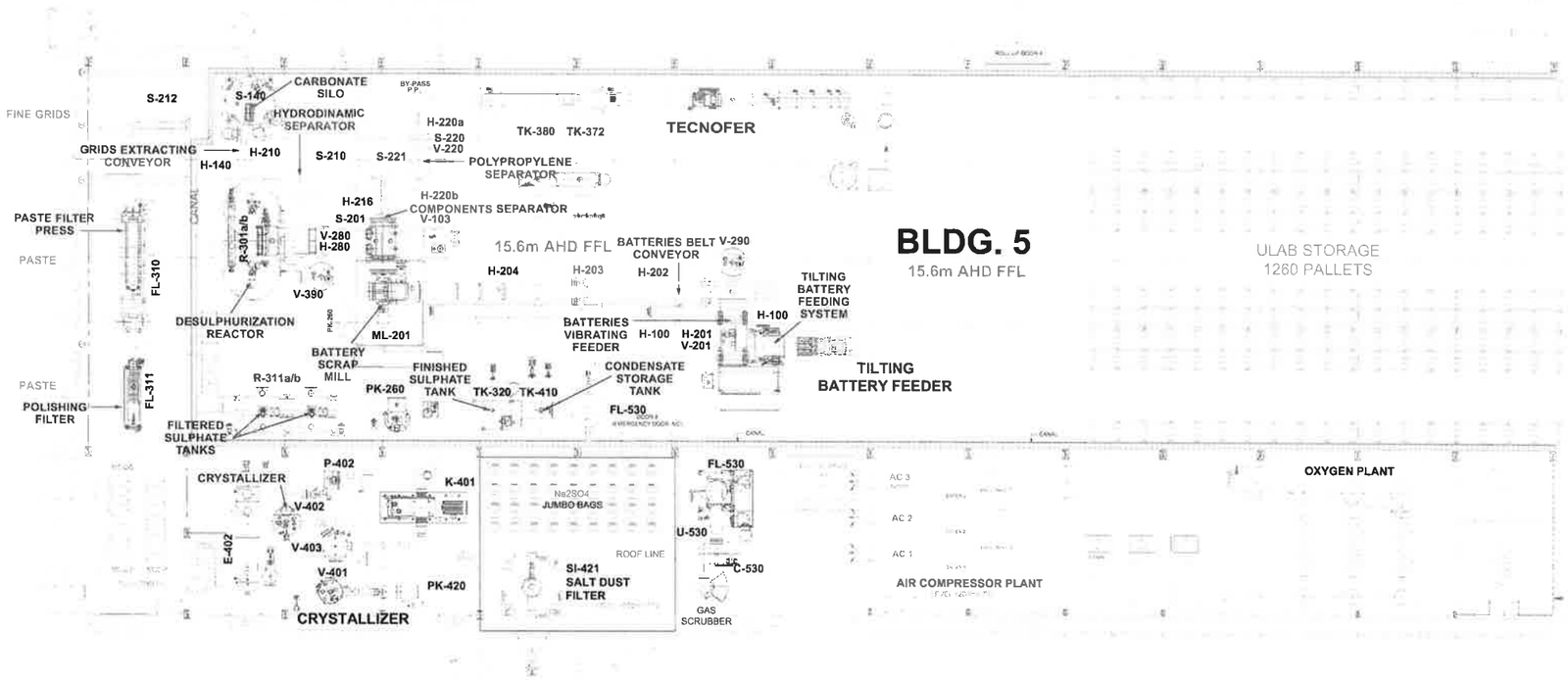

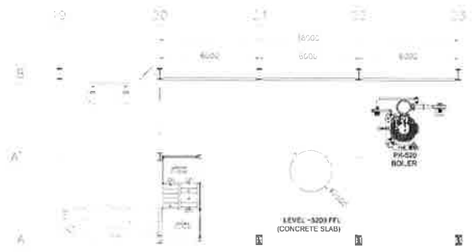

CRYTALLIZER 2ND FLOOR PLAN

MACHINE LAYOUT PLAN

Sr No.	Description	Remarks
1	TILTING BATTERY FEEDING SYSTEM	H-100
2	SPRAYERS WATER TANK AGITATOR	AG-203
3	SUMP AGITATOR	AG-290
4	SPRAYERS WATER STRAINER	FL-203
5	BATTERIES VIBRATING FEEDER	H-201
6	BATTERIES BELT CONVEYOR	H-202
7	GRIDS EXTRACTING CONVEYOR	H-210
8	COMPONENT FEEDER CONVEYOR	H-215
9	SCREEN EXTRACTING CONVEYOR	H-216
10	EXTRACTING CONVEYOR	H-220 a/b
11	PASTE & METAL POWDER SCRAPER	H-280
12	BATTERY SCRAP MILL	ML-201
13	SPRAYERS WATER PUMP	P-203
14	HYDRODINAMIC SEPARATOR PUMP	P-220
15	BREAKER AREA SUMP PUMP	P-290
16	FLOCCULATING AGENT METERING UNIT (N.1)	PK-260
17	BATTERY SCRAP MILL	S-201
18	SPRAYERS WATER PUMP	P-203
19	HYDRODINAMIC SEPARATOR PUMP	P-220
20	BREAKER AREA SUMP PUMP	P-290
21	FLOCCULATING AGENT METERING UNIT (N.1)	PK-260
22	COMPONENTS SEPARATOR	S-201
23	HYDRODINAMIC SEPARATOR	S-210
24	GRIDS ROTARY CLASSIFIER	S-210
25	SEPARATORS DEWATERING SYSTEM	S-220
26	POLYPROPYLENE SEPARATOR	S-221
27	SPRAYERS WATER TANK	V-203
28	SEPARATORS DEWATERING COLLECTIONTANK	V-220
29	PASTE & METAL POWDER SETTLER	V-280
30	AREA SUMP	V-290
31	CARBONATE CONVEYOR	H-140
32	SODA ASH DISTRIBUTION CONVEYOR	H-141
33	TOP DEDUSTER	FL-140
34	CARBONATE SILO	SI-140
35	DESULPHURIZATION REACTOR AGITATORS (nr. 2)	AG-301 a/b
36	FILTERED SULPHATE TANK AGITATOR (nr. 2)	AG-311 a/b
37	PASTE FILTER PRESS	FL-310
38	POLISHING FILTER	FL-311
39	PASTE DISTRIBUTION CONVEYOR	H-301
40	STATIC MIXER (n.1)	MX-320
41	STATIC MIXER (n.1)	MX-321
42	SULPHATE CHECK TANK WITH AGITATOR (n.1)	MX-329
43	FILTER PRESS FEED PUMPS (nr. 2)	P-301 a/b
44	FILTER SULPHATE PUMP (nr. 2)	P-311 a/b
45	FINISHED SULPHATE PUMP	P-320
46	FINISHED SULPHATE PUMP	P-320
47	ACTIVE CARBON DOSING UNIT	PK-350
48	SODIUM SULPHIDE PREPARATION & DOSING UNIT	PK-370
49	HYDROGEN PEROXIDE METERING UNIT	PK-371
50	CAUSTIC SODA METERING UNIT	PK-372
51	SULPHURIC ACID METERING UNIT	PK-380
52	DESULPHURIZATION AREA SUMP PUMP	P-390
53	DESULPHURIZATION REACTOR (nr. 2)	R-301 a/b
54	FILTERED SULPHATE TANKS (nr. 2)	R-311 a/b
55	FINISHED SULPHATE TANK	TK-320
56	AREA SUMP	V-390
57	FEED TANK AGITATOR	AG-401
58	SUMO AGITATOR	AG-490
59	PRODUCT CENTRIFUGE	CF-403
60	CRYSTALLIZER FEED PREHEATER	E-401
61	LIQUOR CIRCULATION HEATER	E-402
62	CONDENSATE COOLER	E-411
63	PRODUCT SILO DUST FILTER	FL-421
64	WET SALT CONVEYOR	H-420
65	PRODUCT EXTRACTOR	H-421
66	VAPOUR COMPRESSOR	K-401
67	CRYSTALLIZER FEED PUMP	P-402
68	CONDENSATE EXTRACTION PUMP	P-404
69	SEAL WATER PUMP (nr. 2)	P-410
70	PROCESS WATER PUMP	P-411
71	CRYSTALLIZER AREA SUMP PUMP	P-490
72	HOT AIR GENERATION UNIT	PK-420
73	ANTIFOAM METERING UNIT	PK-460
74	STEAM GENERATION UNIT	PK-520
75	PRODUCT STORAGE SILO	SI-421
76	CONDENSATE STORAGE TANK	TK-410
77	PRODUCT CONVEYING FAN	U-421
78	CRYSTALLIZER FEED TANK	V-401
79	CRYSTALLIZER	V-402
80	VAPOR DEMISTER	V-403
81	CONDENSATE RECEVING TANK	V-404
82	AREA SUMP	V-490
83	OFF GAS STACK	C-530
84	GAS SCRUBBER	FL-530
85	CIRCULATION WATER STRAINER	FL-531
86	SCRUBBER CIRCULATION PUMP	P-530
87	OFF GAS FAN	U-530
88	PROCESS FUMES STACK (nr. 1)	C-720
89	PROCESS FUMES STACK (nr. 1)	CR-750
90	COMBUSTION SYSTEM (nr. 1)	F-710
91	BURNER WATER COOLING SYSTEM (nr. 2)	PK-711
92	PROCESS FLUE DUSTS COLLECTING CONVEYOR (nr.1)	H-720 a
93	SANITARY AIR DUSTS COLLECTING CONVEYOR (nr. 1)	H-721
94	CRUCIBLES TRANSFER SYSTEM (nr. 1 for two furnace)	H-750
95	TILTING ROTARY FURNACES (nr. 1)	KL-710
96	REFRACTORY MATERIAL:	Local Supply
97	PROCESS FUMES SETTLING CHAMBER (nr.1)	MC-720
98	CHARGING MACHINE (nr.1 for two furnace)	PK-730
99	PROCESS FUMES BAG HOUSE FILTER (nr. 1)	PK-720
100	SANITARY AIR BAG HOUSE (nr. 1 for two furnace)	PK-721
101	FILTERED PROCESS FUMES FAN (nr. 1)	U-720
102	SANITARY AIR FAN (nr. 1 for two furnace)	U-721
103	FLUE DUST SLURRY TANK AGITATOR	AG-701
104	FLUE DUST SLURRY PUMP	P-701
105	FLUE DUST SLURRY TANK	V-701
106	FLUE DUST FILTRATE TANK	V-702

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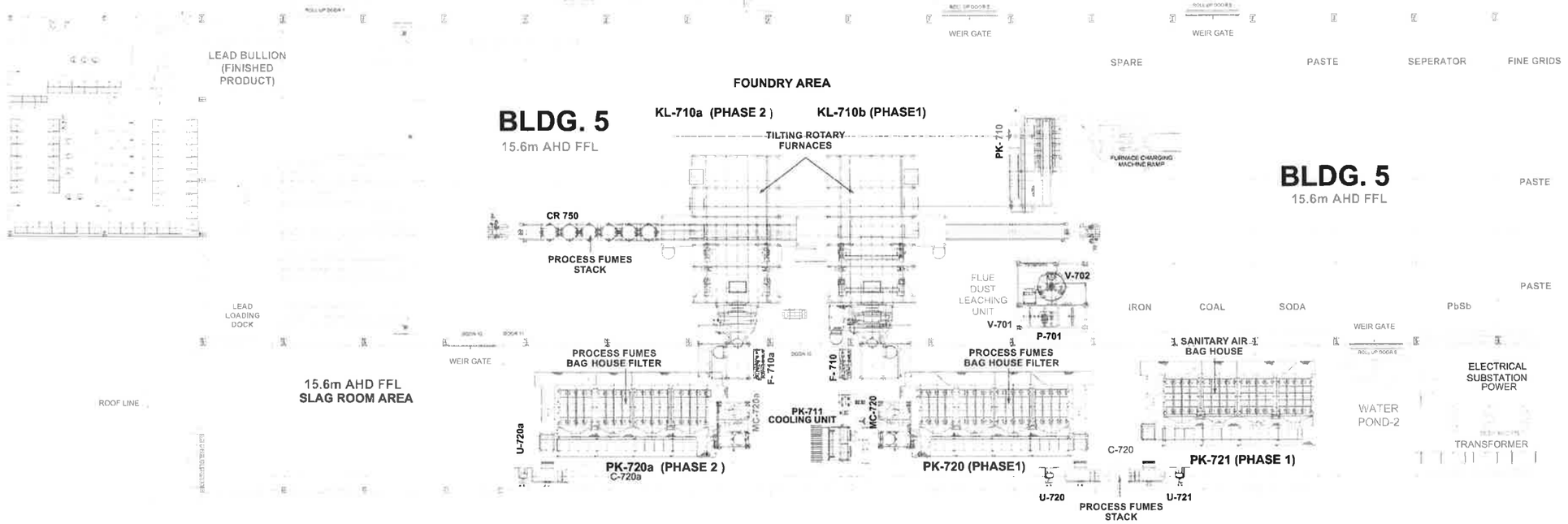
PROJECT:	KURRI-KURRI BATTERY RECYCLING PROJECT	DESIGN BY:	LCC
CLIENT:	PYMORE RECYCLERS INTERNATIONAL PTY LTD	DRAWN BY:	AAM
TITLE:	MACHINE LAYOUT	CHECKED BY:	LCC
DRAWING NO:	KKBR-0036 REV. 1	APPROVED BY:	MW
		DATE:	11.11.2016
		SCALE:1:350	SHT NO: 1/2

EVERGREEN ENVIRONMENTAL RESOURCES (AC

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.



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Sheet No.....of.....

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT	DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.	DRAWN BY:	AAM
TITLE: MACHINE LAYOUT	CHECKED BY:	LCC
DRAWING NO: KKBR-0036 REV. 1	APPROVED BY:	MW
	DATE:	11.11.2016
EVERGREEN ENVIRONMENTAL RESOURCES INC.	SCALE 1:350	SHT NO 1/1

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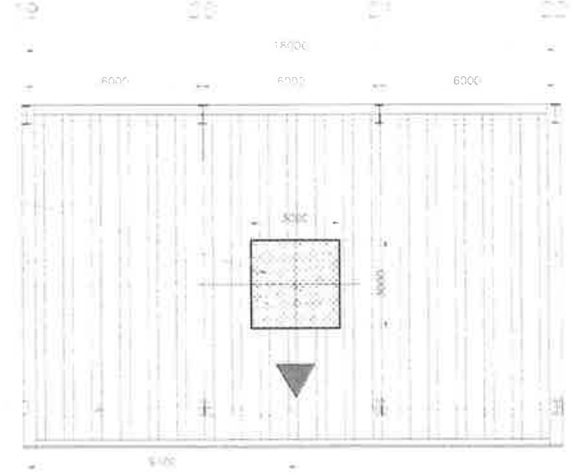
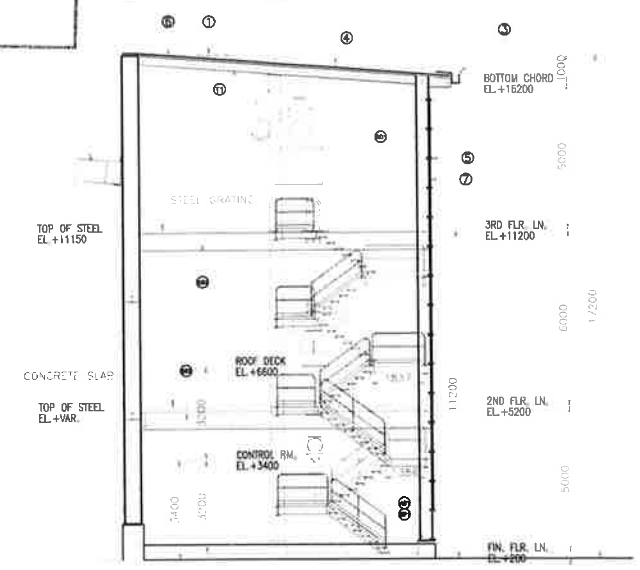
Sheet No. ..... of .....

