

# Project Approval (Consolidated)

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

I approve the project application referred to in Schedule 1, subject to the conditions in Schedules 2 to 4.

These conditions are required to:

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

Approved 28 January 2009

The Hon Kristina Keneally MP  
Minister for Planning

Sydney

2009

### SCHEDULE 1

<b>Application No:</b>	06_0228
<b>Proponent:</b>	Shoalhaven Starches Pty Ltd
<b>Approval Authority:</b>	Minister for Planning
<b>Land:</b>	The land listed in Appendix 1
<b>Project:</b>	Shoalhaven Starches Expansion Project

**MP06\_0228 MOD 1 – Deletion of DDG Pelletiser (2011)**  
**MP06\_0228 MOD 2 – Improve operational/energy efficiency (2012)**  
**MP06\_0228 MOD 3 – Car park relocation (2012)**

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## DEFINITIONS

BCA	Building Code of Australia
Council	Shoalhaven City Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
DDG	Dried Distillers Grain
Department	Department of Planning
Director-General	Director-General of the Department (or delegate)
DWE	Department of Water and Energy
EA	The environmental assessment titled <i>Proposed Ethanol Production Upgrade Including Proposed Odour Reduction and Waste Water Treatment Measures For Existing Shoalhaven Starches Operations</i> , prepared by Cowman Stoddart Pty Ltd, and dated August 2008; and the associated response to submissions, prepared by Cowman Stoddart Pty Ltd, and dated October 2008
EP&A Act	<i>Environmental Planning &amp; Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning &amp; Assessment Regulation 2000</i>
EPL	Environmental Protection Licence
Evening	The period from 6pm to 10pm
GHD Report (October 2007)	<b>Environmental Audit Odour Sources report dated October 2007 prepared for Shoalhaven Starches by GHD Pty Ltd to address Land and Environment Court judgment 2 November 2006.</b>
Incident	An incident causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval
Minister	Minister for Planning
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
Odour Control Works	The works described in Appendix 3
OEH	<b>Office of Environment and Heritage</b>
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Project	<b>The development described in the EA, which includes the continued implementation of all existing and approved development on site, as modified by MP 06_0228 MOD 1, MP 06_0228 MOD 2 and MP 06_0228 MOD 3.</b>
Proponent	Shoalhaven Starches Pty Ltd, or its successors
Reasonable and Feasible	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. Feasible relates to engineering considerations and what is practical to build
Site	The land referred to in Schedule 1
Statement of Commitments	The Proponent's commitments in the EA
VENM	Virgin Excavated Natural Material, as defined in the <i>Protection of the Environment Operations Act 1997</i>

## **SCHEDULE 2 ADMINISTRATIVE CONDITIONS**

### **Obligation to Minimise Harm to the Environment**

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

### **Terms of Approval**

2. The Proponent shall carry out the project generally in accordance with the:
  - a) EA and associated site plans (see Appendix 2);
  - b) amended modification proposal MP 06\_0228 MOD 1 prepared by ME Engineering Pty Ltd and dated 21 December 2010;
  - c) modification proposal MP 06\_0228 MOD 2, accompanying Environmental Assessment dated January 2012 and response to submissions report dated 4 May 2012, prepared by Cowman Stoddart Pty Ltd, accompanying plans (see Appendices 2A and 2B) and supplementary odour report dated 30 July 2012, prepared by PAE Holmes Pty Ltd;
  - d) modification proposal MP 06\_0228 MOD 3, accompanying Environmental Assessment dated May 2012, response to submissions report dated 20 July 2012 and further response to submissions report dated 24 August 2012, prepared by Cowman Stoddart Pty Ltd and accompanying plans (see Appendix 2C);
  - e) statement of commitments; and
  - f) conditions of this approval.
3. If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
  - a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and
  - b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.

### **Surrender of Existing Development Consents**

5. Within 12 months of this approval, the Proponent shall surrender all existing development consents and project approvals for the site, apart from this project approval, in accordance with Clause 97 of the EP&A Regulation.

### **Limits on Approval**

6. (1) The Proponent must not produce on site:
  - a) more than 265,000 tonnes of industrial grade flour per year; and
  - b) more than 300 million litres of ethanol per year, subject to (2) below.
- (2) The proponent must not produce on site more than 126 million litres of ethanol per year except in accordance with a staged approval granted by the Director-General in accordance with condition 7.

*Note: Prior to this approval, the proponent was allowed to produce up to 126 million litres of ethanol per year. Condition 7 below provides for the Director – General to approve increased production of ethanol in stages, firstly up to 200 million litres and then up to 300 million litres. Increased production will only be approved after an independent audit of the performance of the odour controls required by this approval and only if the Director General is satisfied that odour controls will be adequate for such an increase.*

### **Staged Implementation of Increased Ethanol Production Rates**

7. (1) The Proponent may apply to the Director-General for approval to increase ethanol production up to the rate of 200 million litres of ethanol a year on site if –
  - a) the mandatory odour controls listed in Appendix 3 to this Approval have been implemented; and
  - b) the Odour Management Plan required under condition 4 of Schedule 3 has been prepared to the satisfaction of the Director-General and is being implemented; and
  - c) an independent odour audit has been prepared and submitted in accordance with conditions 5 and 6 of Schedule 3; and

- d) the proponent provides the Director-General with an assessment of the likely odour impacts of the proposed increase in ethanol production, using odour monitoring and predictive modelling.
- (2) The proponent may apply to the Director-General for approval to increase ethanol production from 200 million litres of ethanol a year on site up to 300 million litres of ethanol a year on site if –
- a) the site has been producing 200 million litres per year in accordance with an approval granted by the Director-General under this condition; and
  - b) an independent odour audit of the site operating at this rate has been prepared and submitted in accordance with conditions 5 and 6 of Schedule 3; and
  - c) the proponent has provided the Director-General with an assessment of the likely odour impacts of the proposed increase in ethanol production, using odour monitoring and predictive modelling.
- (3) An assessment provided to the Director-General in accordance with this condition –
- a) must assess the effectiveness of the mandatory odour controls required under this approval; and
  - b) may assess the effectiveness of implementing additional odour controls (such as those listed in Appendix 3).
- (4) In deciding whether to approve an increase in ethanol production under this condition, the Director-General must –
- a) assess the odour performance of the premises at its current rate of production; and
  - b) assess the likely odour impacts from the proposed increase; and
  - c) consider the requirement not to cause or permit the emission of offensive odours from the site as defined in section 129 of the POEO Act.

### **Structural Adequacy**

8. The Proponent shall ensure that all new buildings and structures on the site are constructed in accordance with the relevant requirements of the BCA.

#### *Notes:*

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

### **Structural Adequacy of Early Works (MP 06\_0228 MOD 2)**

- 8A. Within 2 months of the date of the approval of MP 06\_0228 MOD 2, the Proponent shall:
- a) obtain and provide copies to the Director-General all necessary building certificate(s) from Shoalhaven City Council for any structures proposed as part of MP 06\_0228 MOD 2 that have been constructed or partially constructed prior to the approval of MP 06\_0228 MOD 2; and
  - b) ensure that all new structures, and any alterations or additions to existing structures, are constructed in accordance with the relevant requirements of the Building Code of Australia.

### **Demolition**

9. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601:2001: The Demolition of Structures*, or its latest version.

### **Protection of Public Infrastructure**

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

### **Operation of Plant and Equipment**

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

**Progressive Submission of Documents**

12. With the approval of the Director-General, the Proponent may submit to the Director-General for approval any plan, strategy, study, or program required by this consent on a progressive basis.

**Development Contribution**

13. Within 12 months of this approval, the Proponent shall pay Council a suitable contribution for the project that has been determined generally in accordance with any applicable Section 94 Contribution Plan. If there is a dispute about the amount of the contribution then either party may refer the matter to the Director-General for resolution.

## SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

### ODOUR

#### Offensive Odour

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

#### Implementation of Mandatory Odour Controls

2. Prior to increasing ethanol production rates on site above 126 million litres a year or within 12 months of this approval, whichever is sooner, the Proponent shall implement all the mandatory odour controls listed in Appendix 3 and described in detail in the Odour Management Plan (see condition 4 below), to the satisfaction of the Director-General.
3. The Proponent shall implement additional mandatory odour controls as may be directed by the Director-General, arising from the Department's assessment of any:
  - a) Independent Odour Audit (see condition 5 below);
  - b) Independent Environmental Audit (see condition 4 of schedule 4); or
  - c) any monitoring results, incidents or complaints related to the project.
- 3A. Prior to commissioning the duct work that directs additional emissions from the evaporator plant area and load-out chute to the bio-filter (as identified in the amended modification proposal) the Proponent must demonstrate to the satisfaction of the Director General and the OEH that the bio-filter can accommodate the additional load while maintaining acceptable treatment performance.
- 3B. Should the Proponent opt to install a DDG pelletising plant as identified in the additional odour controls in Appendix 3 the plant must comply with all regulatory requirements including air and odour emissions standards that are in force at the time of installation. Compliance must be demonstrated to the satisfaction of the Director-General and OEH before installation work begins.

#### Odour Management Plan

4. The Proponent shall prepare and implement an Odour Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - a) be prepared in consultation with OEH by a suitably independent, qualified and experienced expert whose appointment has been endorsed by the Director-General, and submitted to the Director-General for approval within 3 months of the date of this approval;
  - b) describe in detail the measures that would be implemented on site to control the odour impacts of the project, and to ensure that these controls remain effective over time;
  - c) identify triggers for remedial action; and
  - d) include a program for monitoring the odour impacts of the project.
- 4A. Prior to increasing ethanol production the Odour Management Plan for the project must be updated to the satisfaction of the Director General to include the additional Appendix 3 mandatory odour controls specified in the modification approval MOD 1 – Deletion of DDG Pelletiser.

#### Independent Odour Audit

5. Within 3 months of the implementation of the mandatory odour controls (see Appendix 3), and annually thereafter unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Odour Audit of the project. This audit must be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Director-General. During the audit, this expert must:
  - a) consult with OEH and the Department;
  - b) audit the effectiveness of the odour controls on site in regard to protecting receivers against offensive odour;
  - c) review the Proponent's production data (that are relevant to the odour audit) and complaint records;
  - d) review the Odour Management Plan for the project;
  - e) measure all key odour sources on site, and compare the results of these measurements against the predictions in the EA;
  - f) determine whether the project is complying with the requirements in this approval; and, if necessary,
  - g) recommend and prioritise measures to either improve the odour controls on site and/or the Odour Management Plan, such that receivers would be protected against offensive odour from the site.