Item	Specification	Qty	Unit	Description
1	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	40	PCS	ROOFING
2	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	160	PCS	SIDINGS
3	G.I SHEET PRE-PAINTED GUTTER 20FT	3	PCS	ROOF GUTTER
4	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	45	PCS	ROOF PURLINS
5	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	120	PCS	SIDINGS PURLINS
6	Ø12mm x 20ft ROUND BAR	22	PCS	ROOF SAGROD
7	Ø12mm x 20ft ROUND BAR	85	PCS	SIDINGS SAGROD
8	Ø16 x 20ft ROUND BAR	11	PCS	CROSS BRACING
9	M16 TURNBUCKLES	6	PCS	TURNBUCKLES
SC1	W 18" x 11" x 114 Lbs/FT. X 20ft	16	PCS	STEEL COLUMN
SB1	W 21" X 8.5" X 62Lbs/FT. X 20ft	40	PCS	STEEL BEAM
SB2	W 16" X 7" X 40Lbs/FT. X 20ft	3	PCS	STEEL BEAM
BP1	350mmx550mmx25mm	6	PCS	BASE PLATE
AB1	25mmØx400mm A325 ANCHOR BOLTS	36	PCS	ANCHOR BOLT
T1	W 8" X 4" X 13Lbs/FT. X 20ft	13	PCS	STEEL TRUSS
-	$180M^2$	-	M^2	FLOOR AREA

CRYSTALLIZER
GROUND FLOOR PLAN
SCALE: 1:125



ROOF PLAN
SCALE: 1:125



SECTION A-A
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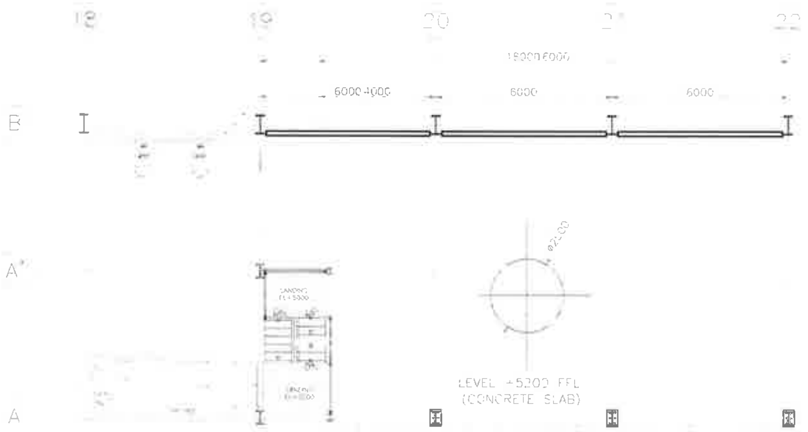

2ND FLOOR PLAN EL @+5200
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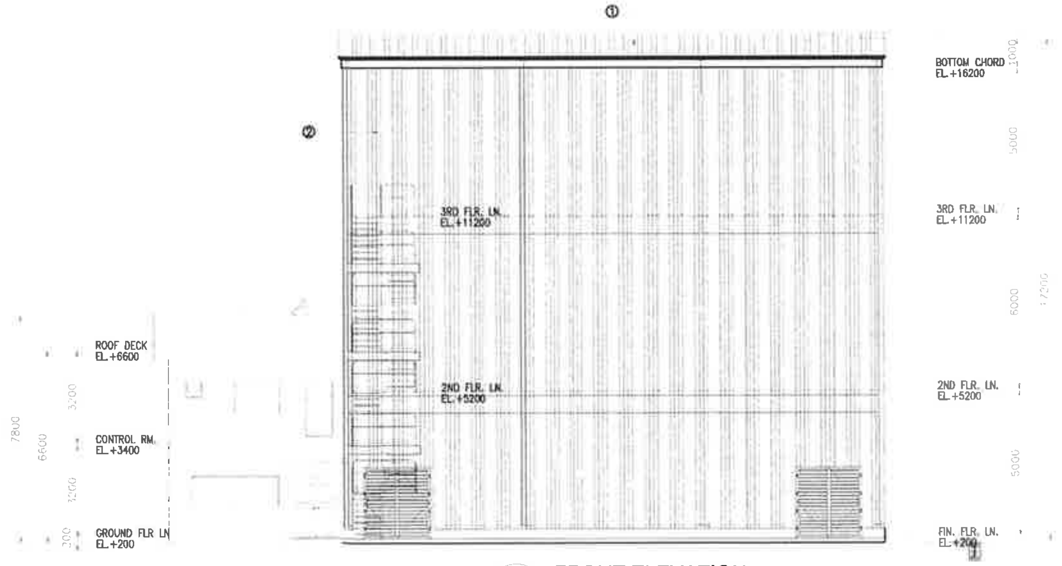
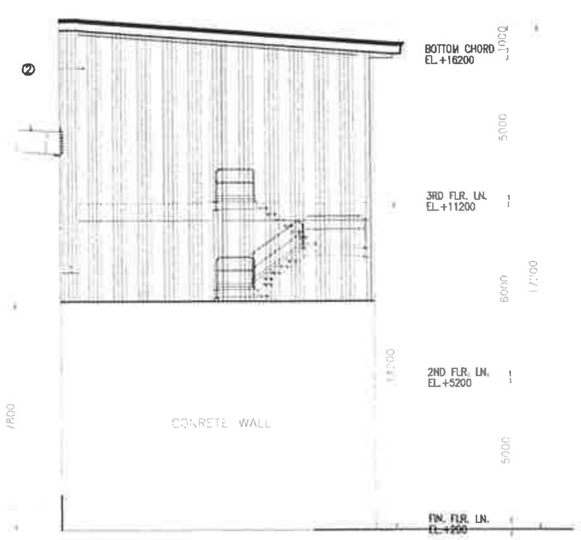
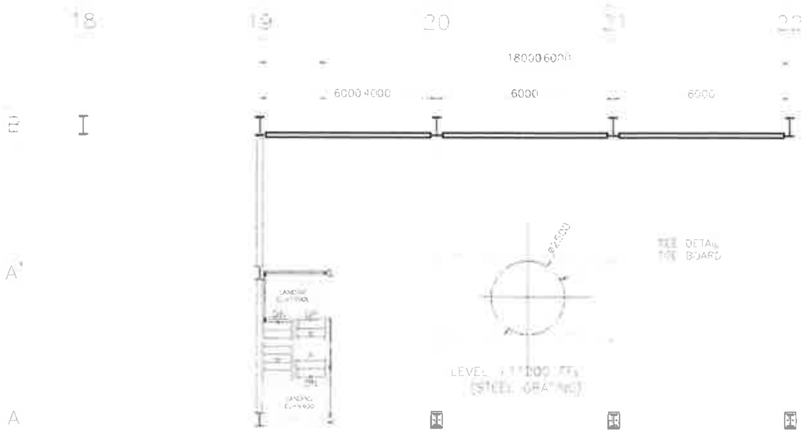


FRONT ELEVATION
SCALE: 1:125



LEFT SIDE ELEVATION
SCALE: 1:125



3RD FLOOR PLAN EL @+11200
SCALE: 1:125

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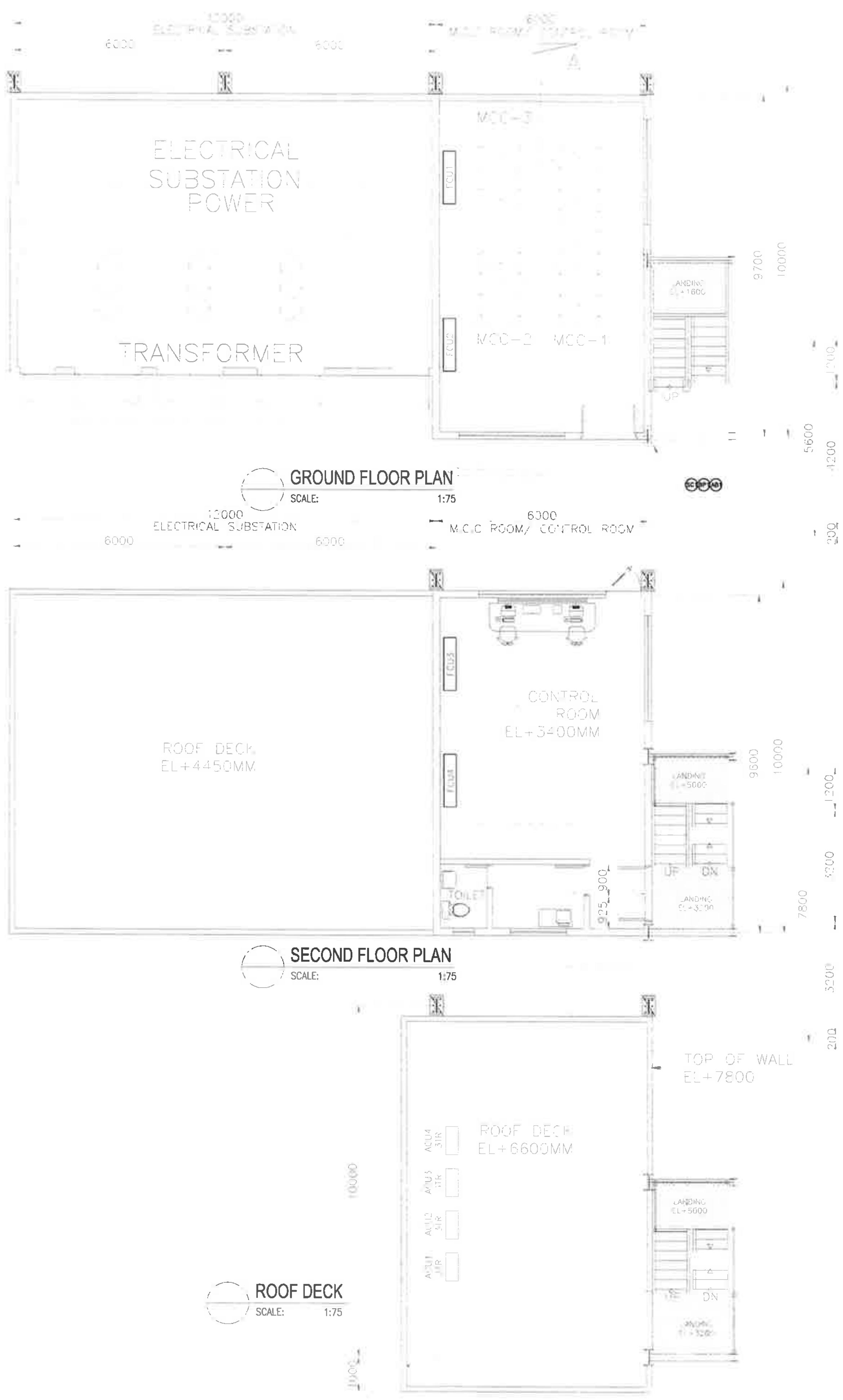
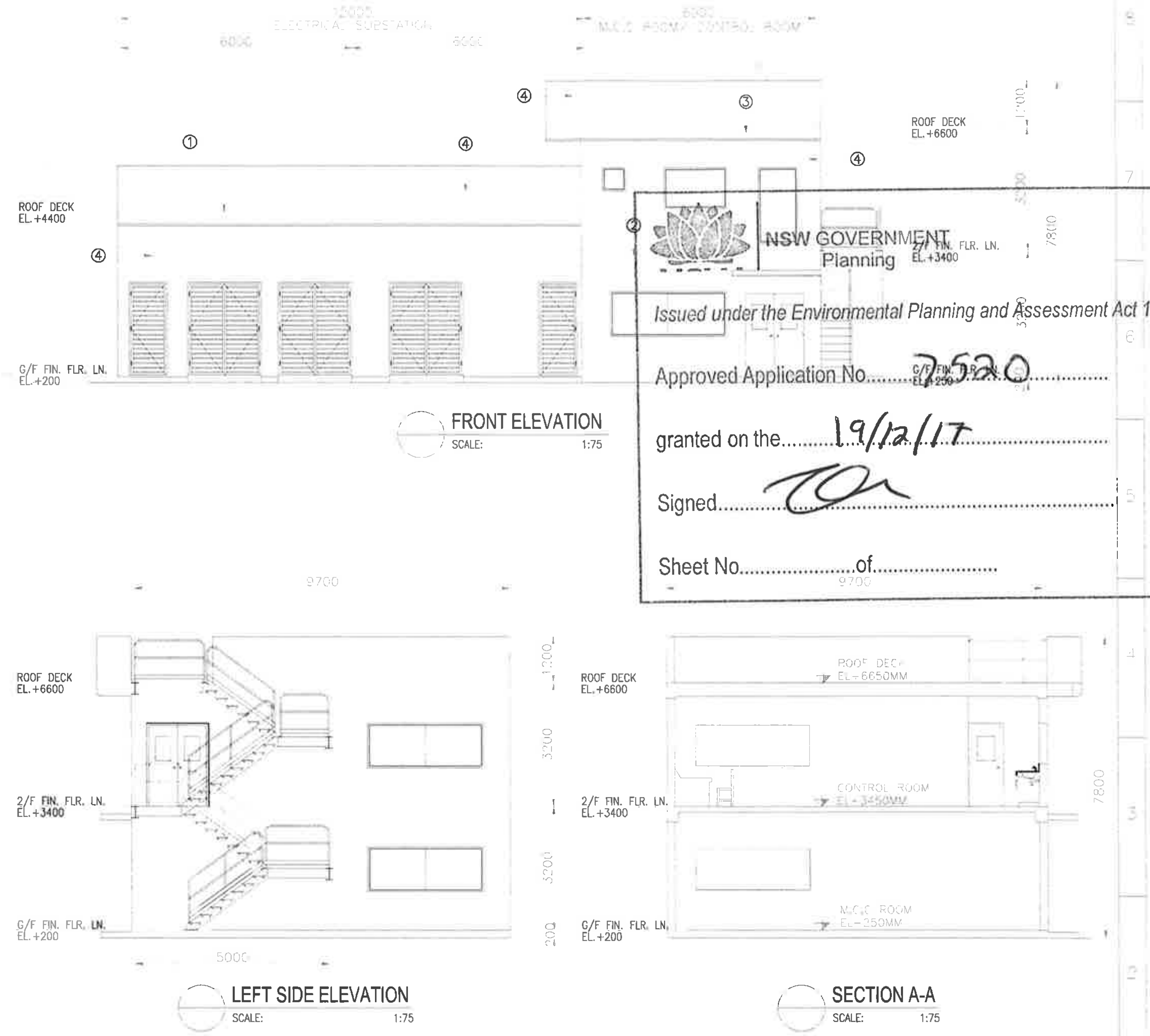
Item	Specification	Qty	Unit	Description
1	W 16" x 8.5" x 27 Lbs/FT. X 20ft	13	PCS	ROOFING DECK FRAME
2	W 16" x 8.5" x 27 Lbs/FT. X 20ft	7	PCS	2ND FRAME
3	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	9	PCS	CONTROL RM ROOF DECK FRAME
4	CONCRETE	-	-	WALL
SC1	W 16" x 8-1/2" x 58 Lbs/FT. X 20ft	8	PCS	STEEL COLUMN
BP1	550mmx350mmx25mm	7	PCS	BASE PLATE
AB1	25mmØx600mm A325 ANCHOR BOLTS	42	PCS	ANCHOR BOLT
-	180M²	-	M²	FLOOR AREA





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EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT

TITLE: ELECTRICAL SUBSTATION/ MCC RM./ CONTROL RM.