*Note: The Director-General may vary the frequency of the audit depending on the performance of the project.*

6. Within 6 weeks of the completion of this audit, the Proponent shall submit a copy of the audit report to both **OEH** and the Department with a response to any recommendations contained in the audit report.

#### Odour Verification (MP 06\_0228 MOD 2)

- 6A. The Proponent shall ensure that any Independent Odour Audit submitted to the Director-General in accordance with Condition 5 of this Schedule includes:
  - a) 3 monthly (quarterly) odour monitoring with samples taken from the carbon dioxide/ethanol recovery scrubber inlet/s and outlet/s; and
  - b) annual odour monitoring with samples taken of single vent stack (direct to atmosphere) emissions from a filling fermenter tank at 10% intervals (up to 50%).

### AIR QUALITY

#### General

7. The Proponent shall implement all reasonable and feasible measures to minimise the dust generated by the project.
8. During construction, the Proponent shall ensure that:
  - a) all trucks entering or leaving the site with loads have their loads covered; and
  - b) the trucks associated with the project do not track dirt onto the public road network.

#### Emission Limits - Boiler Stacks

9. The Proponent shall ensure that the emissions from the combined boiler stacks for Number 5 and 6 Boilers on site comply with the limits in the EPL.

#### Monitoring

10. The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program must:
  - a) be prepared in consultation with **OEH**;
  - b) be submitted to the Director-General for approval within 3 months of this approval; and
  - c) include a program to monitor the ongoing performance of the project.

### NOISE

#### Hours of Operation

11. The Proponent shall comply with the restrictions in Table 1.

Table 1: Construction and Operation Hours for the Project

Activity	Day	Time
Construction	Monday – Friday	7:00am to 6:00pm
	Saturday	8:00am to 1:00pm
	Sunday and Public Holidays	Nil
Operation	All days	Any time

Note: Construction activities may be conducted outside the hours in Table 1 provided that the activities are not audible at any residence beyond the boundary of the site.

#### Noise Limits

12. The Proponent shall ensure that noise from the project does not exceed the noise limits in Table 2.

Table 2: Project Noise Limits

Location	Day/Evening/Night LA <sub>10(15 minute)</sub> dB(A)
1 - Terara on the south side of the Shoalhaven River	38
2,3 & 4 - Nowra on the south side of the Shoalhaven River	38
5 - Merroo Street, Bomaderry	42
6 - Other residential locations in Bomaderry	40



*Note: To interpret the locations referred to Table 2, see the map in Appendix 4. Noise generated by the project is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy.*

### **Noise Management Plan**

13. During construction, the Proponent shall implement all reasonable and feasible measures to minimise the construction noise impacts of the project.
14. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - a) be prepared by a suitably qualified and experienced expert in consultation with **OEHL**, and be submitted to the Director-General for approval within 3 months of this approval;
  - b) describe the measures that would be implemented to control the noise impacts of the project;
  - c) identify trigger levels for remedial action; and
  - d) include a program to:
    - investigate ways to reduce the noise impacts of the project; and
    - monitor the noise impacts of the project using a combination of real-time and supplementary attended monitoring measures, which includes a protocol for evaluating compliance with the noise limits.

### **SOIL, WATER & ENERGY**

#### **Discharge Limits**

15. Except as may be expressly provided in an EPL for the project, the Proponent shall:
  - a) comply with Section 120 of the POEO Act; and
  - b) not discharge any wastewater, including treated wastewater to the Shoalhaven River.

#### **Water & Energy Efficiency**

16. The Proponent shall prepare and implement a Water Savings Action Plan and an Energy Savings Action Plan for the project to the satisfaction of the Director-General. These plans must be prepared:
  - a) in consultation with DWE and be submitted to the Director-General for approval within 12 months of this approval; and
  - b) in accordance with the *Guidelines for Water Savings Action Plans (DEUS 2005)* and *Guidelines for Energy Savings Action Plans (DEUS 2005)*, respectively.

#### **Bunding**

17. The Proponent shall store all chemicals, fuels and oils used on site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund. These bunds shall be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or DECC's *Storing and Handling Liquids: Environmental Protection* manual.

*Note: To avoid any doubt, this condition does not apply to the fermenters on site.*

#### **Importation of Fill**

18. The Proponent shall ensure that all imported fill is VENM.

#### **Erosion and Sediment Control**

19. The Proponent shall prepare and implement an Erosion and Sediment Control Plan for the project to the satisfaction of the Director-General. This plan must:
  - a) be submitted to the Director-General before the commencement of construction on site;
  - b) be prepared in accordance with Landcom's *Managing Urban Stormwater: Soils and Construction* manual;
  - c) identify the works that could cause soil erosion and generate sediment;
  - d) describe the location, function, and capacity of the erosion and sediment controls that would be implemented; and
  - e) describe the measures that would be implemented to maintain these controls during the construction period.

*Note: the provisions of this plan shall be implemented for all construction works associated with the project and/or modification approved thereafter.*

#### **Site Contamination**

20. Prior to the commencement of construction, unless otherwise agreed by the Director-General, the Proponent shall demonstrate to the satisfaction of the Director-General that an accredited site auditor has prepared a site audit statement and summary site audit report and that the site is suitable for its intended use(s).

## Acid Sulfate Soils

21. The Proponent shall prepare and implement an Acid Sulphate Soil Management Plan for the project to the satisfaction of the Director-General. The plan must be prepared in accordance with the *Acid Sulphate Soils Manual* (Acid Sulphate Soils Management Advisory Committee, 1998), and be submitted to the Director-General for approval prior to the commencement of construction.

## Stormwater

22. The Proponent shall prepare and implement a Stormwater Management Plan for the project to the satisfaction of the Director-General. This plan must:
- be prepared in consultation with Council and be submitted to the Director-General for approval prior to the commencement of construction;
  - be prepared in accordance with the latest version of *Managing Urban Stormwater: Council Handbook* (DECC);
  - outline measures to manage stormwater to prevent the pollution of waters; and
  - include detailed plans of the stormwater system.

## Wastewater

23. The Proponent shall ensure runoff and spray from the irrigation of wastewater does not go beyond the boundary of the utilisation areas.
24. The Proponent shall ensure that the pollutants in the soils at the environmental farm do not exceed the soil quality impact assessment criteria outlined in the EPL for the project.
25. The Proponent shall prepare and implement a Wastewater Management Plan for the project to the satisfaction of the Director-General. This plan must:
- be prepared in consultation with **OEH** and be submitted to the Director-General for approval within 12 months of this approval;
  - be prepared in accordance with DECC's *Environmental Guidelines: Use of Effluent by Irrigation*;
  - outline the location, design and management of the irrigation, crop and grazing system, including measures to minimise soil and groundwater degradation; and
  - include:
    - baseline data on soil and groundwater quality and characteristics;
    - wastewater and soil quality impact assessment criteria and the effluent treatment and irrigation system performance measures;
    - details of the wastewater, soil, silage and groundwater monitoring program;
    - procedures for the reporting the monitoring results against the criteria and to determine the annual site nutrient and analyte budgets and water balance;
    - contingency measures to address exceedances, pollutant triggers and problems with the wastewater management systems; and
    - a description how the effectiveness of actions would be monitored over time.

## Flooding

26. The Proponent shall prepare a Flood Mitigation and Management Plan for the project to the satisfaction of the Director-General. This plan must:
- be prepared in consultation with Council and be submitted to the Director-General for approval within 12 months of this approval;
  - include:
    - baseline data on local and regional flooding and the predicted flood impacts of the project;
    - details of all reasonable and feasible measures that would be implemented to minimise on-site and off-site flooding;
    - procedures for the monitoring, assessment and compensation of any flood impacts caused by the project;
    - a program for contribution toward the ALERT Flood Warning System operated by Council and the Bureau of Meteorology; and
    - procedures for collaboration and coordination with the paper mill with respect to flood emergency planning.

## TRANSPORT

### Upgrade Existing Accesses to Factory

27. Within 12 months of this approval, the Proponent shall:

- a) upgrade the three accesses to the site off Bolong Road (marked in colour on the map in Appendix 5); and
  - b) clear and profile the road verges at the intersection of the site's access road and Hannigan's Lanes,
- to the satisfaction of Council and the RTA.

*Note: Site accesses referred to in this condition are illustrated by the figure in Appendix 5.*

- 27A. The Proponent shall provide works-as-executed plans to the Director-General and Council for:
- a) the road upgrade works completed in accordance with condition 27, no later than 31 October 2012; and
  - b) the intersection upgrade works required by condition 27B, within 1 month of completion of the upgrade works,
- to the satisfaction of Council and RMS.

### **Upgrade Access to Car Park (MOD 3)**

- 27B. Prior to operation of the car park described in MOD 3, the Proponent shall complete the following upgrades in accordance with Austroads *Guide to Road Design – Part 4a: Unsignalised and Signalised Intersections*:
- a) upgrade the right turn in to the 'Dairy Farmers' site from Bolong Road to a Channelised Right (CHR) intersection; and
  - b) upgrade the left turn in to the 'Dairy Farmers' site from Bolong Road to an Auxiliary Right (AUL),
- to the satisfaction of Council and RMS.

- 27C. The Proponent shall remove the informal access point located to the east of Access Point 1 and reinstate the road verge to the satisfaction of Council, by the end of April 2013.

### **Road Works to the Packing Plant**

28. Prior to the commencement of operations at the proposed packing plant, the Proponent shall:
- a) construct the proposed left turn only access to the packing plant site from Bolong Road with appropriate physical barriers and signage;
  - b) provide alternative access arrangements for the vehicles from the adjoining Shoalhaven Water site, and dedicate any land additional land required for these alternative access arrangements to Council as a road reserve; and
  - c) upgrade the access from the packing plant site to Railway Street; and
  - d) construct the proposed bridge over Abernethy Creek,
- to the satisfaction of Council and the RTA.

29. Prior to the commencement of construction on the proposed packing plant site, the Proponent shall prepare a Construction Traffic Management Plan for the construction works on site to the satisfaction of Council.