DESIGN BY: | DRAWN BY: | CHECKED BY: | APPROVED BY:

SCALE: 1:75

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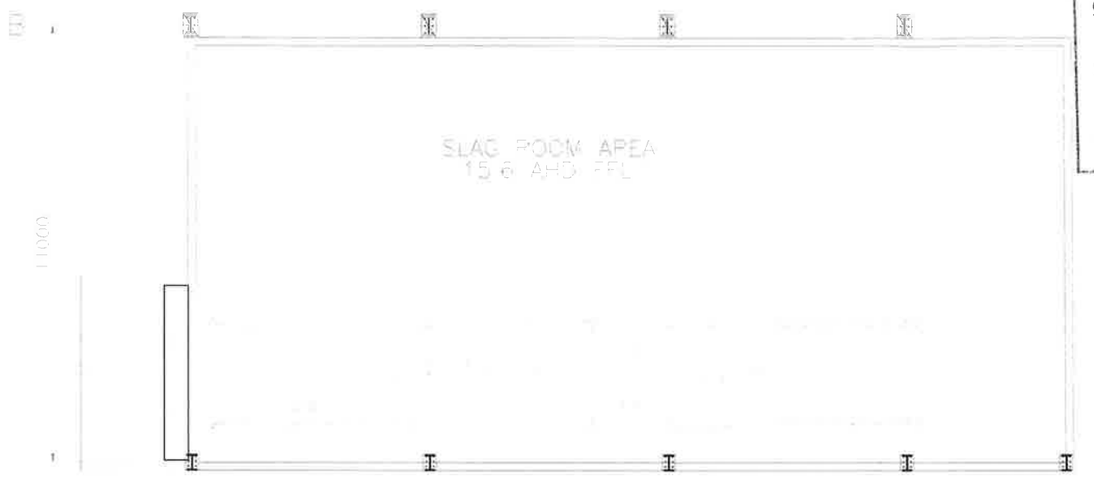
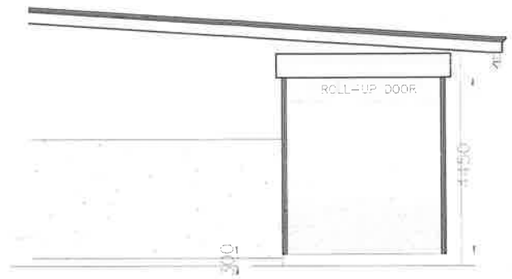
Sheet No. of

Item	Specification	Qty	Unit	Description
1	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	60	PCS	ROOFING
2	G.I SHEET PRE-PAINTED GUTTER 20FT	5	PCS	ROOF GUTTER
3	50mm X 175mm X 20ft GA# 16 (1.5mm) I-TYPE STEEL	65	PCS	ROOF PURLINS
4	Ø12mm x 20ft ROUND BAR	36	PCS	ROOF SAGROD
5	Ø16mm x 20ft ROUND BAR	12	PCS	CROSS BRACING
6	M16 TURNBUCKLES	6	PCS	TURNBUCKLES
7	W 12" x 10" x 50 Lbs/FT. X 20ft	5	PCS	STEEL COLUMN
8	W 12" X 6.5" X 27Lbs/FT. X 20ft	2	PCS	STEEL COLUMN
9	W 8" X 4" X 13 Lbs/FT. X 20ft	13	PCS	STEEL BEAM
10	250mmx400mmx16mm	5	PCS	BASE PLATE
11	200mmx400mmx10mm	2	PCS	BASE PLATE
12	25mmØx600mm A325 ANCHOR BOLTS	28	PCS	ANCHOR BOLT
T1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	9	PCS	STEEL TRUSS
-	220M²	-	M²	FLOOR AREA

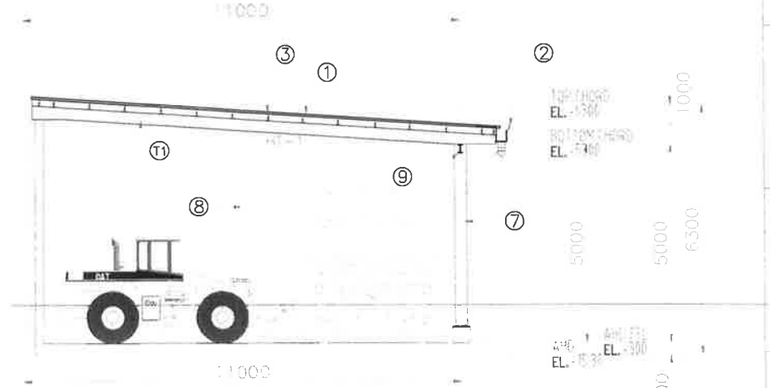


SLAG ROOM AREA
SCALE: 1:100



FRONT ELEVATION
SCALE: 1:100

RIGHT SIDE ELEVATION
SCALE: 1:100



SECTION A-A
SCALE: 1:100

EVERGREEN ENVIRONMENTAL RESOURCES INC.

KURRI-KURRI BATTERY RECYCLING PROJECT	
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.	
TITLE: SLAG ROOM AREA	
DRAWING NO: KKBR-0016 REV.0	
DESIGN BY:	LCC
DRAWN BY:	MBN
CHECKED BY:	LCC
APPROVED BY:	
DATE:	NOV.8 2016
SCALE:1:75	SHT NO: 1/1

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.

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Approved Application No. 7520

granted on the 19/12/17

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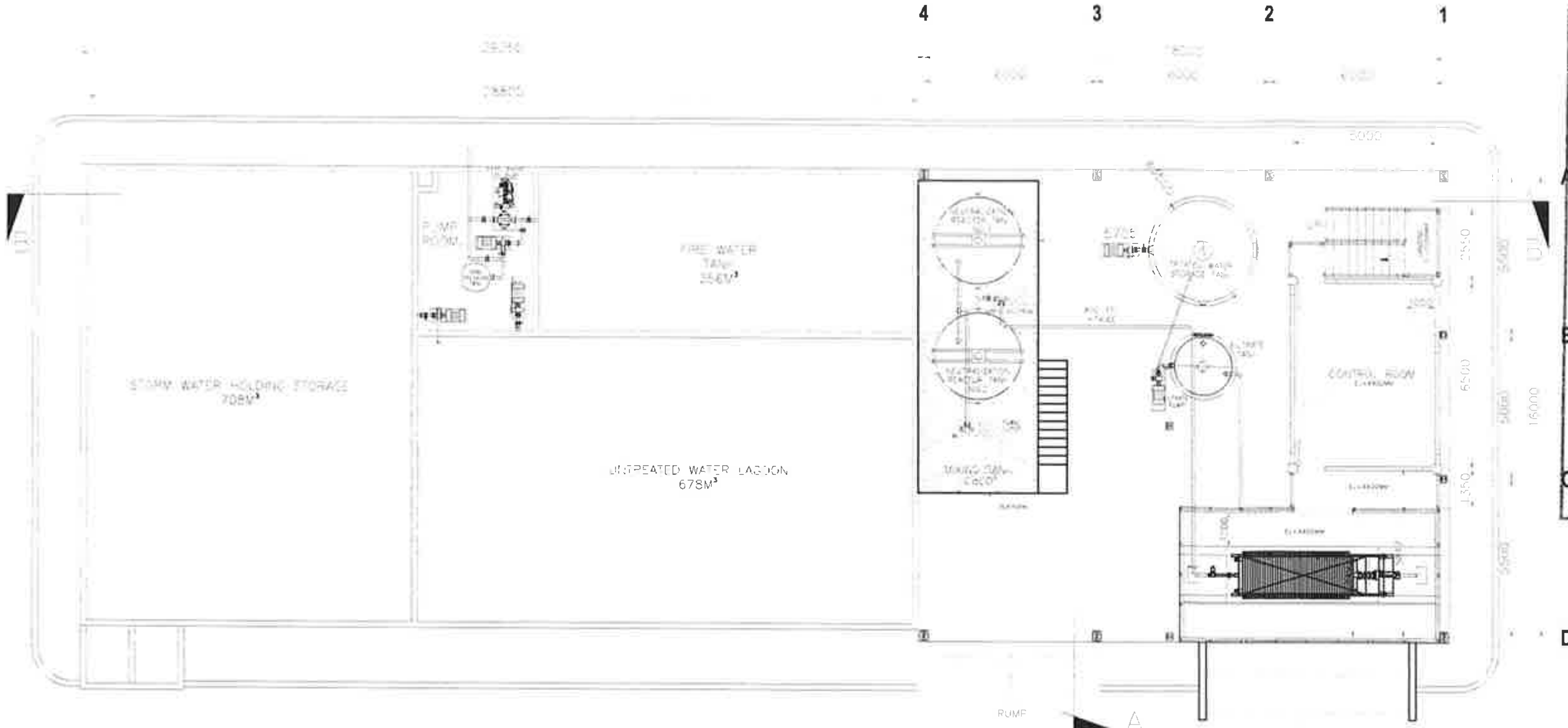
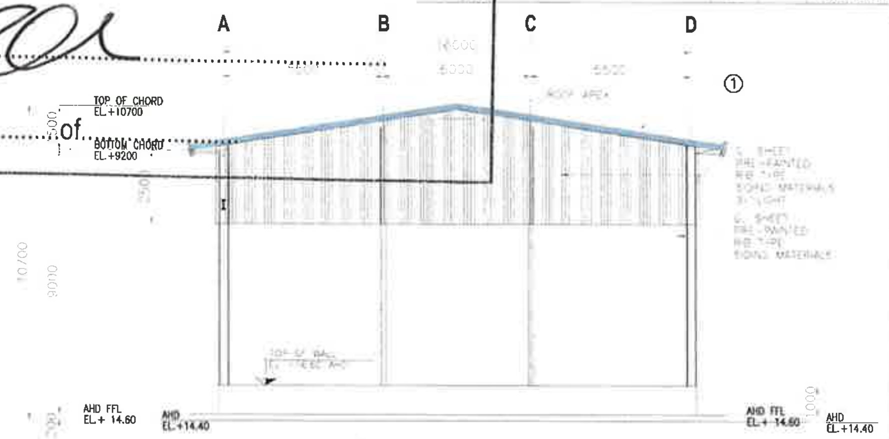
Sheet No. ...... of ......

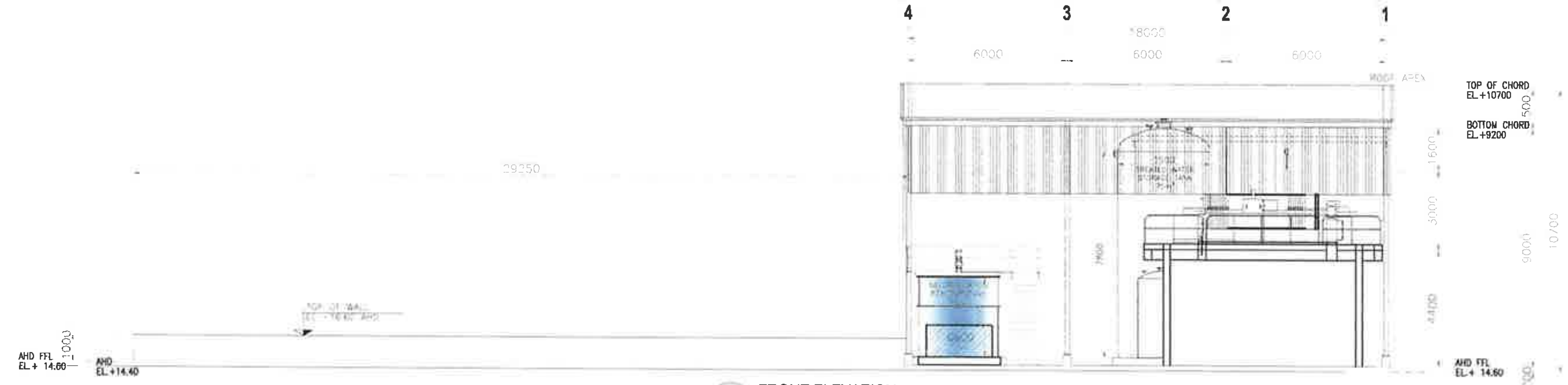
Item	Specification	Qty	Unit	Description
1	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	62	PCS	ROOFING
2	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	53	PCS	SIDINGS
3	G.I SHEET PRE-PAINTED GUTTER 20FT	6	PCS	ROOF GUTTER
4	50mm X 175mm X 20ft GA# 16 (1.5mm) |-TYPE STEEL	67	PCS	ROOF PURLINS
5	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	23	PCS	SIDINGS PURLINS
6	Ø12mm x 20ft ROUND BAR	40	PCS	ROOF SAGROD
7	Ø12mm x 20ft ROUND BAR	12	PCS	SIDINGS SAGROD
8	Ø16 x 20ft ROUND BAR	20	PCS	CROSS BRACING
9	Ø16 TURNBUCKLES	10	PCS	TURNBUCKLES
SC1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	10	PCS	STEEL COLUMN
SC2	W 6" X 6" X 15.5 Lbs/FT. X 20ft	7	PCS	STEEL COLUMN
SB1	W 8" X 4" X 13 Lbs/FT. X 20ft	23	PCS	STEEL BEAM
BP1	400mmx250mmx20mm	7	PCS	BASE PLATE
BP2	200mmx200mmx10mm	4	PCS	BASE PLATE
AB1	25mmØx400mm A325 ANCHOR BOLTS	28	PCS	ANCHOR BOLT
AB2	16mmØx300mm A325 ANCHOR BOLTS	16	PCS	ANCHOR BOLT
T1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	10	PCS	STEEL TRUSS
-	486M²	-	M²	FLOOR AREA