### **Upgrade Pedestrian Facilities**

30. Within 12 months of this approval, the Proponent shall:
- a) provide a 1.2 metre pedestrian pathway along the southern boundary of Bolong Road between the Central Access Point (see map in Appendix 5) and the western boundary of Lot 62 DP 1078788;
  - b) provide a pedestrian refuge on Bolong Road between the factory and the:
    - CO<sub>2</sub> gas plant; and
    - the proposed packing plant; and
  - c) upgrade the street lighting along Bolong Road, in accordance with AS/NZS 1158: *Lighting for Roads and Public Spaces* to ensure that the pedestrian pathways, including the bridge over Abernethy Creek, and refuges are suitably lit after dark,
- to the satisfaction of the Council.

*Note: The pedestrian pathway over Abernethy Creek must be designed and constructed in accordance DWE's Guidelines for Controlled Activities – Watercourse Crossings, dated February 2008.*

### **Pedestrian Access from Car Park (MOD 3)**

- 30A. The Proponent shall provide a formal pedestrian access from the car park described in MOD 3 to the existing pedestrian footpath adjacent to Bolong Road, as shown on the plans in Appendix 2C. The pedestrian access shall be:
- a) completed prior to operation of the car park;
  - b) designed in consultation with Council; and
  - c) appropriately lit in accordance with the requirements of condition 30c).

## Internal Roads & Parking

31. The Proponent shall:
- ensure that all internal roads and parking on site complies with AS2890.1:2004 and AS2890.2:2002, or their latest versions;
  - construct at least 60 new parking spaces on the factory site, in accordance with the plans in Appendix 2C, by the end of April 2013.
  - construct at least 30 new parking spaces at the proposed packing plant prior to the commencement of operations at the plant, to the satisfaction of the Director-General.
32. The Proponent shall ensure that vehicles associated with the project do not park or queue on the public road network at any time.

## Night-time Heavy Vehicle Restrictions

33. The Proponent shall ensure that heavy vehicles travelling to and from the site between 8pm and 7am only use Bolong Road and Princes Highway.

## Railway Crossings

34. Within 12 months of this approval, the Proponent shall undertake an assessment of the safety of the rail level crossing of Bolong Road, in consultation with the RTA, Council, NSW Rail Level Crossing Unit and the Independent Safety and Reliability Regulator, and to the satisfaction of the Director-General.
35. The Proponent shall implement all reasonable and feasible recommendations in the rail level crossing safety assessment to the satisfaction of the Director-General.

## HAZARDS

### Pre-construction Studies

36. The Proponent shall prepare and implement a Construction Safety Study in accordance with the Department's *Hazardous Industry Planning Advisory Paper No.7 - Construction Safety Guidelines*, for the Project to the satisfaction of the Director-General.

*Note: The commissioning portion of the Construction Safety Study may be submitted to the Department prior to the commencement of commissioning.*

37. The Proponent shall not commence construction on site before the Construction Safety Study has been approved by the Director General.

*Note: Preliminary construction works outside the scope of the hazard studies may be undertaken prior to the approval of the Construction Safety Study referred to above.*

### Pre-construction Studies for MP 06\_0228 MOD 2

- 37A. The Proponent shall prepare and implement a Construction Safety Study in accordance with the Department's *Hazardous Industry Planning Advisory Paper No.7 - Construction Safety Guidelines*, for MP 06\_0228 MOD 2 to the satisfaction of the Director-General. The Proponent shall not commence any construction on site associated with MP 06\_0228 MOD 2 before the Construction Safety Study has been approved by the Director General.

*Note: Preliminary construction works outside the scope of the hazard studies may be undertaken prior to the approval of the Construction Safety Study referred to above.*

### Pre-Commissioning Hazard Studies

38. The Proponent shall prepare and implement the following to the satisfaction of the Director-General:
- an updated Fire Safety Study for the project as modified by MP 06\_0228 MOD 2 prepared in accordance with 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 Fire Safety Study shall also be prepared and implemented to the satisfaction of the NSW Fire Brigade;
  - a Hazard and Operability Study prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No.8 - HAZOP Guidelines*, chaired by an independent qualified person approved by the Director-General, includes a program for the implementation of all recommendations made during the study; and if the Proponent

- intends to defer the implementation certain recommendations, then provide justification for the proposed deferral; and
- c) a Final Hazards Analysis (FHA) prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis*.
- d) a Transport of Hazardous Materials Plan, which details arrangements for the transport of hazardous materials including routes to be used by vehicles carrying hazardous materials, selected in accordance with the Department's draft '*Route Selection*' *Guidelines*;
- e) an updated Emergency Plan for the project as modified by MP 06\_0228 MOD 2 prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1- Industry Emergency Planning Guidelines*; and
- f) a Safety Management System prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No.9 - Safety Management*, and specifies all safety-related procedures, responsibilities and policies, along with mechanisms for ensuring adherence to these procedures.

39. The Proponent shall not commence the commissioning of the project before these plans and systems have been approved by the Director-General.

#### **Pre-Commissioning Hazard Studies for MP 06\_0228 MOD 2**

- 39A. The Proponent shall prepare and implement the following to the satisfaction of the Director-General:
- a) a Hazard and Operability Study for MP 06\_0228 MOD 2 prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No.8 - HAZOP Guidelines*, chaired by an independent qualified person approved by the Director-General, includes a program for the implementation of all recommendations made during the study; and if the Proponent intends to defer the implementation certain recommendations, then provide justification for the proposed deferral; and
  - b) a Final Hazards Analysis (FHA) for MP 06\_0228 MOD 2 prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis*.

#### **Hazard Audit**

39B. Twelve months after the commencement of operations of MP 06\_0228 MOD 2 and every three years thereafter, or at such intervals as the Director General may agree, the Proponent shall carry out a comprehensive Hazard Audit of the project as modified by MP 06\_0228 MOD 2 and the site and within one month of each audit submit a report to the Director General. The initial Hazard Audit should report on the effectiveness of the upgraded deluge system and the effectiveness of the location of the hydrocarbon detectors.

The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the project, prior to commencement of each audit and shall be consistent with the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'*.

#### **WASTE**

40. Except as expressly permitted by an EPL, the Proponent shall:
- a) not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal; and
  - b) ensure that all waste generated on the site is classified and managed in accordance with the DECC's Environmental Guidelines: *Waste Classification Guideline*.

#### **Waste Management Plan**

41. The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must:
- a) be submitted to the Director-General for approval within 3 months of this approval;
  - b) identify the various waste streams of the project;
  - c) describe what measures would be implemented to reuse, recycle or minimise the waste generated by the project; and
  - d) include a program to monitor the effectiveness of these measures.

#### **LANDSCAPE**

##### **Lighting**

42. The Proponent shall ensure that the lighting associated with the project:
- 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.

### **Landscape and Vegetation Management**

- 43. The Proponent shall prepare and implement a Vegetation Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - a) be prepared in consultation with DWE and Council and be submitted to the Director-General for approval within 6 months of this approval;
  - b) be prepared in accordance with *DWE's Guidelines for Controlled Activities – Vegetation Management Plans*; and
  - c) include:
    - a Landscape Plan for the project, which identifies screen plantings to minimise visual impacts;
    - detailed plans and procedures to:
      - restore and maintain the waterways and riparian zones of Shoalhaven River, Bomaderry Creek, Abernethy's Creek and Broughton Creek on the site;
      - manage weeds in the vicinity of the riparian zones;
      - integrate works into the proposed landscaping for the rest of the site;
      - manage impacts on fauna; and
      - monitor the performance of the proposed restoration works.
- 44. The Proponent shall, to the satisfaction of the Director-General, ensure that:
  - a) all landscaping works proposed in the Landscape Plan/s in Appendix 2B of this approval are completed within 6 months of the date of approval of MP 06\_0228 MOD 2 in consultation with Council;
  - b) the Landscape Plan/s in Appendix 2B of this approval are incorporated into the approved Landscaping and Vegetation Management Plan for the project; and
  - c) suitable measures are in place and detailed in the Landscaping and Vegetation Management Plan to ensure vegetation at the site is maintained for the life of the project.
- 45. The Proponent shall:
  - a) commence landscaping as proposed in the Landscape Plans in Appendix 2C within 6 weeks of commencing construction of the car park described in MOD 3;
  - b) update the Vegetation Management Plan for the project, in consultation with Council, to include the Landscape Plan in Appendix 2C, including details of the measures to be implemented to ensure that landscaping is maintained for the life of the project; and
  - c) submit the updated Vegetation Management Plan to the Director-General for approval, by the end of April 2013.

## **SCHEDULE 4**

### **ENVIRONMENTAL MANAGEMENT, REPORTING & AUDITING**

#### **ENVIRONMENTAL MANAGEMENT**

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:
  - a) be submitted to the Director-General for approval within 3 months of this approval;
  - b) identify the statutory requirements that apply to the project;
  - c) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
    - receive, handle, respond to, and record complaints;
    - resolve any disputes that may arise during the course of the project;
    - respond to any non-compliance;
    - manage cumulative impacts; and
    - respond to emergencies; and
  - d) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the project.

#### **ENVIRONMENTAL REPORTING**

##### **Incident Reporting**

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

##### **Annual Reporting**

3. The Proponent shall submit an Annual Report to the Director-General and other relevant agencies. This report must:
  - a) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
  - b) include a summary of monthly production levels over the year;
  - c) include a summary of the monitoring results obtained during the past year, and a comparison of these results against the relevant:
    - impact assessment criteria/limits;
    - monitoring results from previous years; and
    - predictions/assumptions in the EA;
  - d) identify any trends in the monitoring results over the life of the project;
  - e) identify any non-compliance during the previous year; and
  - f) describe what actions were, or are being, taken to ensure compliance.

#### **INDEPENDENT ENVIRONMENTAL AUDIT**

4. Within 12 months of the commencement of operations, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
  - a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Director-General;
  - b) be undertaken in consultation with OEH, DWE and Council;
  - c) assess the environmental performance of the project and undertake any works necessary to determine whether it is complying with the relevant standards, performance measures, and statutory requirements;
  - d) review the adequacy of any strategy/plan/program required under this approval; and, if necessary,
  - e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

*Note: Wherever possible, the timing of the Independent Environmental Audit, Independent Odour Audit and Hazard Audit should be co-ordinated to avoid duplication, and the experts conducting the Independent Odour Audit and Hazard Audit should be included in the broader audit team. In the initial years, the Independent Environmental Audit team should include experts in Odour, Noise, and Wastewater Irrigation.*



4. Within 6 weeks of completing this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General with a response to any recommendations contained in the audit report.
5. Within 3 months of submitting an audit report to the Director-General, the Proponent shall review and if necessary revise the strategy/plans/programs and undertake additional mitigation measures as required under this approval to the satisfaction of the Director-General.

#### **Revisions of Management Plans/Monitoring Programs**

- 5A. Within 3 months of:
- a) a modification to this approval; and/or
  - b) any audit required under this approval,

the Proponent must review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General.

*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 project.*

#### **ACCESS TO INFORMATION**

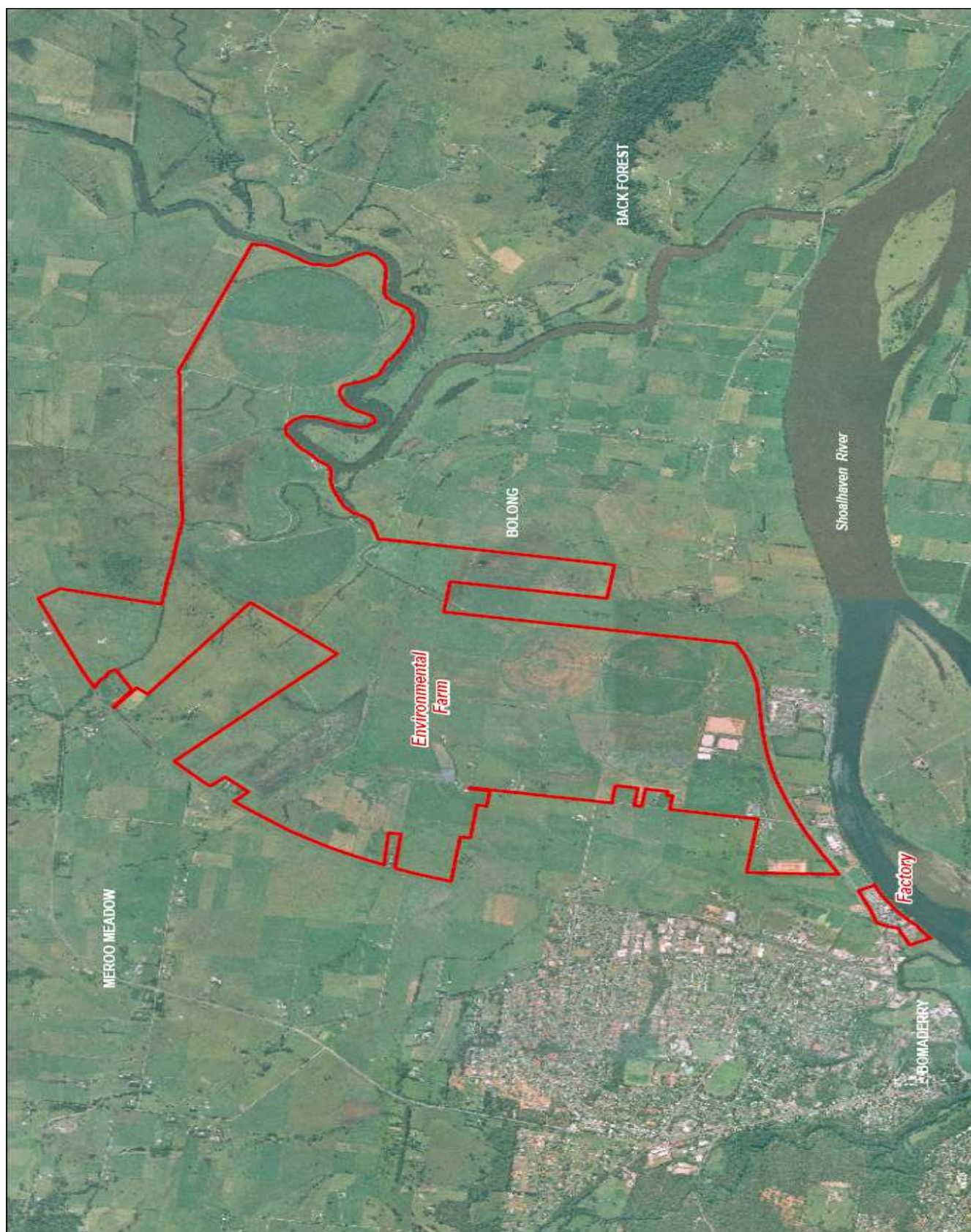
6. Within 3 months of the approval of any strategy/plan/program required under this approval (or any subsequent revision of these strategies/plans/programs), or the completion of the audits or annual reports required under this approval, the Proponent shall provide a copy of the relevant documents/data to:
  - a) the relevant agencies, and
  - b) any interested party upon request.



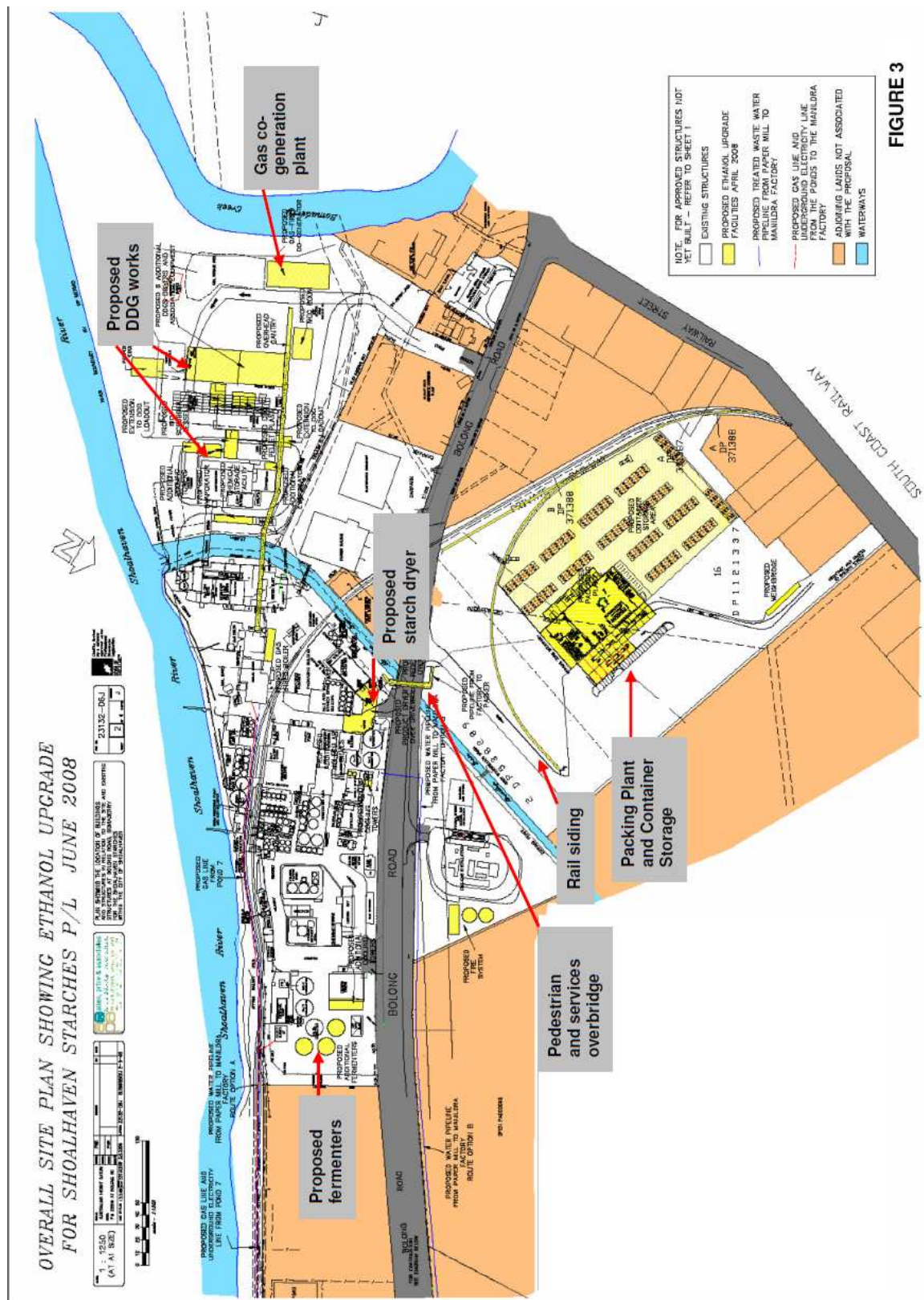
**APPENDIX 1  
SCHEDULE OF LAND**

<b>Lot</b>	<b>DP/FP</b>
<b><i>Factory</i></b>	
1	838753
A	334511
B	334511
B	376494
62	1078788
201	1062668
1	385145
241	1130535
143	1069758
<b><i>Packing Plant</i></b>	
16	1121337
2	538289
<b><i>Wastewater Treatment Plant &amp; Environmental Farm</i></b>	
4	610696
	131008
1	842231
2	842231
3	235705
1	235705
2	235705
Part 2	854837
4	1109510
22	811233
164	4469
2	854764
210	6131
211	6131
PT 212	6131
213	6131
214	6131
248	6131
2	955009
42	751268
63	751268
PT 2	854837
3	1109510
2	1109510
1	1109510
2	833181
<b><i>Overhead bridge – Bolong Road Reserve</i></b>	
2	538289
<b><i>Fire Services</i></b>	
241	1130535