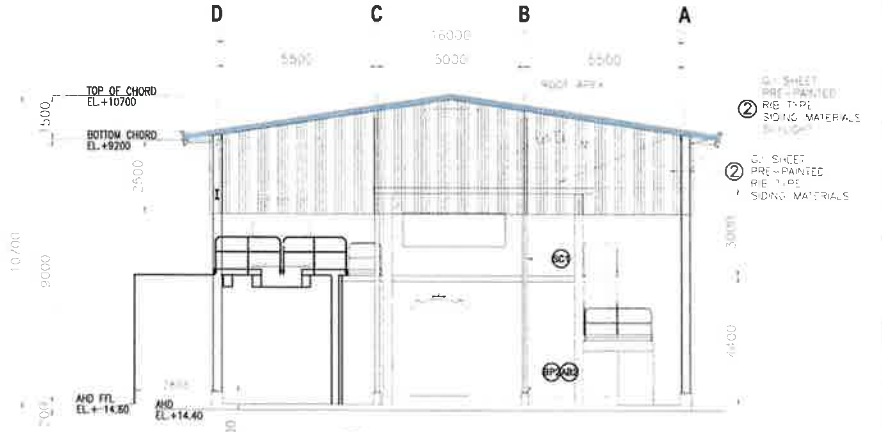
BUILDING 9- FLOOR PLAN
SCALE: 1:125



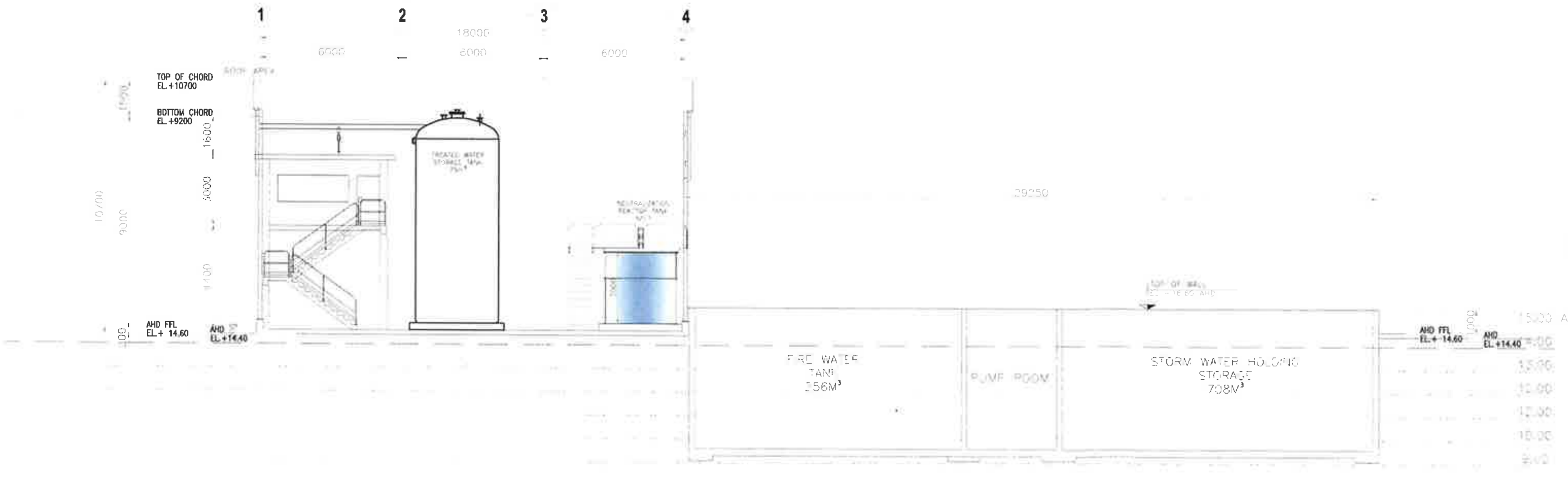
LEFT SIDE ELEVATION
SCALE: 1:125



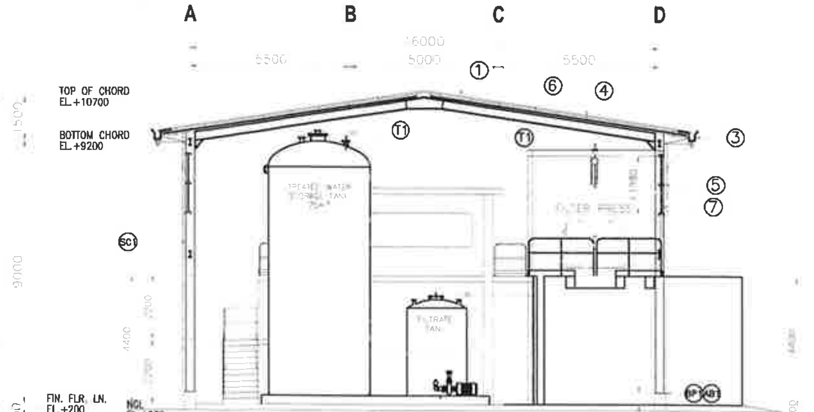
FRONT ELEVATION
SCALE: 1:125



RIGHT SIDE ELEVATION
SCALE: 1:125



SECTION B-B
SCALE: 1:125



SECTION A-A

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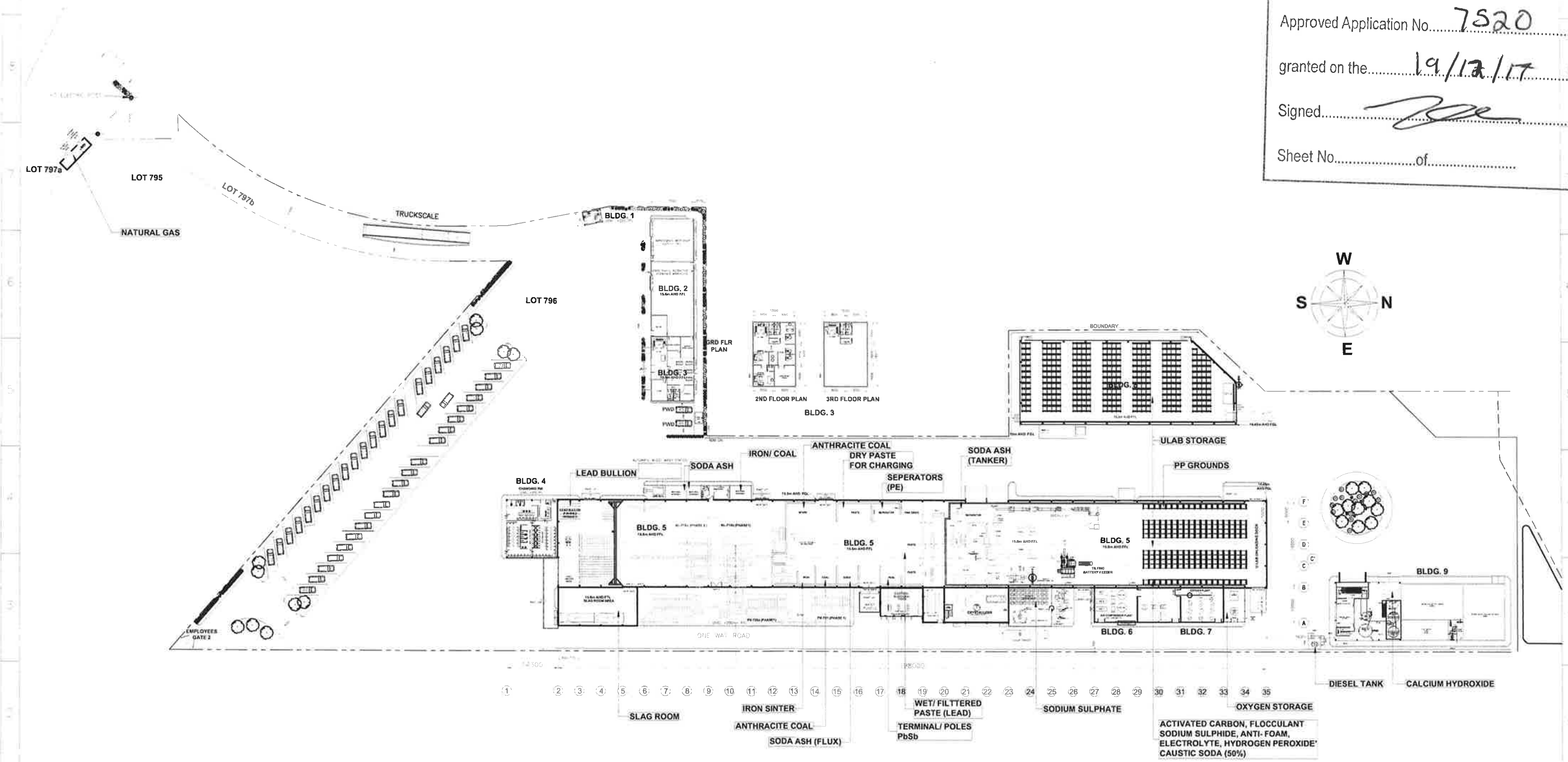

LOT 797a
LOT 795
LOT 797b
NATURAL GAS
TRUCKSCALE
LOT 796
BLDG. 1
BLDG. 2
BLDG. 3
GRD FLR PLAN
2ND FLOOR PLAN
3RD FLOOR PLAN
BLDG. 3
BOUNDARY
W
S
N
E
ULAB STORAGE
PP GROUNDS
SODA ASH (TANKER)
ANTHRACITE COAL
DRY PASTE FOR CHARGING
SEPERATORS (PE)
IRON/ COAL
SODA ASH
LEAD BULLION
BLDG. 4
BLDG. 5
BLDG. 5
BLDG. 5
BLDG. 6
BLDG. 7
BLDG. 9
EMPLOYEES GATE 2
ONE WAY ROAD
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
SLAG ROOM
IRON SINTER
ANTHRACITE COAL
SODA ASH (FLUX)
WET/ FILTTERED PASTE (LEAD)
TERMINAL/ POLES PbSb
SODIUM SULPHATE
OXYGEN STORAGE
ACTIVATED CARBON, FLOCCULANT SODIUM SULPHIDE, ANTI- FOAM, ELECTROLYTE, HYDROGEN PEROXIDE' CAUSTIC SODA (50%)
DIESEL TANK
CALCIUM HYDROXIDE

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Approved Application No. 7520

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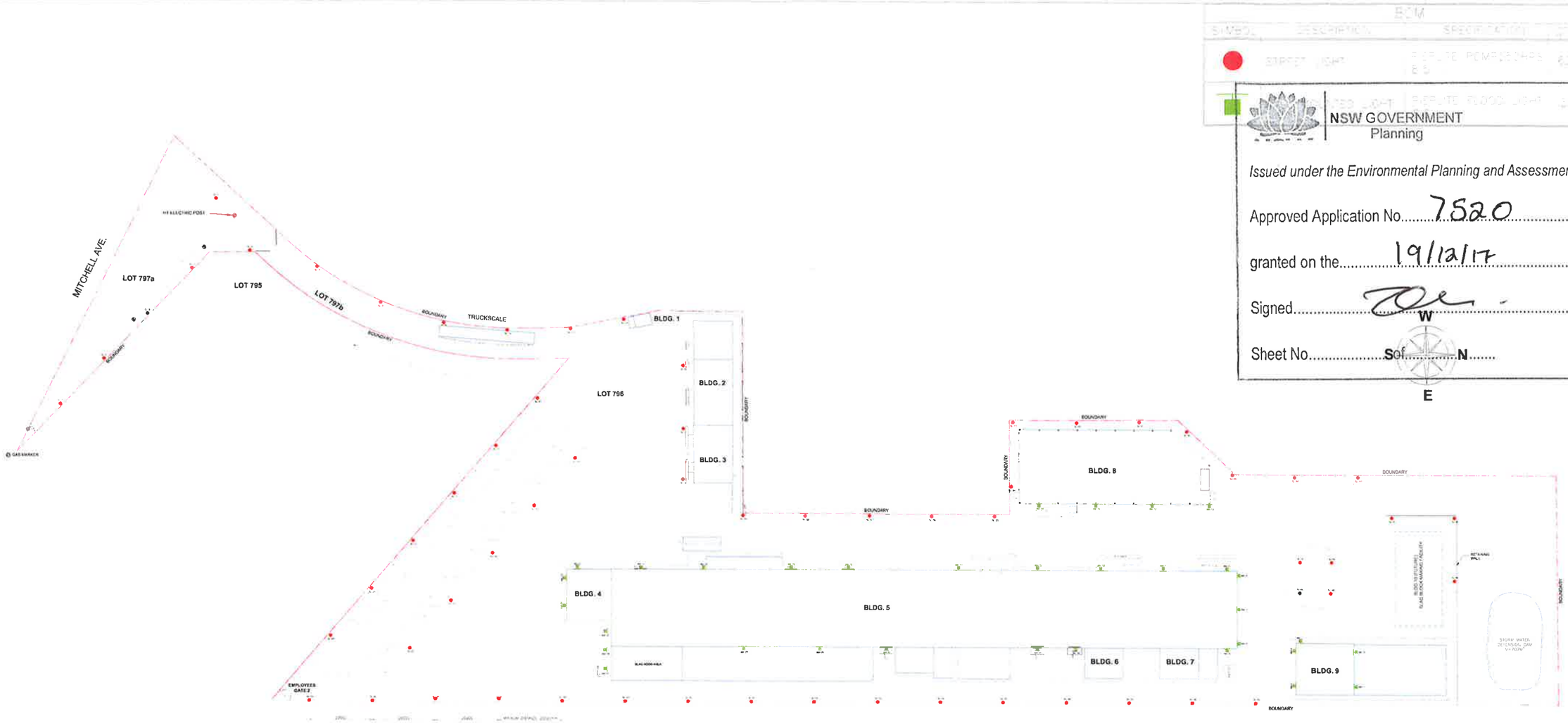
Sheet No. ... of ...

MATERIAL STORAGE SYSTEM

EVERGREEN ENVIRONMENTAL RESOURCES INC.



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Sheet No. S of N

KKBR LIGHTING LAYOUT PLAN

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT		DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.		DRAWN BY:	AAM
TITLE: KKBR LIGHTING LAYOUT		CHECKED BY:	LCC
DRAWING NO: KKBR-E-0001	REV. 0	APPROVED BY:	MW
NOTE: THIS DRAWING IS PROPERTY OF EVERGREEN ENVIRONMENTAL RESOURCES INC. AND SUCH MUST NOT BE REPRODUCED, COPIED IN PART OR IN WHOLE WITHOUT CONSENT.		DATE:	09.14.2016
		SCALE:1:650	SHT NO: 1/1

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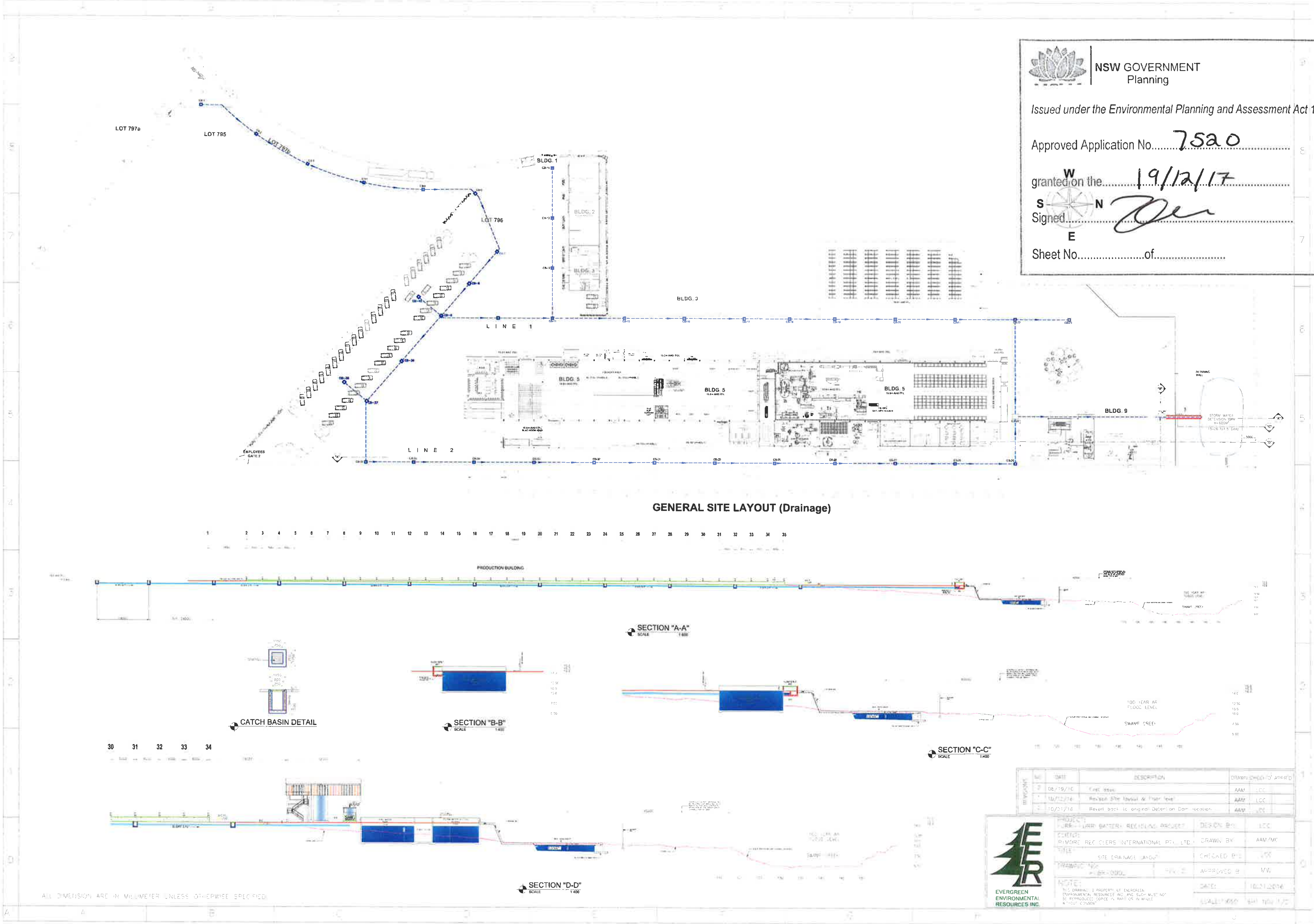
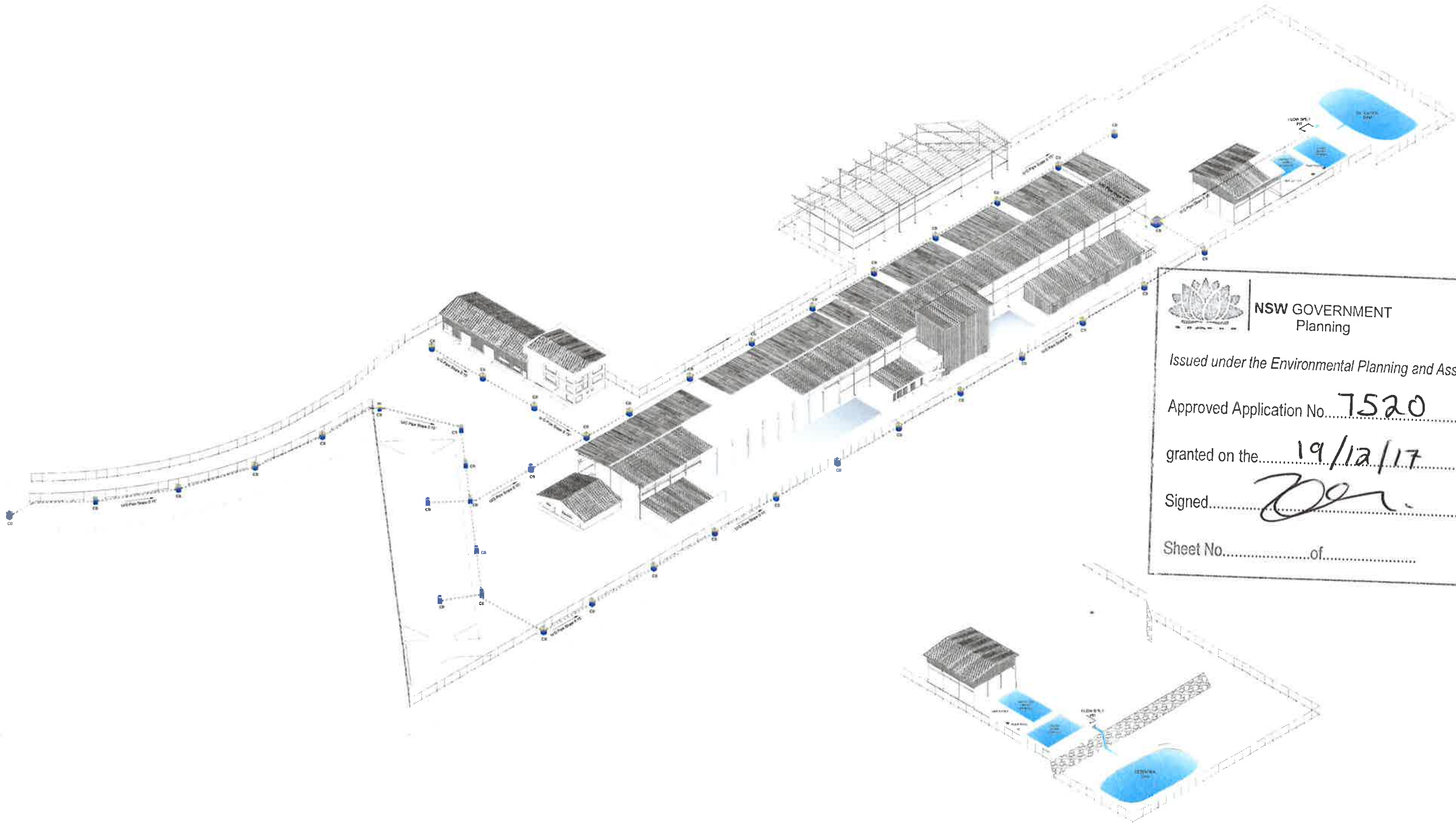
Sheet No.......of.......