## APPENDIX 2 SITE PLANS







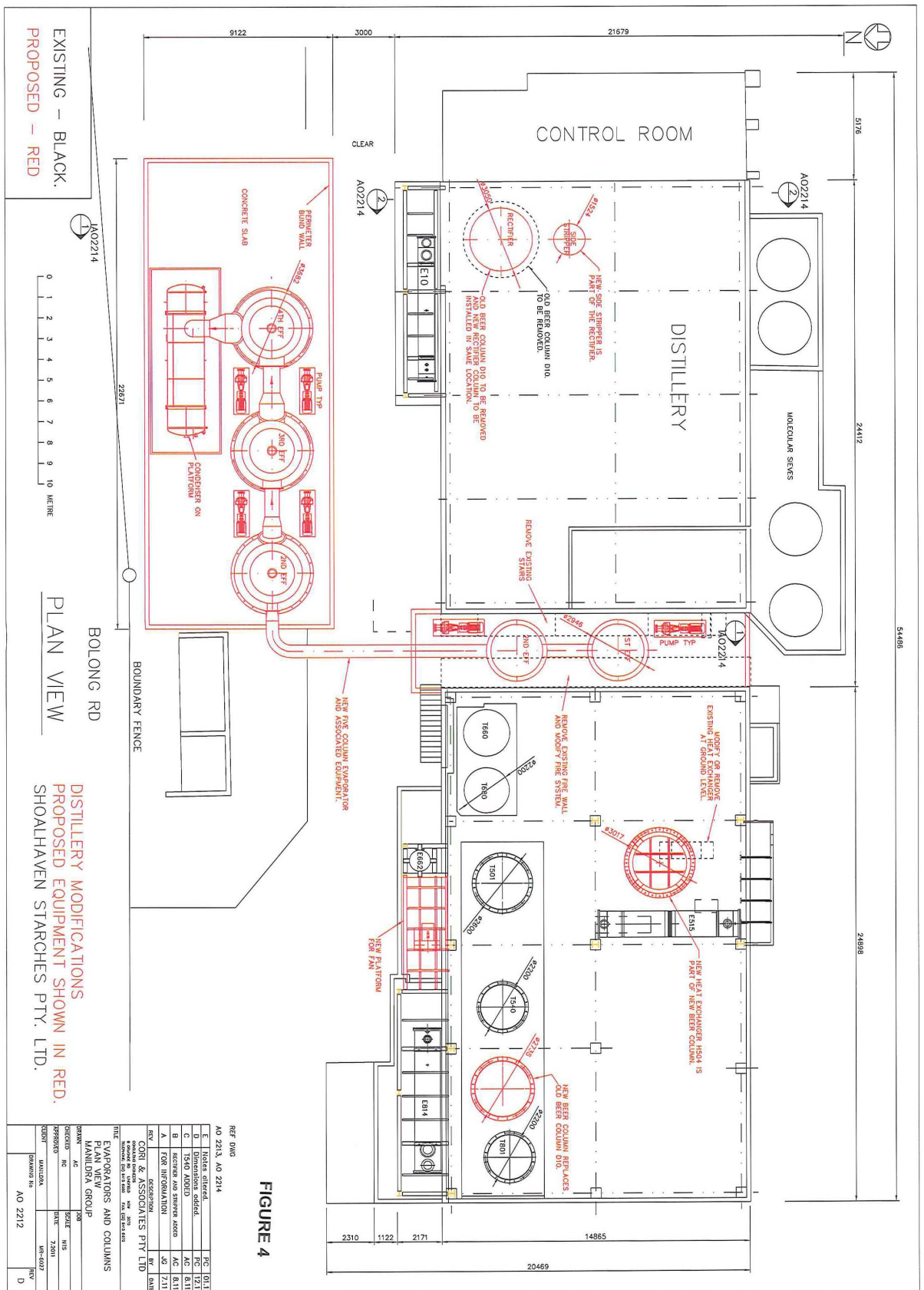


20

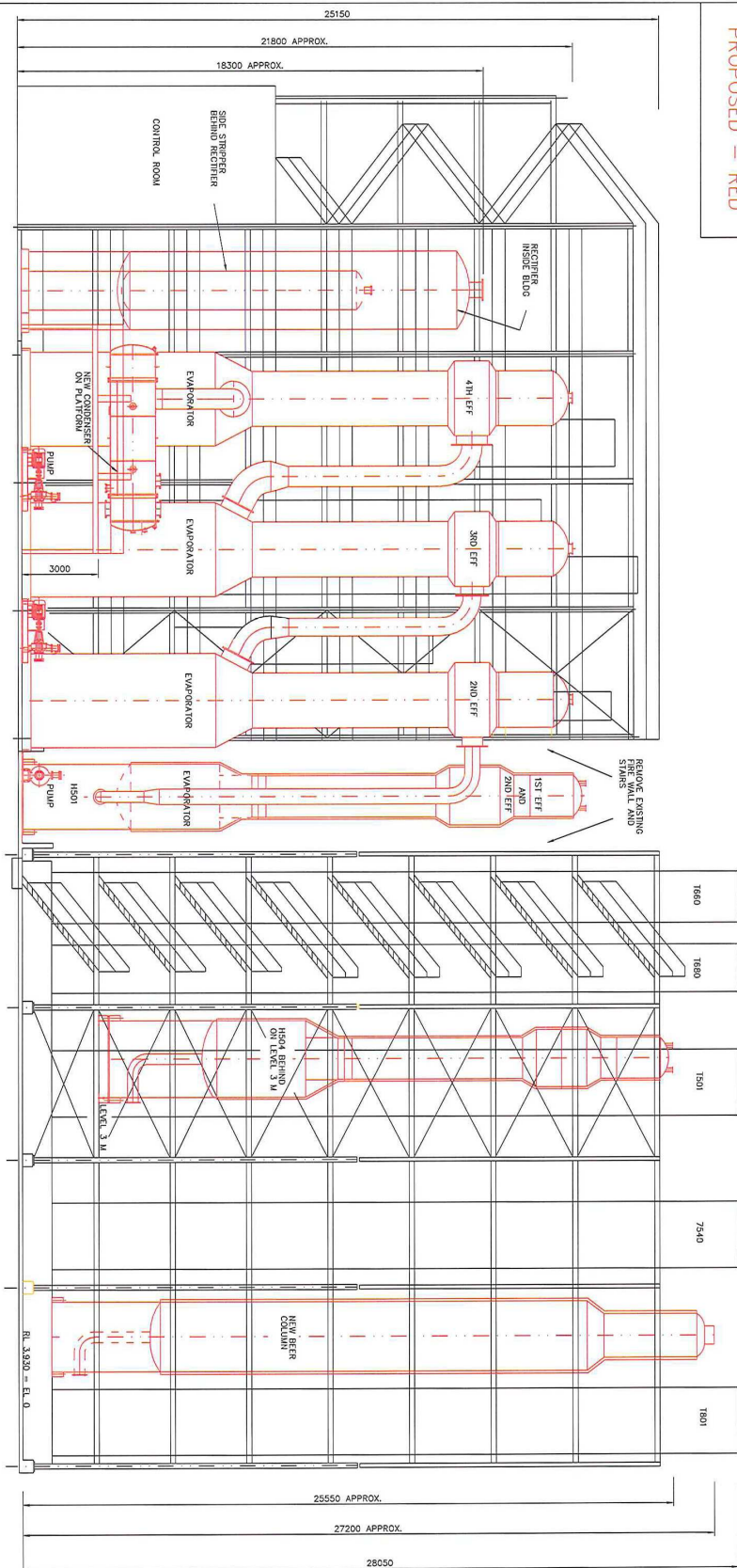


OVERALL SITE PLAN SHOWING ETHANOL MODIFICATIONS  
FOR SHOALHAVEN STARCHES P/L NOV 2011





EXISTING – BLACK.  
PROPOSED – RED



ELEVATION LOOKING SOUTH

FIGURE 5

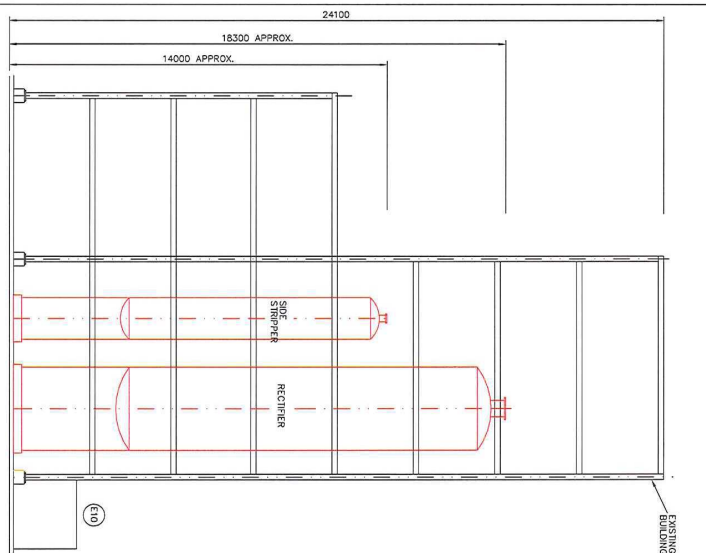
REF DWG			
AO 2212, AO 2214			
D	Dimensions added.	FC	12.11
C	TS40 ADDED	AC	8.11
B	RECIPIER AND STAIRS ADDED	AC	8.11
A	FOR INFORMATION	AC	7.11
REV	DESCRIPTION	BY	DATE
1	CON & ASSOCIATES PTY LTD	BY	DATE
HILL			
EVAPORATORS AND COLUMNS			
ELEVATION LOOKING SOUTH			
MANIDRA GROUP			
DESIGN	AC	SCALE	NIS
DRAWN	AC	DATE	7.2011
CHECKED	MANIDRA	REV	D
DRAWING NO. AO 2213			

DISTILLERY MODIFICATIONS  
PROPOSED EQUIPMENT SHOWN IN RED.  
SHOALHAVEN STARCHES PTY. LTD.

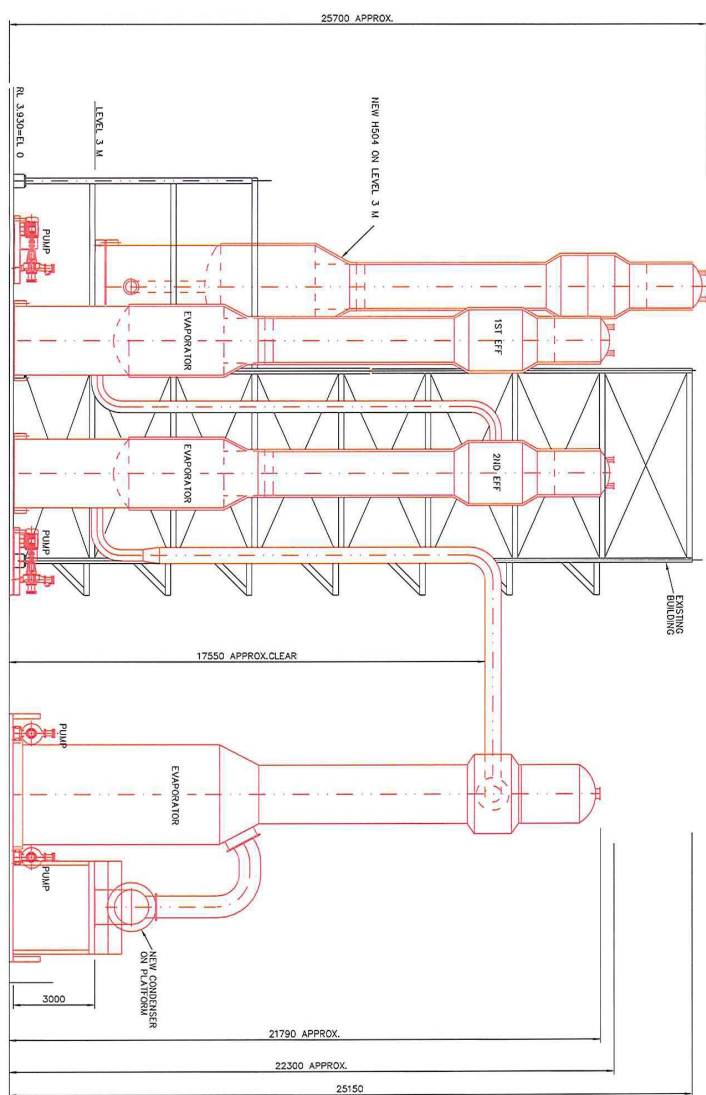




EXISTING – BLACK,  
PROPOSED – RED



SECTION 2  
AO 2212



SECTION 1  
AO 2212

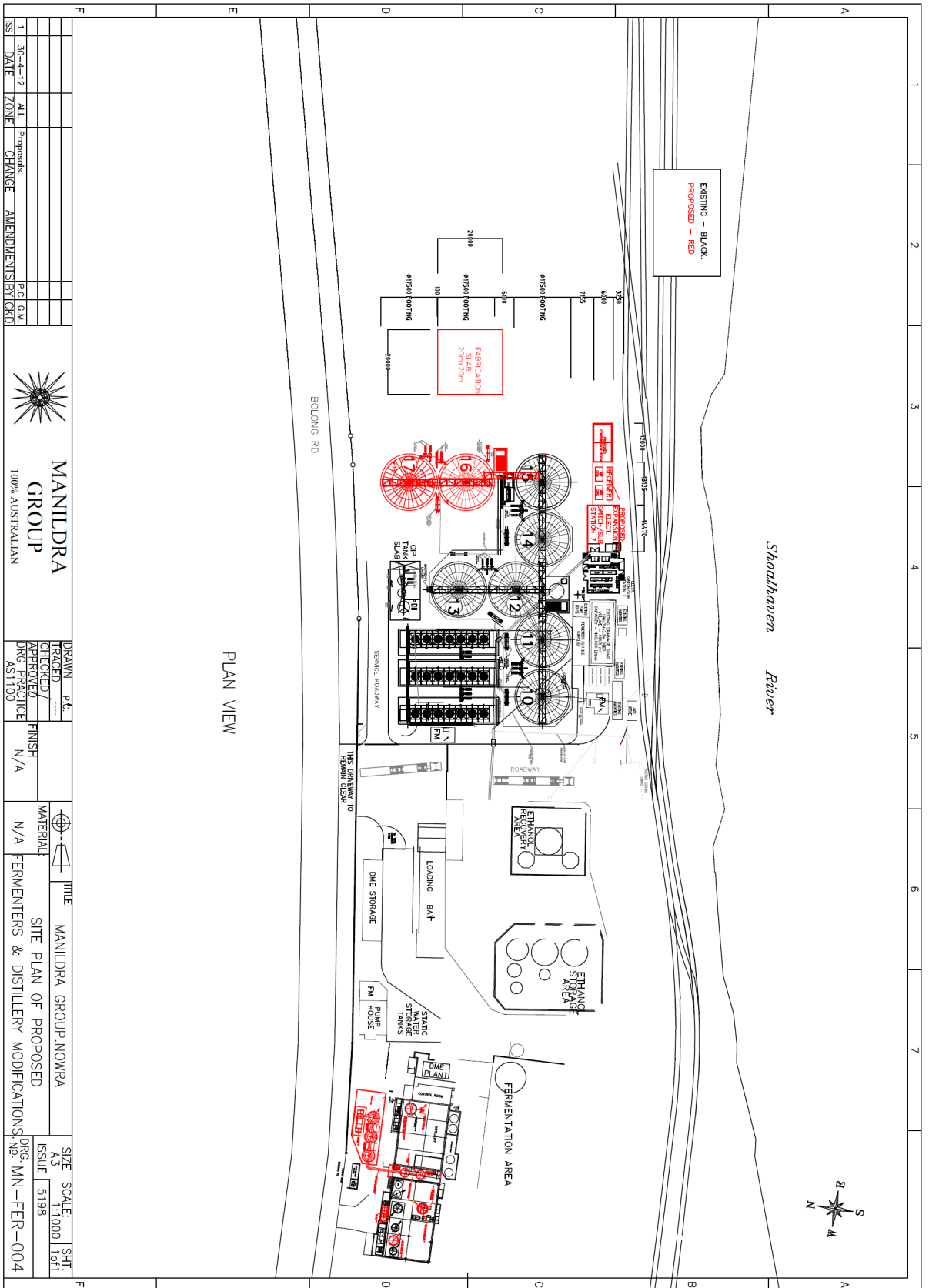
FIGURE 6

REF DWG

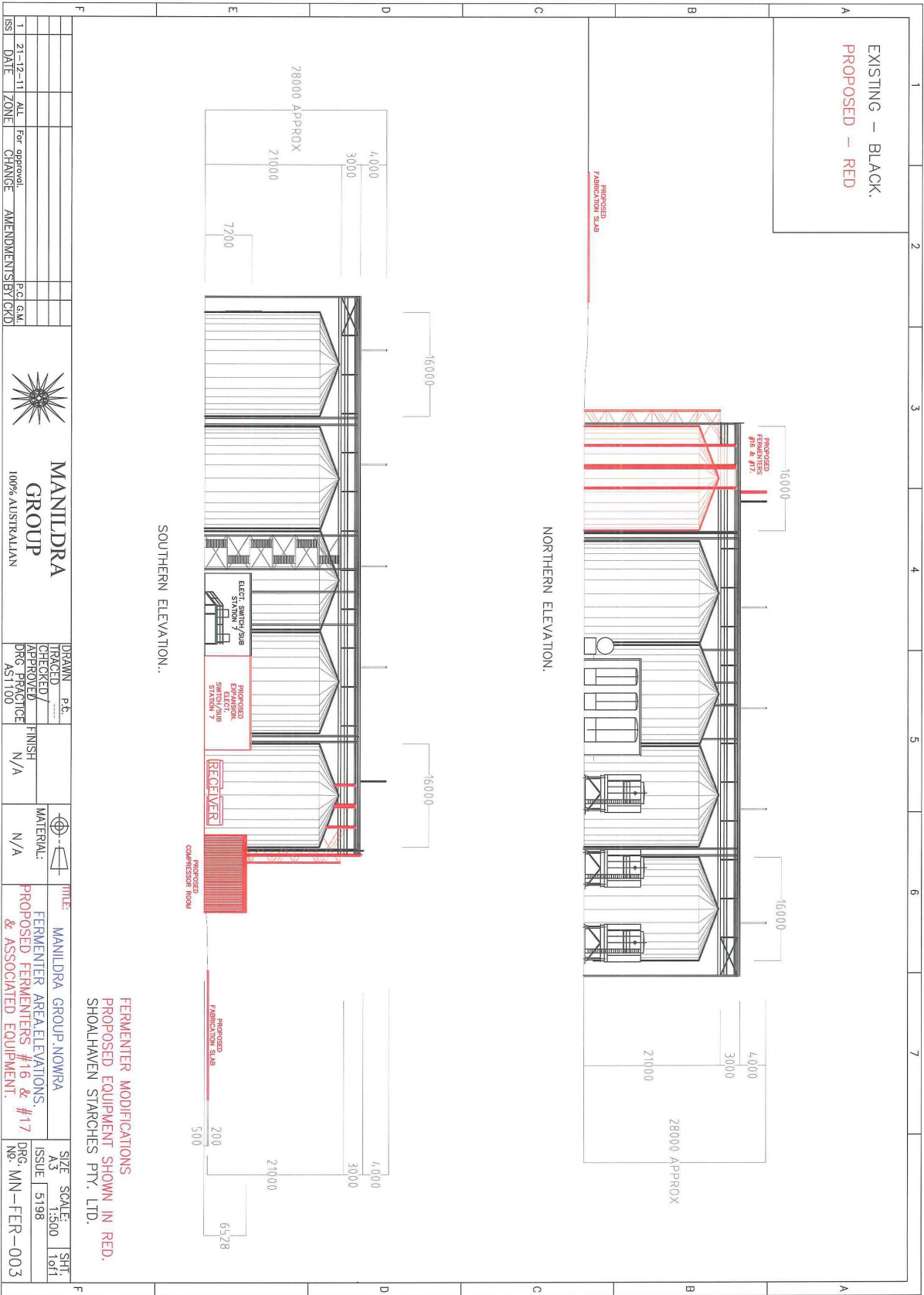
AO 2212, AO 2213		FC	12.11
C Dimensions added		AC	8.11
B Rectifier and stripper added		AC	7.11
A FOR REFORMATION		AC	7.11
REV	DESCRIPTION	BY	DATE
1	COIN & ASSOCIATES PTY LTD		
* Drawn by: <i>[Signature]</i> and <i>[Signature]</i>			
* Checked by: <i>[Signature]</i>			
TITLE			
EVAPORATORS AND COLUMNS			
SECTION 1			
MANIDRA GROUP			
DRAWN	AO	FC	
CHECKED	FC	NTS	
APPROVED	DATE	7.2011	
CLIENT	MANIDRA		
DRAWING NO.	AO 2214	REV	C

DISTILLERY MODIFICATIONS  
PROPOSED EQUIPMENT SHOWN IN RED.  
SHOALHAVEN STARCHES PTY. LTD.