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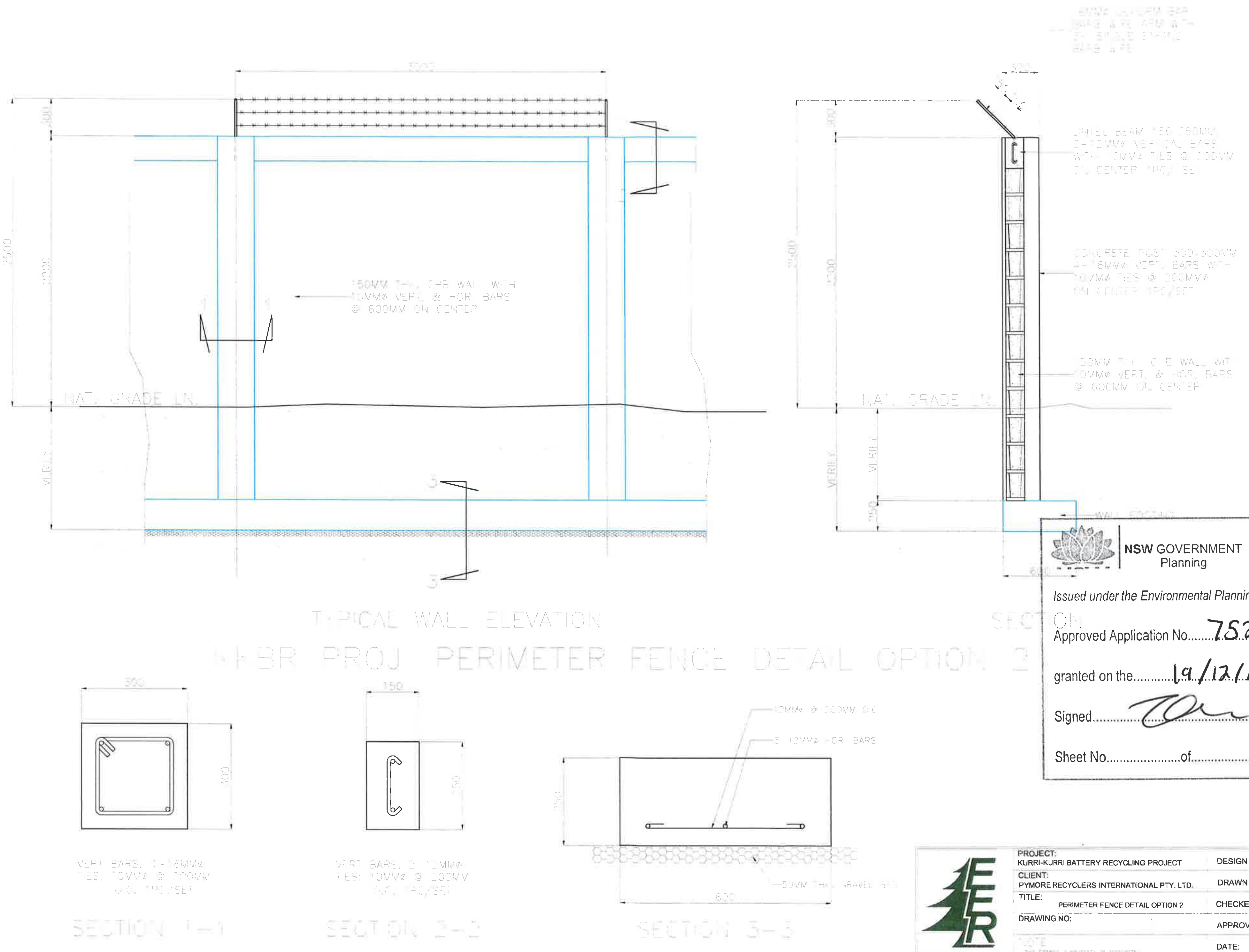
Sheet No. .... of ....

REVISIONS	NO.	DATE	DESCRIPTION	DRAWN	CHK'D	APP'D
	0	[illegible]	First Issue	AAM	LCC	
	1	[illegible]	Revised Site layout & Floor level	AAM	LCC	
	2	[illegible]	Revert back to original Detention Dam location	AAM	LCC	

EVERGREEN ENVIRONMENTAL RESOURCES INC

PROJECT: [illegible] BATTERY RECYCLING PROJECT	DESIGN BY: LCC
CLIENT: [illegible]	DRAWN BY: AAM/MC
TITLE: SITE DRAINAGE LAYOUT	CHECKED BY: LCC
DRAWING NO.: [illegible]	APPROVED BY: MW
NOTE: THIS DRAWING IS PROPERTY OF EVERGREEN ENVIRONMENTAL RESOURCES INC. AND SUCH MUST NOT BE REPRODUCED [illegible] IN PART OR IN WHOLE WITHOUT [illegible]	DATE: [illegible]
	SCALE: [illegible] SHT NO: [illegible]

ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED



ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.

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Approved Application No. 7520

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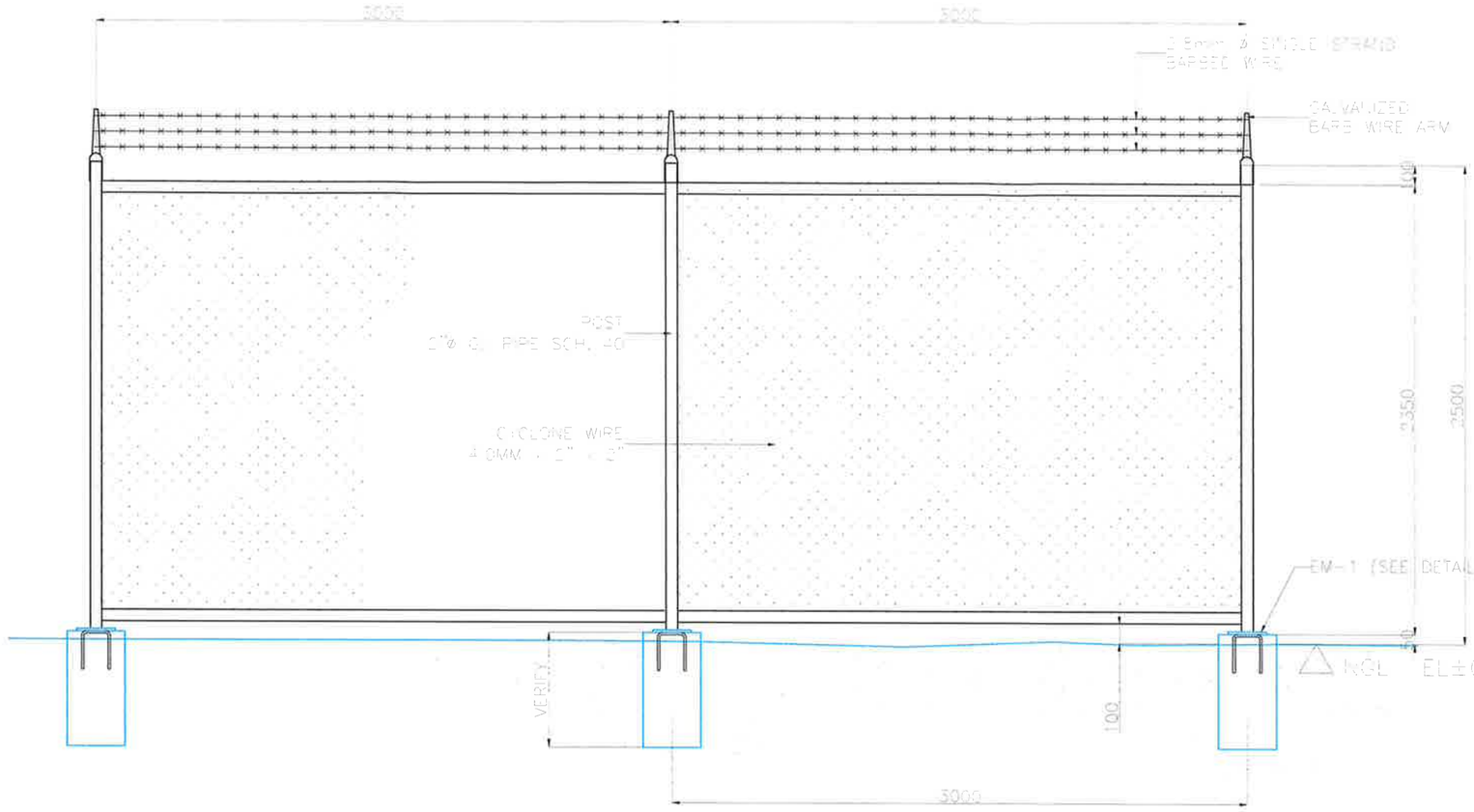
Signed [signature]

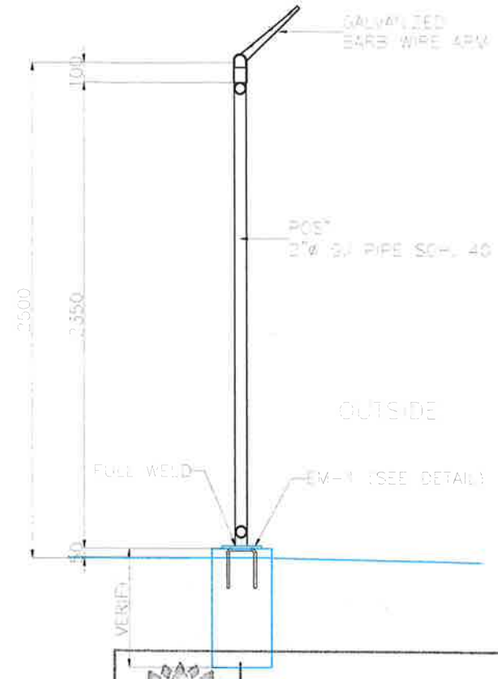
Sheet No.......of.......

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT		DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.		DRAWN BY:	MBN
TITLE: PERIMETER FENCE DETAIL OPTION 2		CHECKED BY:	LCC
DRAWING NO:		APPROVED BY:	
EVERGREEN ENVIRONMENTAL RESOURCES INC.		DATE:	OCT 24, 2016
		SCALE:1:15	SHT NO: 1/1

A1

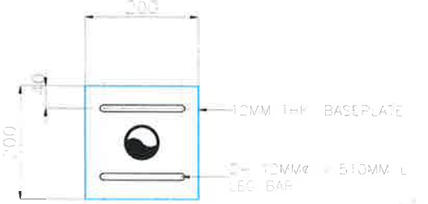


FRONT VIEW

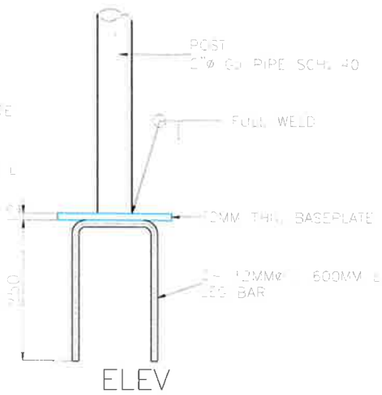


SIDE VIEW

NBR PROJ. PERIMETER FENCE DETAIL



EM-1, PLAN



ELEV

EM-1, EMBEDED METAL DETAIL

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Sheet No.....of.....

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT	DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.	DRAWN BY:	MBN
TITLE: PERIMETER FENCE DETAIL	CHECKED BY:	LCC
DRAWING NO:	APPROVED BY:	
NOTE: THIS DRAWING IS PROPERTY OF EVERGREEN ENVIRONMENTAL RESOURCES INC. ANY SUCH MUST NOT BE REPRODUCED, COPIED OR MADE PART OF ANY WORK OR PROJECT WITHOUT	DATE:	OCT 24, 2016
	SCALE:1:15	SHT NO: 1/1

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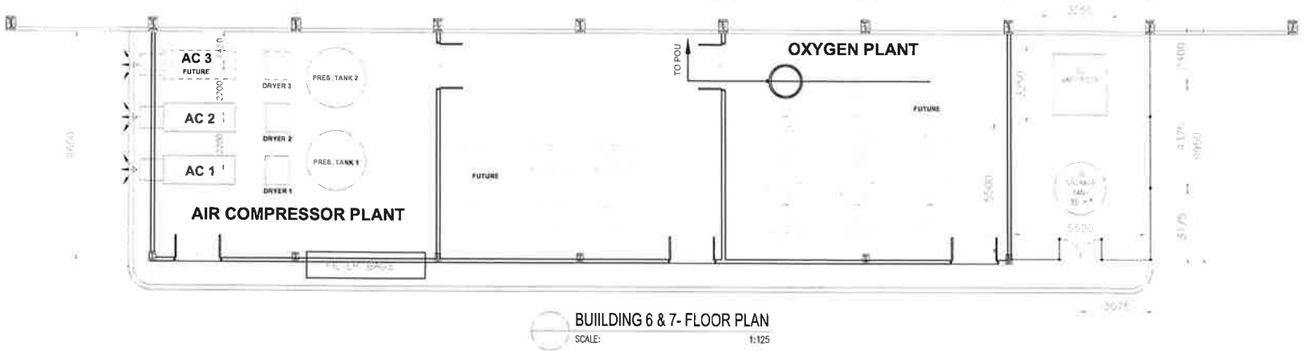
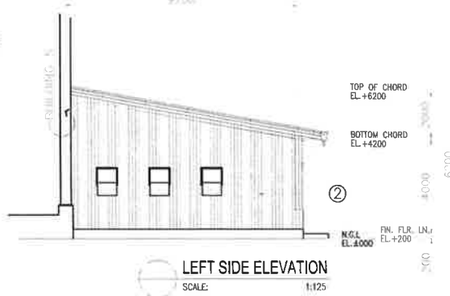
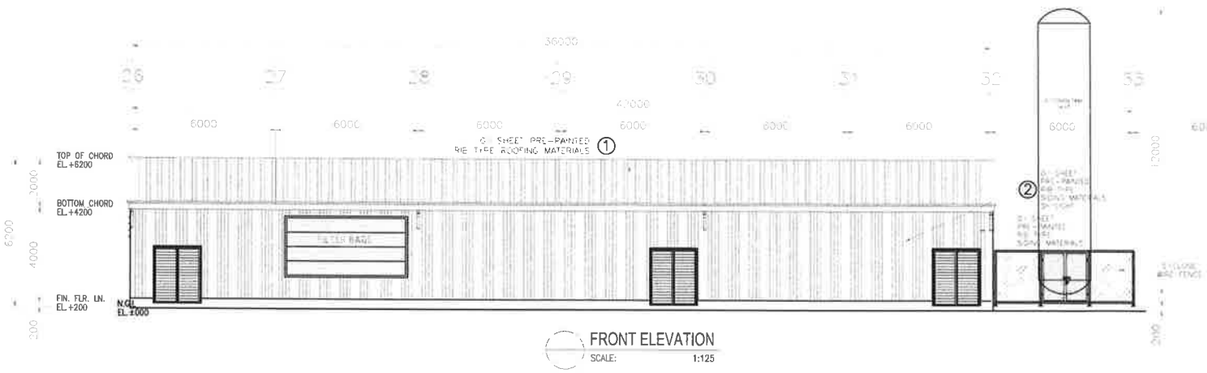