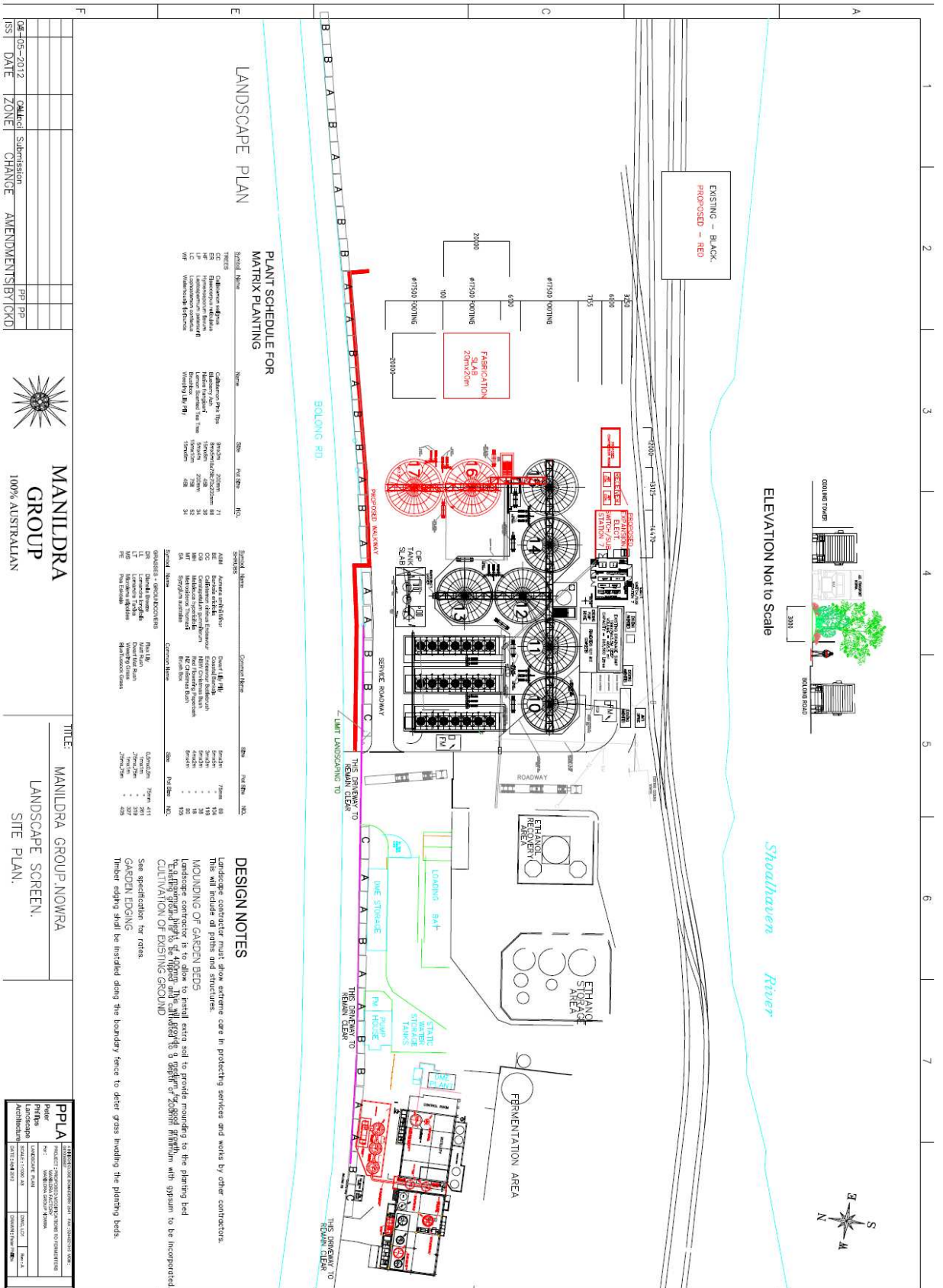








## LANDSCAPE PLANS (MP 06\_0228 MOD 2)







Protein Name	GenBank Accession	Protein Size (aa)	Protein Weight (kDa)	Protein pI
VEGFA	U01420	121	16.5	3.6
VEGFB	U01421	121	16.5	3.6
VEGFC	U01422	121	16.5	3.6
VEGD	U01423	121	16.5	3.6
VEGE	U01424	121	16.5	3.6
VEGF	U01425	121	16.5	3.6
VEGFR1	U01426	121	16.5	3.6
VEGFR2	U01427	121	16.5	3.6
VEGFR3	U01428	121	16.5	3.6
VEGFR4	U01429	121	16.5	3.6
VEGFR5	U01430	121	16.5	3.6
VEGFR6	U01431	121	16.5	3.6
VEGFR7	U01432	121	16.5	3.6
VEGFR8	U01433	121	16.5	3.6
VEGFR9	U01434	121	16.5	3.6
VEGFR10	U01435	121	16.5	3.6
VEGFR11	U01436	121	16.5	3.6
VEGFR12	U01437	121	16.5	3.6
VEGFR13	U01438	121	16.5	3.6
VEGFR14	U01439	121	16.5	3.6
VEGFR15	U01440	121	16.5	3.6
VEGFR16	U01441	121	16.5	3.6
VEGFR17	U01442	121	16.5	3.6
VEGFR18	U01443	121	16.5	3.6
VEGFR19	U01444	121	16.5	3.6
VEGFR20	U01445	121	16.5	3.6
VEGFR21	U01446	121	16.5	3.6
VEGFR22	U01447	121	16.5	3.6
VEGFR23	U01448	121	16.5	3.6
VEGFR24	U01449	121	16.5	3.6
VEGFR25	U01450	121	16.5	3.6
VEGFR26	U01451	121	16.5	3.6
VEGFR27	U01452	121	16.5	3.6
VEGFR28	U01453	121	16.5	3.6
VEGFR29	U01454	121	16.5	3.6
VEGFR30	U01455	121	16.5	3.6
VEGFR31	U01456	121	16.5	3.6
VEGFR32	U01457	121	16.5	3.6
VEGFR33	U01458	121	16.5	3.6
VEGFR34	U01459	121	16.5	3.6
VEGFR35	U01460	121	16.5	3.6
VEGFR36	U01461	121	16.5	3.6
VEGFR37	U01462	121	16.5	3.6
VEGFR38	U01463	121	16.5	3.6
VEGFR39	U01464	121	16.5	3.6
VEGFR40	U01465	121	16.5	3.6
VEGFR41	U01466	121	16.5	3.6
VEGFR42	U01467	121	16.5	3.6
VEGFR43	U01468	121	16.5	3.6
VEGFR44	U01469	121	16.5	3.6
VEGFR45	U01470	121	16.5	3.6
VEGFR46	U01471	121	16.5	3.6
VEGFR47	U01472	121	16.5	3.6
VEGFR48	U01473	121	16.5	3.6
VEGFR49	U01474	121	16.5	3.6
VEGFR50	U01475	121	16.5	3.6
VEGFR51	U01476	121	16.5	3.6
VEGFR52	U01477	121	16.5	3.6
VEGFR53	U01478	121	16.5	3.6
VEGFR54	U01479	121	16.5	3.6
VEGFR55	U01480	121	16.5	3.6
VEGFR56	U01481	121	16.5	3.6
VEGFR57	U01482	121	16.5	3.6
VEGFR58	U01483	121	16.5	3.6
VEGFR59	U01484	121	16.5	3.6
VEGFR60	U01485	121	16.5	3.6
VEGFR61	U01486	121	16.5	3.6
VEGFR62	U01487	121	16.5	3.6
VEGFR63	U01488	121	16.5	3.6
VEGFR64	U01489	121	16.5	3.6
VEGFR65	U01490	121	16.5	3.6
VEGFR66	U01491	121	16.5	3.6
VEGFR67	U01492	121	16.5	3.6
VEGFR68	U01493	121	16.5	3.6
VEGFR69	U01494	121	16.5	3.6
VEGFR70	U01495	121	16.5	3.6
VEGFR71	U01496	121	16.5	3.6
VEGFR72	U01497	121	16.5	3.6</

Landscape contractors must show extreme care in protecting services and wires by other contractors. This includes all points and structures.

**MOUNDING OF GARDEN BEDS**

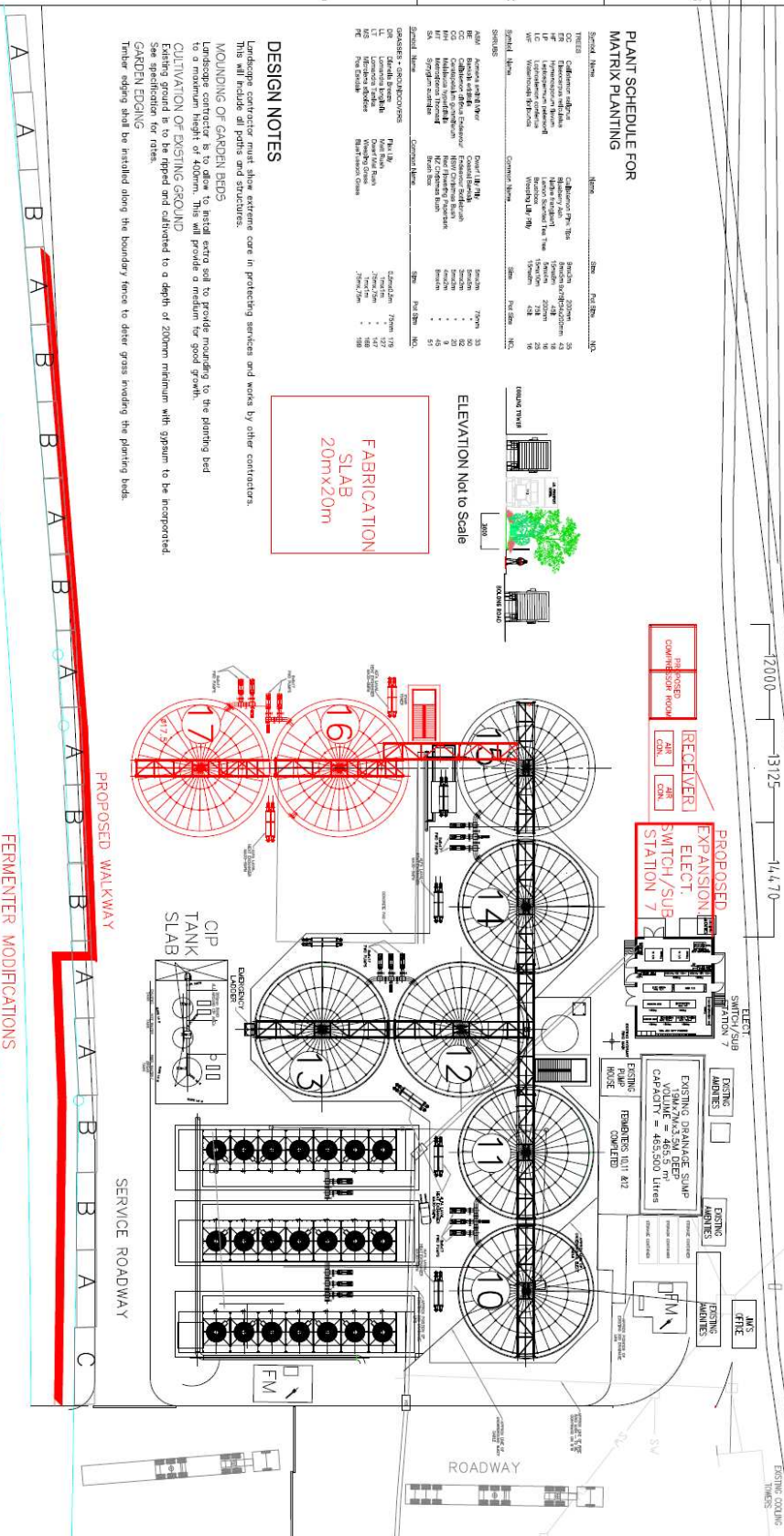
Landscape contractors be to allow to install extra soil to provide mounding to the planting bed to a maximum height of 400mm. This will provide a medium for good growth.