BUIILDING 6 & 7- FLOOR PLAN
SCALE: 1:125

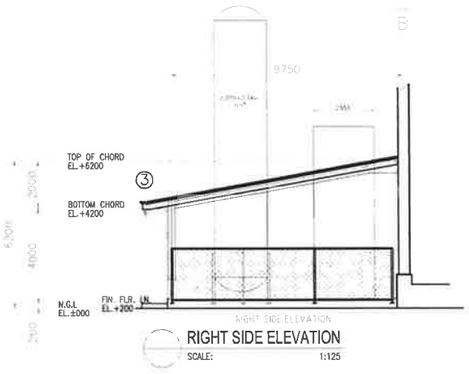


LEFT SIDE ELEVATION
SCALE: 1:125

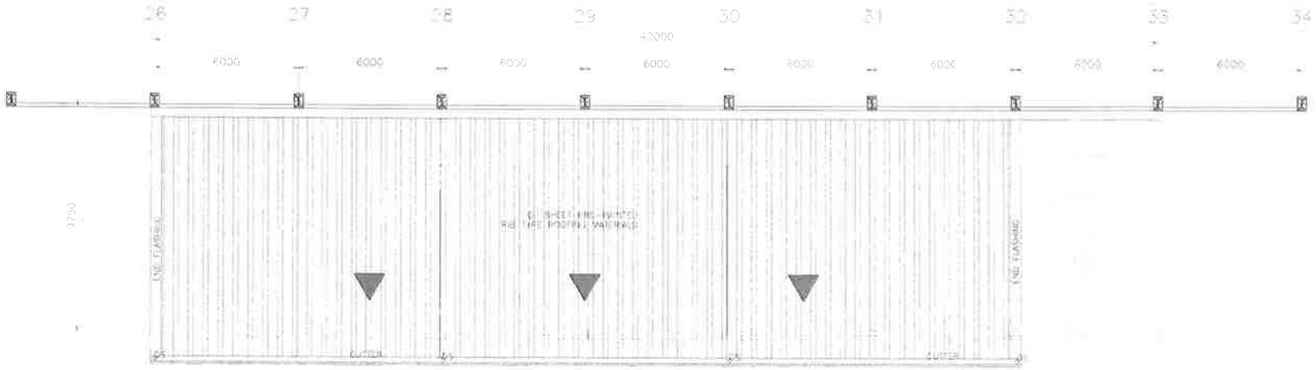
Item	Specification	Qty	Unit	Description
1	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	155	PCS	ROOFING
2	G.I SHEET PRE-PAINTED RIB TYPE 3FT X 20FT	30	PCS	SIDINGS
3	G.I SHEET PRE-PAINTED GUTTER 20FT	6	PCS	ROOF GUTTER
4	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	85	PCS	ROOF PURLINS
5	50mm X 175mm X 20ft GA# 16 (1.5mm) [-TYPE STEEL	32	PCS	SIDINGS PURLINS
6	Ø12mm x 20ft ROUND BAR	30	PCS	ROOF SAGROD
7	Ø12mm x 20ft ROUND BAR	10	PCS	SIDINGS SAGROD
8	Ø16 x 20ft ROUND BAR	17	PCS	CROSS BRACING
9	M16 TURNBUCKLES	12	PCS	TURNBUCKLES
SC5	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	12	PCS	STEEL COLUMN
BP5	300mmx350mmx20mm	28	PCS	BASE PLATE
AB5	25mmØx400mm A325 ANCHOR BOLTS	48	PCS	ANCHOR BOLT
T1	W 12" x 6-1/2" x 27 Lbs/FT. X 20ft	14	PCS	STEEL TRUSS
SB1	W 8" X 4" X 13 Lbs/FT. X 20ft	6	PCS	STEEL BEAM
-	463.2M²	-	M²	FLOOR AREA



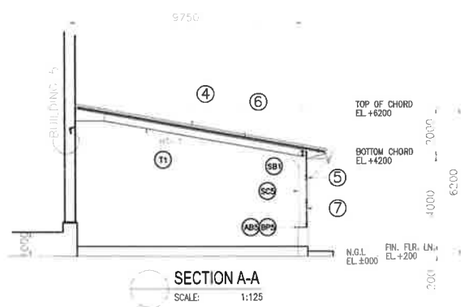
FRONT ELEVATION
SCALE: 1:125



RIGHT SIDE ELEVATION
SCALE: 1:125



ROOF PLAN
SCALE: 1:125



SECTION A-A
SCALE: 1:125

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Approved Application No. 7520

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Sheet No.....of.....

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT		DESIGN BY:	LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.		DRAWN BY:	MBN
TITLE: BUILDING 6 & 7- AIR COMPRESSOR PLANT & OXYGEN PLANT		CHECKED BY:	LCC
DRAWING NO: KKBR-0013	REV.0	APPROVED BY:	MW
NOTE: THIS DRAWING IS PROPERTY OF EVERGREEN ENVIRONMENTAL RESOURCES INC AND SHALL NOT BE REPRODUCED EITHER IN PART OR IN WHOLE WITHOUT CONSENT.		DATE:	NOV.8 2018
		SCALE:1:125	SHT NO: 1/1

EVERGREEN ENVIRONMENTAL RESOURCES INC

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Sheet No. .... of ....

PLANT BUILDING

1. The contractor shall verify the necessity of an air natural drafting system in order to maintain the inner temperature in according to the Australian safety and occupational rules. During the hot season the hourly heat generated in the plant in operation is the following :

-Furnace area	280000 Kca l/h;
-Slag demolition area	150000 Kca l/h;
-Refinery area	100000 Kca l/h;
-Crystallizer tower	100000 Kca l/h;

2. The building design shall include louvers capable to allow the following air intake :

-Battery breaker room	16000 Nm3/h;
-Charge preparation room	25000 Nm3/h;
-Furnace and refinery room	95000 Nm3/h;
-Slag demolition room	12000 Nm3/h;

3. The control room shall be equipped with the hvac system and the light shall have an intensity of 500 lux.

4. The drawing shows the main doors. Those access shall be of to kinds: the swinging type and the rolling type. The main doors shall have a glass window, spring return closing mechanism, and anti panic handle device. the drawing does not show any type of windows, however the window may be foreseen in according to the civil engineer design.

5. The building diffused lighting shall have an intensity of 250-300 lux. Emergency light are also required to maintain safe work conditions during the possible power black out. The emergency lighting intensity will be granted of 150 lux. The machinery equipments lighting and services (where it is required) will be part of detailed engineering.

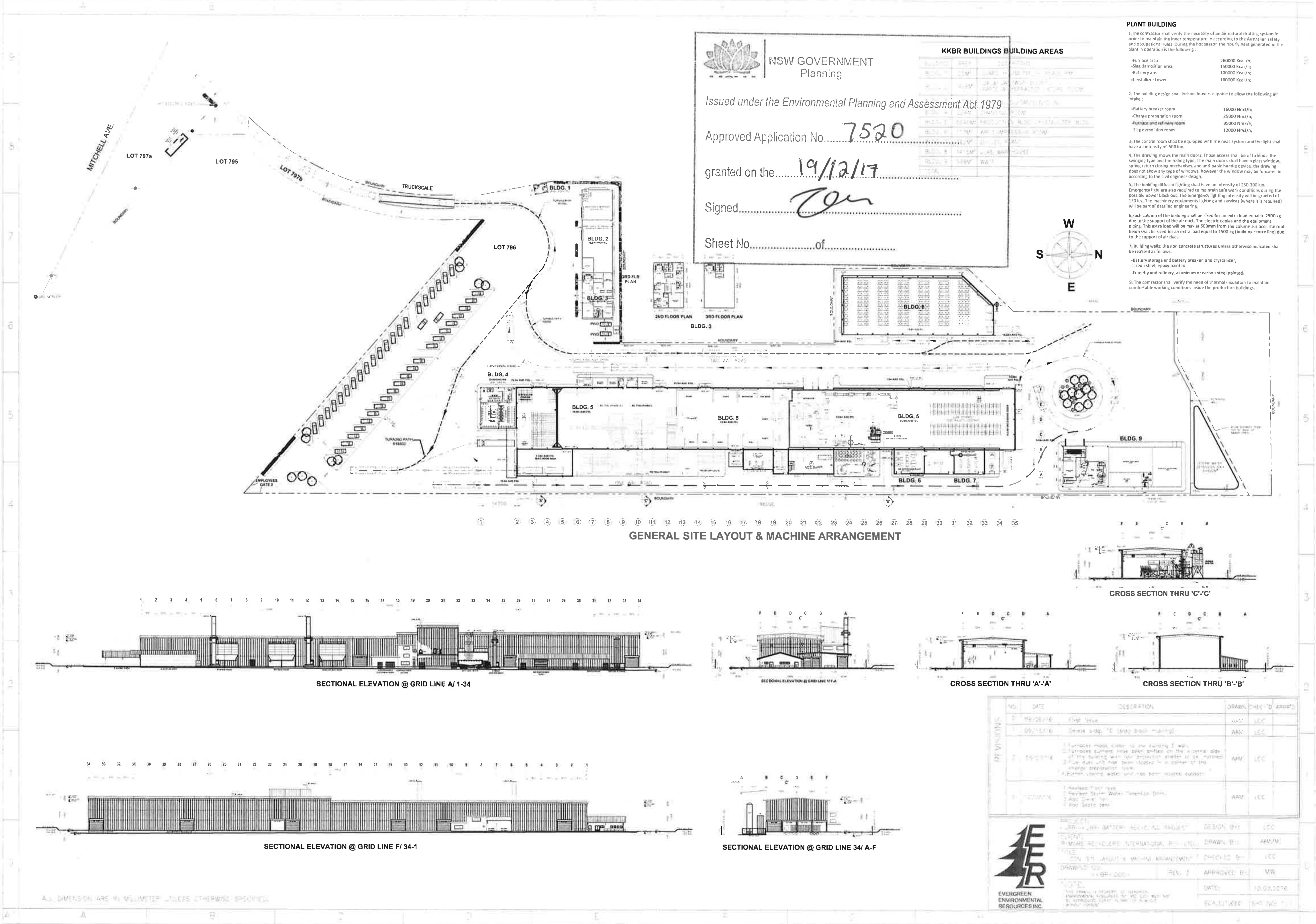
6. Each column of the building shall be sized for an extra load equal to 2500 kg due to the support of the air duct. The electric cables and the equipment piping. This extra load will be max at 600mm from the column surface. The roof beam shall be sized for an extra load equal to 1500 kg (building centre line) due to the support of air duct.

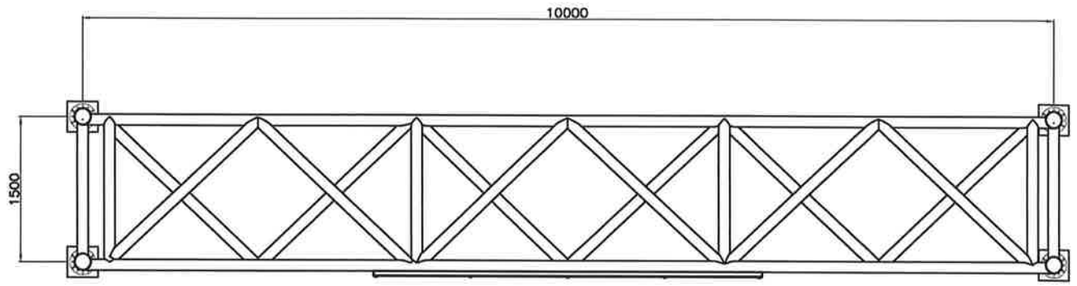
7. Building walls: the non concrete structures unless otherwise indicated shall be realised as follows:

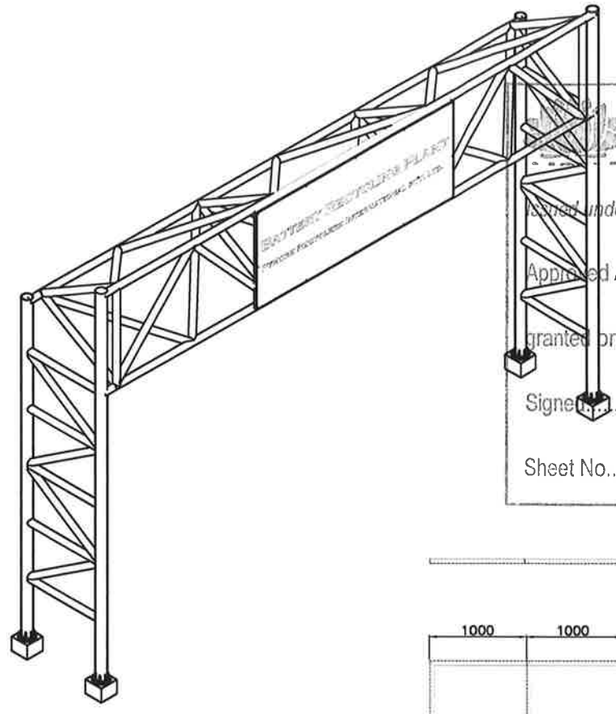
-Battery storage and battery breaker and crystallizer, carbon steel; epoxy painted

-Foundry and refinery, aluminum or carbon steel painted.

9. The contractor shall verify the need of thermal insulation to maintain comfortable working conditions inside the production buildings.







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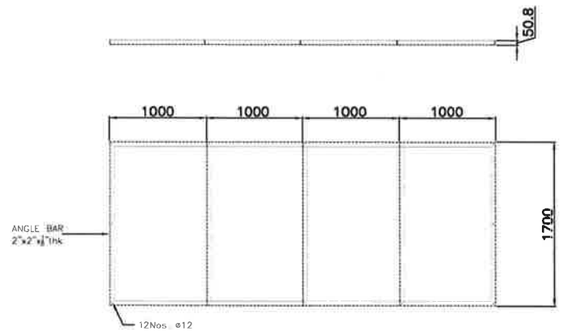
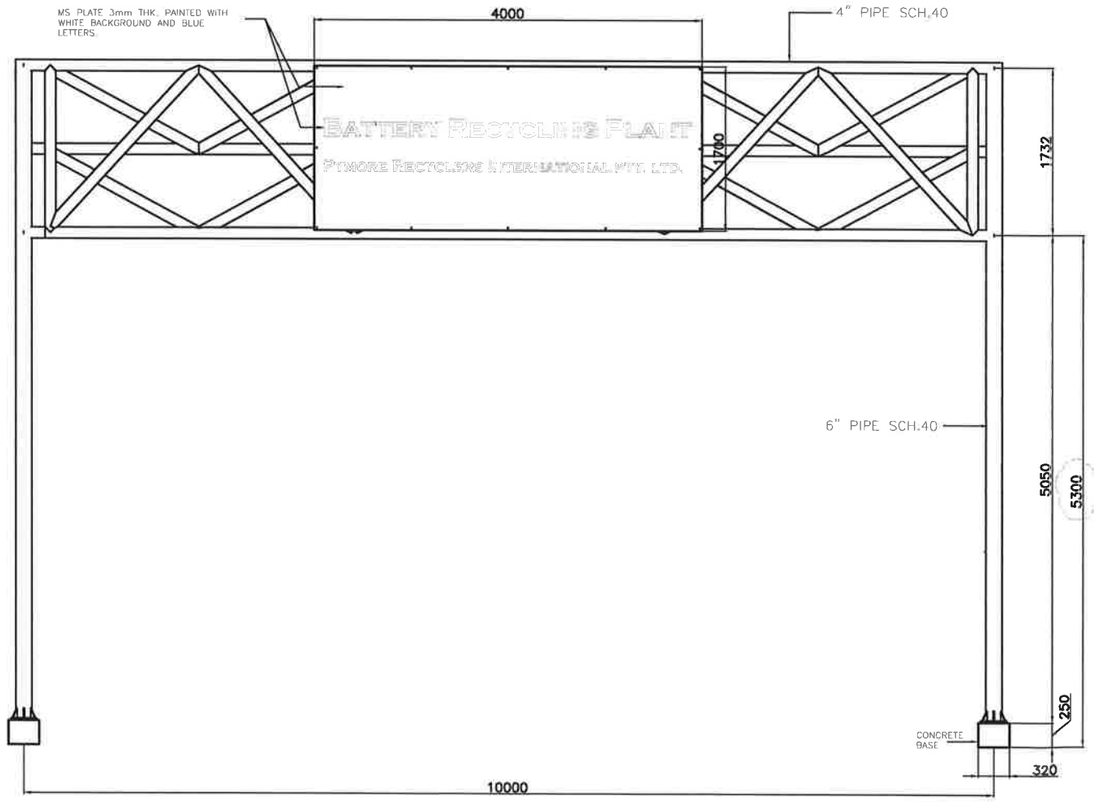
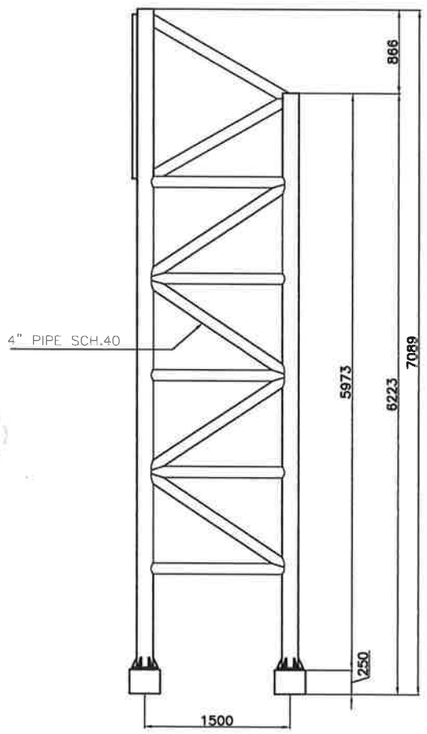
Sheet No. ..... of .....



SISNAGE FRAME



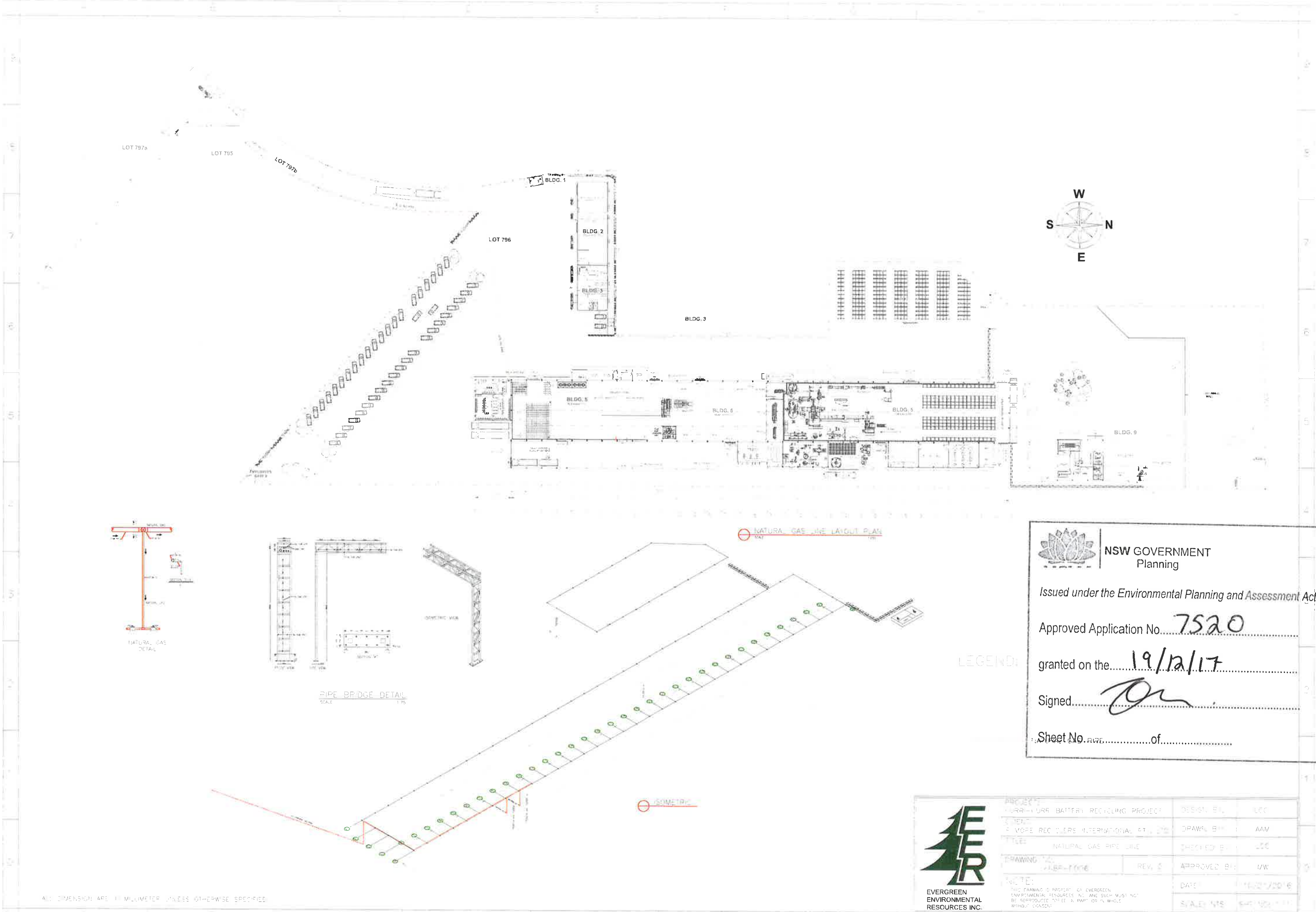


REVISIONS	NO.	DATE	DESCRIPTION	DRAWN/CHECKED/APP'D
	0	10/27/16	FIRST ISSUE	AAM LCC
	1	10/28/16	INCREASE HEIGHT	AAM LCC

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: KURRI-KURRI BATTERY RECYCLING PROJECT	DESIGN BY: LCC
CLIENT: PYMORE RECYCLERS INTERNATIONAL PTY. LTD.	DRAWN BY: AAM
TITLE: SIGNAGE HEAVY VEHICLE ENTRANCE (1ST OPTION)	CHECKED BY: LCC
DRAWING NO: KKBR-0034 REV.1	APPROVED BY: MW
	DATE: 10.28.2016
	SHT NO: 1/1

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.



NSW GOVERNMENT Planning

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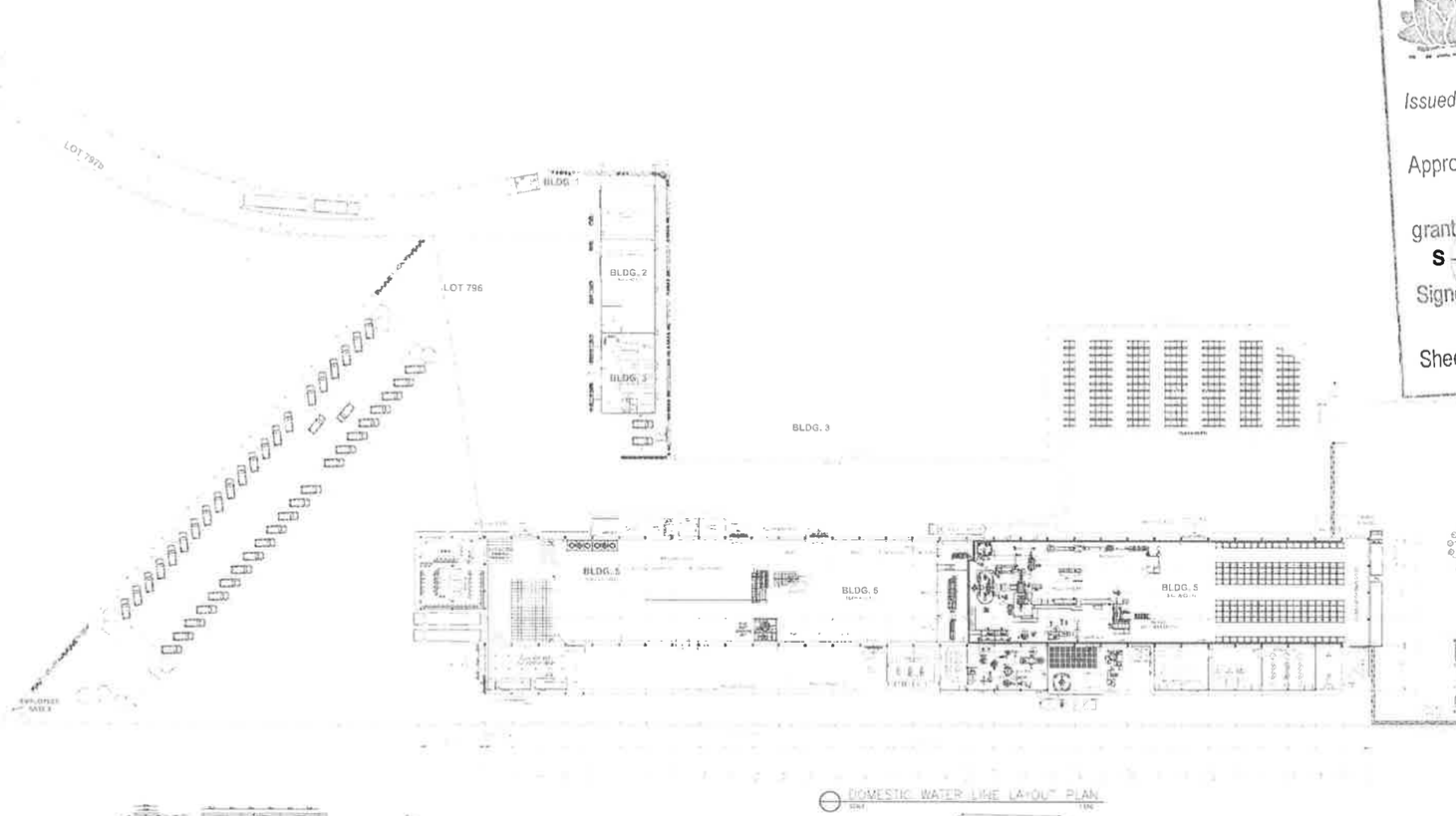
Approved Application No. 7520

granted on the 19/12/17

Signed [signature]

Sheet No. .... of ....

EVERGREEN ENVIRONMENTAL RESOURCES INC.		
PROJECT: BATTERY RECYCLING PROJECT	DESIGN BY:	LCC
CLIENT:	DRAWN BY:	AAM
TITLE: NATURAL GAS PIPE LINE	CHECKED BY:	LCC
DRAWING NO.:	APPROVED BY:	
NOTES: THIS DRAWING IS PROPERTY OF EVERGREEN ENVIRONMENTAL RESOURCES INC. AND SUCH MUST NOT BE REPRODUCED, COPIED IN PART OR IN WHOLE WITHOUT CONSENT	DATE:	
	SCALE: NTS	



NSW GOVERNMENT
Planning

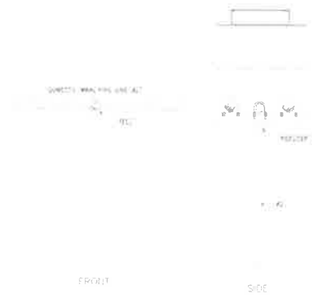
Issued under the Environmental Planning and Assessment Act 1979

Approved Application No. 7520

granted on the 19/12/17

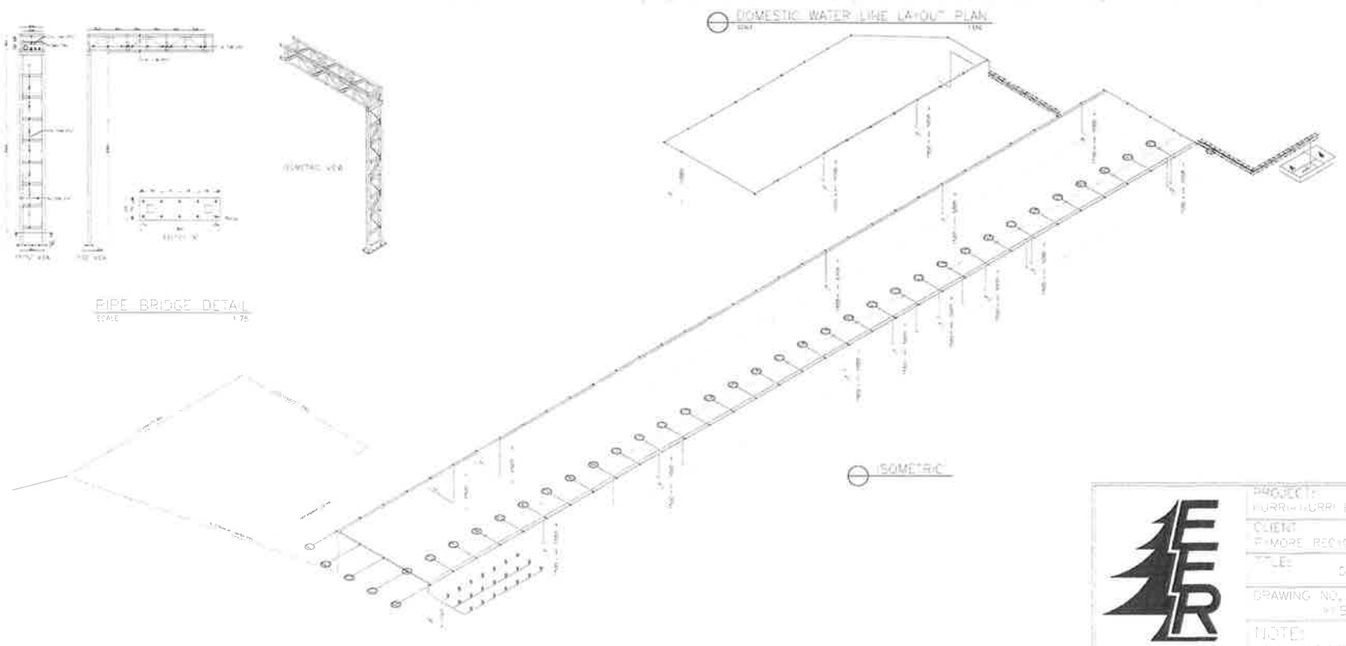
Signed

Sheet No. ..... of .....



FIRE WATER PIPE DETAIL
SCALE 1:20

PIPE BRIDGE DETAIL
SCALE 1:75



LEGEND

- L/C FIRE HYDRANT PIPE
- L/C DOMESTIC WATER PIPE
- DOMESTIC WATER PIPE
- SPRINKLER

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: PUROK-HURRI BATTERY RECYCLING PROJECT	DESIGN BY: JCC
CLIENT: PIMORE RECYCLERS INTERNATIONAL PTY. LTD.	DRAWN BY: AAM
TITLE: DOMESTIC WATER LINE	CHECKED BY: JCC
DRAWING NO.: WSP-0004 REV.: 0	APPROVED BY: MW
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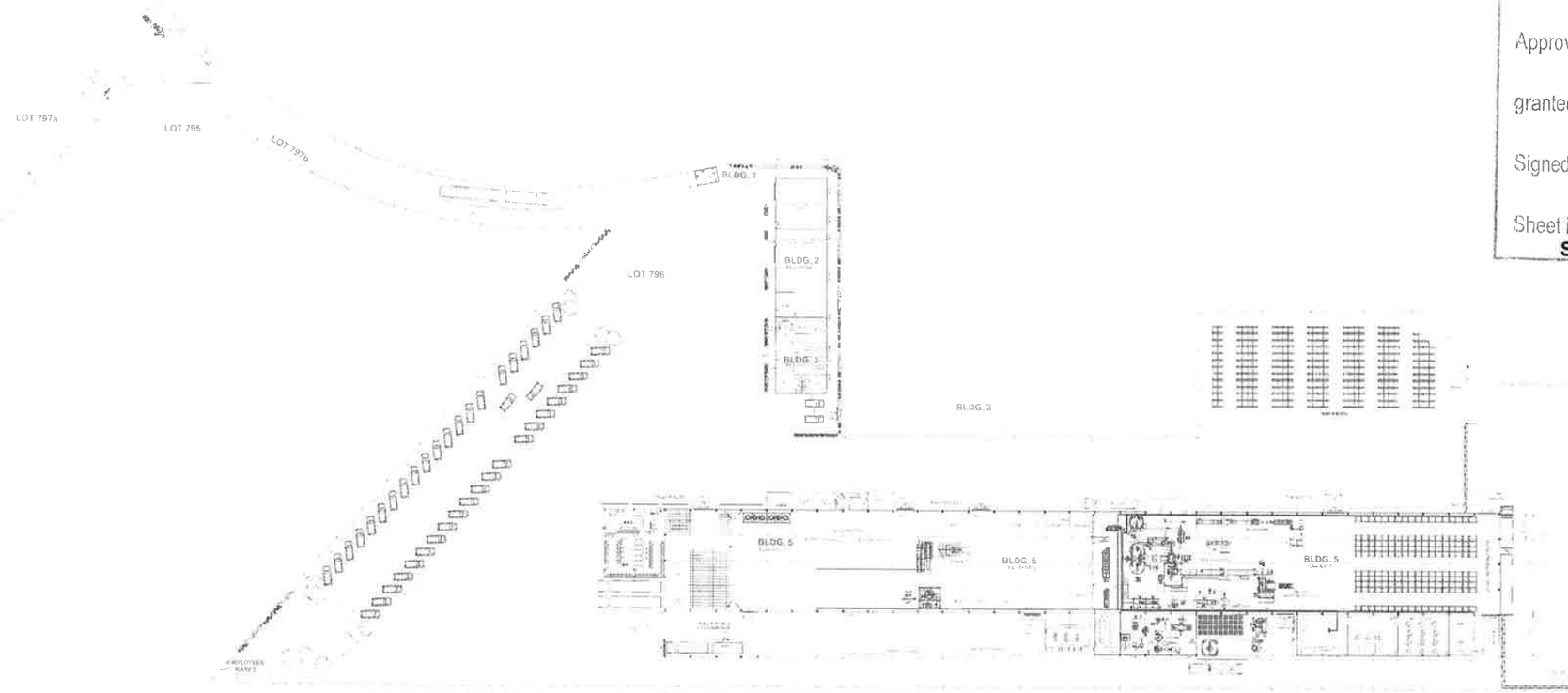
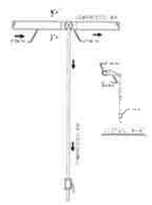
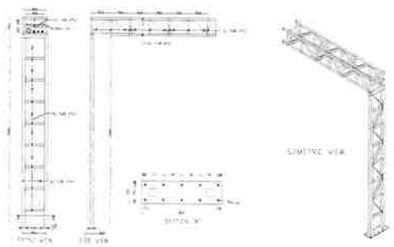
	SCALE: 650 SHT SIZE: A1





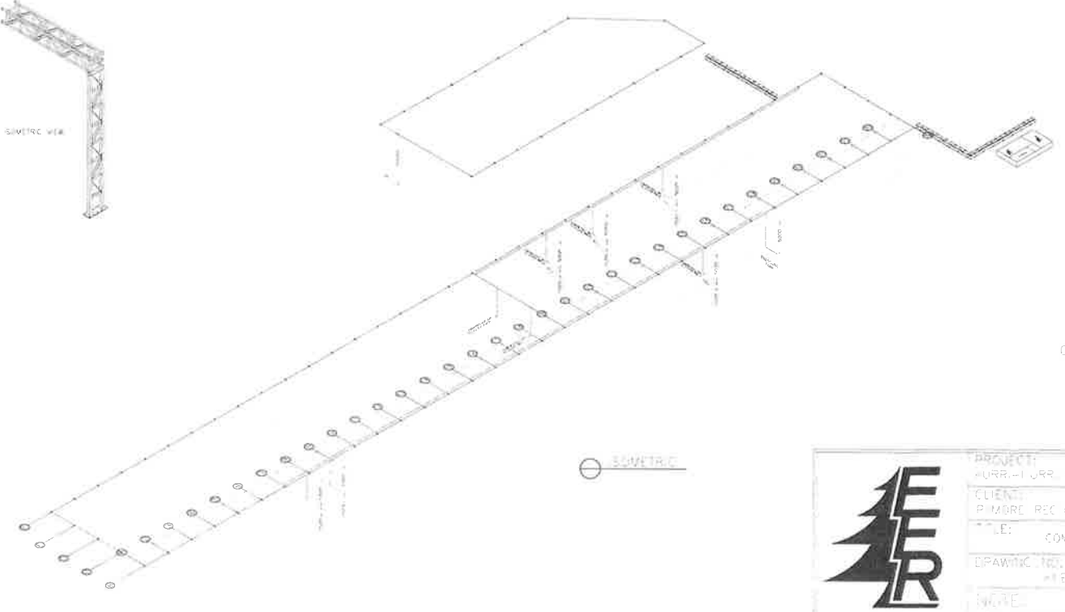
COMPRESSED AIR DETAIL



PIPE BRIDGE DETAIL
SCALE 1:25

FIRE WATER PIPE DETAIL
SCALE 1:20

COMPRESSED AIR LAYOUT PLAN
SCALE 1:150



ISOMETRIC
SCALE N.T.S

LEGEND:

COMPRESSED AIR PIPE

ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.

EVERGREEN ENVIRONMENTAL RESOURCES INC.

PROJECT: HURR-I CRR BATTERY RECYCLING PROJECT	DESIGN BY: CCC
CLIENT: PUMBRE RECYCLERS INTERNATIONAL PTY. LTD.	DRAWN BY: AAM
TITLE: COMPRESSED AIR PIPE LAYOUT	CHECKED BY: CCC
DRAWING NO.: HBR-0005 REV. 2	APPROVED BY: MW
NOTE: THIS DRAWING IS PROPERTY OF EVERGREEN ENVIRONMENTAL RESOURCES INC. AND SUCH MUST NOT BE REPRODUCED IN PART OR IN WHOLE WITHOUT CONSENT.	DATE: 10/31/2016
	SCALE: N.T.S SHT NO.: 5/6

APPENDIX B
APPLICANT'S MANAGEMENT AND MITIGATION MEASURES

8 Statement of commitments

The environmental management measures to be implemented under the project identified in the IES and technical studies are summarised in Table 8.1.

Table 8.1 Summary of management and mitigation measures

Key issue	Management and mitigation measures
Waste management	Management of construction wastes would be detailed in a Construction Management Plan. An operational waste management plan would be prepared and implemented during the project.
Human health	To reduce employee's lead dust exposure during the operation of the facility, a number of control measures would be implemented. These would include: • compliance with WHS Regulation 2011 requirements to control exposure; • implementation of specific engineering controls; • provision of PPE; • conducting health monitoring and blood level monitoring of all employees; and • provision of employee education and awareness campaigns.
Hazards and risk	An automatic slam shutoff valve should be provided for the natural gas supply to ensure that leaks can be isolated. The following safety systems (maintained by the transport contractors) would be provided for the proposed transport operations, in compliance with the ADG Code and relevant Australian standards: • induction training for drivers including training in emergency response, fire fighting, first aid and handling procedures for materials; • appropriate dangerous goods licenses for transport of hazardous materials; • mobile phones and/or radios for communication to emergency services and to the transport company base; • fire extinguishers on trucks, where applicable; • covering slag during transport; • an ERP provided to drivers including emergency services contact numbers and safety data sheets; • regular maintenance and inspection of trucks for roadworthiness and containment integrity; • contract requirements for loading and handling procedures; and • DG driver licensing requirements.
Traffic and transport	A construction stage traffic management plan would be required for the management of the project site access (including any travel requirements for oversize vehicles) during the construction stage. This plan would be prepared prior to construction commencing. Additional site traffic management measures (including a code of conduct for the site truck drivers) would be considered to help specify preferred transport routes which would minimise the potential future traffic safety, noise and residential amenity impacts of the site truck traffic in the vicinity of other nearby urban areas of Kurri Kurri.

Table 8.1 Summary of management and mitigation measures

Key issue	Management and mitigation measures
Noise and vibration	Management measures that would be implemented during construction and operation to minimise noise impacts would include: • properly maintaining plant to ensure rated noise emission levels are not exceeded; and • undertaking construction activities guided by AS2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites; Universal work practices to minimise noise and vibration emissions include: • regular reinforcement (such as at toolbox talks) of the need to minimise noise and vibration; • regular identification of noisy activities and adoption of improvement techniques; • avoiding the use of portable radios, public address systems or other methods of site communication that may unnecessarily impact upon residents; • minimising the use of equipment that generates impulsive noise; • minimising the movement of materials and plant and unnecessary impacts; • minimising truck movements; and • scheduling respite periods for intensive works. Measures to minimise noise emissions from plant and equipment include: • choosing quieter plant and equipment, including installing best-practice noise suppression equipment, based on the optimal power and size to most efficiently perform the required tasks; • using temporary noise barriers (in the form of plywood hoarding or similar) to shield intensive construction noise activities from residences if required; • operating plant and equipment in the quietest and most efficient manner; and • regularly inspecting and maintaining plant and equipment to minimise noise and vibration level increases, to ensure that all noise and vibration reduction devices are operating effectively; • low-frequency reversing alarms ("growlers") would be used rather than the standard high frequency beepers; • plant and equipment would be switched off when not in use; • any vehicle queuing would be on site rather than on public roads; and • material drop heights and materials dragging along the ground would be minimised. Work scheduling to minimise the impact of noise include: • scheduling construction activities such that the concurrent operation of plant is limited; • scheduling activities to minimise impacts by undertaking all possible work during hours that would least adversely affect sensitive receivers and by avoiding conflicts with other scheduled events; • scheduling work to coincide with non-sensitive periods; • scheduling noisy activities to coincide with high levels of neighbourhood noise so that noise from the activities is partially masked and not as intrusive; • planning deliveries and access to the site to occur quietly and efficiently and organising parking only within designated areas located away from the sensitive receivers; • optimising the number of deliveries to the site by amalgamating loads where possible and scheduling arrivals within designated hours; • designating, designing and maintaining access routes to the site to minimise impacts; and • conducting high vibration generating activities in continuous blocks, with appropriate respite periods as determined through consultation with potentially affected neighbours.
Air quality	Management measures that would be implemented to minimise air quality impacts during construction include: • erect shade cloth barriers to site fences around potentially dusty activities where practicable; • impose a maximum-speed-limit of 20 km/h on all internal roads and work areas; • ensure proper maintenance and tuning of all equipment engines;

Table 8.1 Summary of management and mitigation measures

Key issue	Management and mitigation measures
	• provide an adequate water supply on the construction site for effective dust/particulate matter suppression/mitigation; • minimise drop heights from loading or handling equipment; • maintain a log book during construction period; • record all dust and air quality complaints in the log book, identifying cause(s) and take appropriate measures taken to reduce emissions; • record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the log book; and • carry out regular site inspections, record inspection results, and make the log book available to the local authority when asked. Management measures that would be implemented to minimise air quality impacts during operation include: • the crushing mill and associated conveyors will be fully controlled to prevent dust emissions; • the crushed materials will pass through a screen and be wetted down with high pressure water sprayers using recycled water; • the charge preparation building will be completely closed and under strong negative pressure where dusty air will ne draw off in a closed duct system and carried to the to the sanitary air bag house filtration system (PK-721); • ambient air from the furnace feeding area will be injected to the settling chamber before passing to the PK-720 bag house; • process fume from the rotary furnace will be sucked into the bag house system (PK-720). • flue dust collected from the bag house filters will be mixed with the lead paste for recycling into the rotary furnace; • the sodium sulphate crystals silo will be equipped with a bag house for de-dusting prior to discharge (during filling); and • polluted air will be collected from the following points for collection and ducted to a packed tower scrubber (FL-530) for removal of acid gas and mist: – batteries vibrating feeding; – sound proofing cabin of mill; – paste settler; – battery conveyor terminal hood; – components separator; – separators dewatering system; – grid rotary classifier; – reaction tank; – lead paste filter press; – purification tank; – polishing filter; and – crystallizer feed tank.
Contamination and soils	It is recommended that a Construction Environmental Management Plan is prepared for the development of the site, which should include an unexpected finds protocol to ensure that as yet undiscovered contamination, if encountered, can be appropriately managed. If evidence of contamination is encountered during the construction phase of works, advice should be sought from an appropriately qualified environmental consultant. In addition the construction phase of works should ensure no contamination is introduced to the site.
Surface water	A surface water monitoring program will be implemented that comprises quarterly monitoring of a full suite of analytes during wet weather conditions. Water quality monitoring data will be reviewed annually as part

Table 8.1 Summary of management and mitigation measures

Key issue	Management and mitigation measures
	of the Annual Environmental Monitoring Report. A flood evacuation procedure will be established as part of the site's Emergency Management Plan. The following management measures have been proposed to mitigate potential flood impacts associated with increases to peak flows and filling, respectively: • detention storage will be provided to reduce developed conditions peak flows to existing rates for the 100 year ARI and lower magnitude rainfall events; • the detention basin and embankment will be established in cut to avoid any localised increases in surface levels; and • any fences established to the north of the retaining wall will be low profile to minimise any impacts to flow conveyance. The following flood risk management measures will be implemented: • all hazardous materials are to be stored and processed in fully enclosed and bunded buildings that have a minimum FFL of 15.6 m AHD. This provides 4.1 m freeboard to the peak 1% AEP and 3.1 m freeboard to the peak 0.5% AEP levels; and • site staff will be able to take refuge in building 3 if required.
Aboriginal heritage	If unexpected Aboriginal objects or sites are uncovered during the course of development, work will cease and a qualified archaeologist will be contacted to conduct a preliminary assessment. If the find is confirmed to be a relic, the Heritage Council must be notified. In the event that known or suspected human skeletal remains are encountered during the activity, the procedures detailed in Appendix L will be followed.
Historic heritage	If unexpected historical archaeology is discovered during construction, work in the immediate area must cease and an archaeologist would be contacted to make an assessment of the find. If it is determined to be a relic under the Heritage Act, further investigation may be required.
Fire and incident management	The following spill response and management measures would be implemented: • spilled materials would not be touched and walking through spilled material would be prohibited; • the extent of each spill would be assessed. If significant and hazardous, the alarm would be activated, emergency services would be contacted and personnel would be evacuated to the designated Emergency Assembly Point; • appropriate PPE would be selected and implemented dependent on the type of spilt material; • first aid would be delivered (if necessary); • all ignition sources within the immediate area would be eliminated; • all combustible materials would be kept away from spilled materials; • entry of spilled materials into waterways, sewers and confined areas would be prevented; • small spills would be contained using spill kits, absorbent pads, sand or other non-combustible absorbent material and placed into appropriate containers for disposal; • for large spills, temporary bunding would be installed ahead of the liquid spill for later disposal; • sulphuric acid spills would be neutralised with lime or soda ash; • dry lead spills would be vacuumed using a high efficiency particulate arrester vacuum; • once the bulk of the spilled material has been removed, spill areas would be appropriately cleaned; and • waste materials would be disposed of in accordance with EPA requirements.
Visual	The site entrance on Mitchell Avenue is to be landscaped and kept tidy.

Table 8.1 Summary of management and mitigation measures

Key issue	Management and mitigation measures
Biodiversity	Management and mitigation measures that would be implemented during construction and operations to minimise biodiversity impacts would include: • clearing limits would be clearly delineated in the field, which would be especially pertinent to the northern area of the site where, as described above, all direct impacts on RFEF EEC would be avoided; • the final design would be reviewed to determine if any Earps Gum can be retained. If any Earps Gum can be retained, an ecologist would mark them in the field and they would be fenced for the duration of the construction period; • a clearing procedure will be prepared which details the methods to be implemented during clearing. This procedure will include detailed instruction on the two-stage clearing protocol for felling of hollow-bearing trees in the site boundary, as well as, a requirement for a suitably trained fauna handler to be present during hollow-bearing tree clearing to rescue and relocate any displaced fauna. The clearing procedure should also mandate the completion of preclearance surveys to determine whether nesting birds are present; and • appropriate sediment and erosion controls will be implemented to ensure that there are no off-site impacts resulting from the project, particularly to Swamp Creek. A biodiversity offset strategy will be prepared to identify offsets to compensate for the project's impacts. The biodiversity offset strategy will be finalised in consultation with OEH, DP&E and DPI – Lands within 12 months of obtaining project approval.
Socio-economic	Wherever possible, a preference for local employment would be made. Further, local contractors should be encouraged to tender for work, both during the construction and operations phase.

APPENDIX C
LOCATION OF RESIDENTIAL AND OTHER RECEPTORS

Noise monitoring and assessment locations

Kurri Kurri Battery Recycling Facility
Noise and vibration impact assessment

Figure 4.1