**CULTIVATION OF EXISTING GROUND**

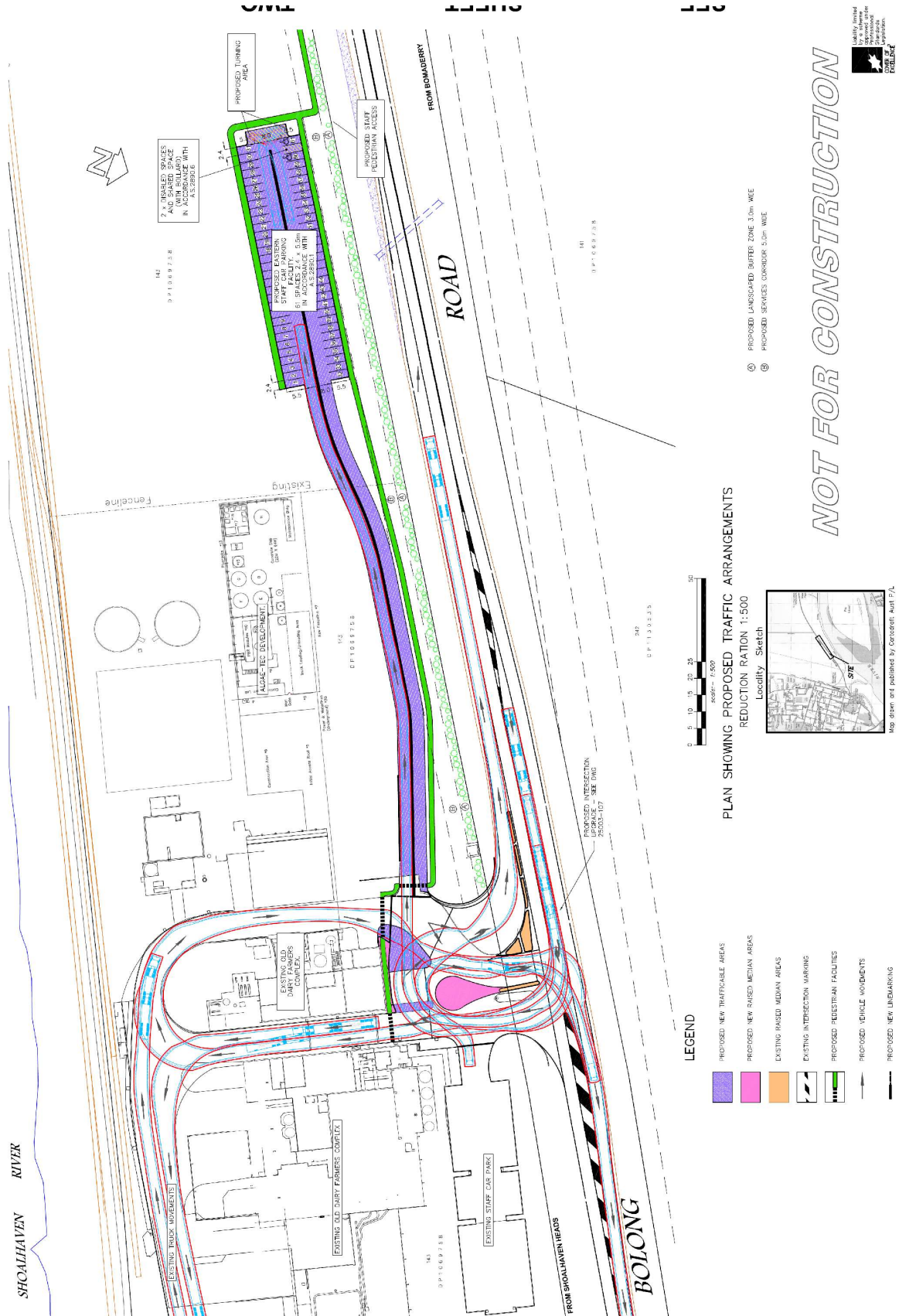
Existing ground is to be ripped and cultivated to a depth of 200mm minimum with gypsum to be incorporated See specification for rates.

**GARDEN EDGING**

Edging shall be installed along the boundary fence to deter grass invading the planting beds.

[illegible]

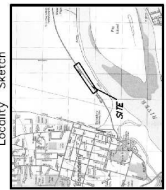
# APPENDIX 2C LAYOUT AND LANDSCAPE PLANS (MP 06\_0228 MOD 3)



- LEGEND**
- PROPOSED NEW TRAFFICABLE AREAS
  - PROPOSED NEW RAISED MEDIAN AREAS
  - EXISTING RAISED MEDIAN AREAS
  - EXISTING INTERSECTION MARKING
  - PROPOSED PEDESTRIAN FACILITIES
  - PROPOSED VEHICLE MARKINGS
  - PROPOSED NEW LANDMARKING

PLAN SHOWING PROPOSED TRAFFIC ARRANGEMENTS  
REDUCTION RATION 1:500

Locality Sketch



**NOT FOR CONSTRUCTION**



REF. NO.	25003-106
REVISION	02
SHEET	1
OF 2 SHEETS	

PLAN SHOWING PROPOSED TRAFFIC  
ARRANGEMENTS FOR "ACF" DRIVEWAY &  
CARPARK UPGRADE AT BOLONG ROAD BOLONG  
FOR MANILDRA GROUP LIMITED

**allen, price & associates**  
land and development consultants  
75 plunkett street, nowra, nsw. 2541  
phone: (08) 443 1344 fax: (08) 443 1801  
www.allenprice.com.au

DATE	BY	DATE	REVISION
1:500 (AT A1 SIZE)	APRIL 2012	APRIL 2012	1
AUSTRALIAN HEIGHT DATUM	APRIL 2012	APRIL 2012	1
PM 32610	APRIL 2012	APRIL 2012	1
ORIGIN	APRIL 2012	APRIL 2012	1
DATE OF PLAN	APRIL 2012	APRIL 2012	1





## DESIGN NOTES

Landscape contractor must show extreme care in protecting services and works by other contractors. This will include all paths and structures.

## MOUNDING OF GARDEN BEDS

Landscaping contractor is to allow to install extra soil to provide mounding to the planting bed to a maximum height of 400mm. This will provide a medium for good growth.

Existing ground is to be ripped and cultivated.

See specification for rates.

GARDEN EDGING

**GARDEN EDGING**  
Timber edging shall be installed along the boundary fence to deter grass invading the planting beds.

[illegible]





## APPENDIX 3 ODOUR CONTROLS

### Mandatory odour controls<sup>1</sup>

- Install and commission a bioscrubber or biofilter (full details of its design, location, size, capacity and output must be included in the Odour Management Plan).
- Duct high priority dry distillers grain plant (DDG) odour sources to the bioscrubber/biofilter. The odorous sources include the DDG liquids line, the DDG solid line, the DDG (liquids) plant concentrate tank, finisher feed tank and feed holding tank (syrup). These have been identified as sources with very unpleasant odour. It is proposed to increase the volume of foul process air from sources within the DDG dryer building to the boiler.
- The bioscrubber/biofilter must have sufficient capacity to eliminate the odour collected at the plant's ultimate production limit and/or be capable of being readily upgraded to meet the requirements of any other control works that require implementation in the future, for example any of the additional odour control measures listed below.
- Install and commission a wastewater treatment plant at the Environmental Farm capable of processing the liquid waste streams from the factory at full approval capacity (full details of its design, location, capacity and output must be included in the Odour Management Plan).
- Install wet-legs on key odour sources that are not ducted to the bioscrubber at this stage. These sources include:
  - Farm tank (located near ethanol plant)
  - Ethanol plant Jet cooker retention tank "F7"
  - Glucose plant enzyme tank
  - DDG (solids) plant decanter feed tank
- Regularly clean all starch and gluten dryer ductwork to remove build up of solids that can become odorous
- Implement and maintain best practice standards for factory housekeeping in general and in particular the DDG plant grounds.
- *(Deleted)*
- Decommission designated odour sources as follows:
  - Ethanol plant cooling towers
  - Kestner dryer exhaust at Starch plant
- *Install a ducting system in the DDG plant to collect odorous discharges from the sources listed in the GHD Report (October 2007) and direct them to at least 2 of the boilers. Existing connections from the non-condensables discharge fans and cyclone transfer fans must remain connected to the boilers.*
- *Re-route the Palmer cooler discharge stack to at least 2 of the boilers.*
- *Install a ducting system to collect all odorous discharges nominated in the GHD Report (October 2007) for the evaporator plant area and direct them to a new bio-filter via a venturi scrubber and cyclone separator.*
- *Modify the DDG load-out area in the following manner:*
  - *Extend the existing load-out awning to the south and fit each end of the shed with a motorised roller door configured such that at all times either the north or south door will be closed when a truck is loading DDG to prevent a wind tunnel effect and powder drifting out of the load-out area.*
  - *Install the truck load-out chutes with Moduflex Bellow Feeders fitted with a dust extraction system to collect dust at the chute discharge and duct it to the bio-filter.*

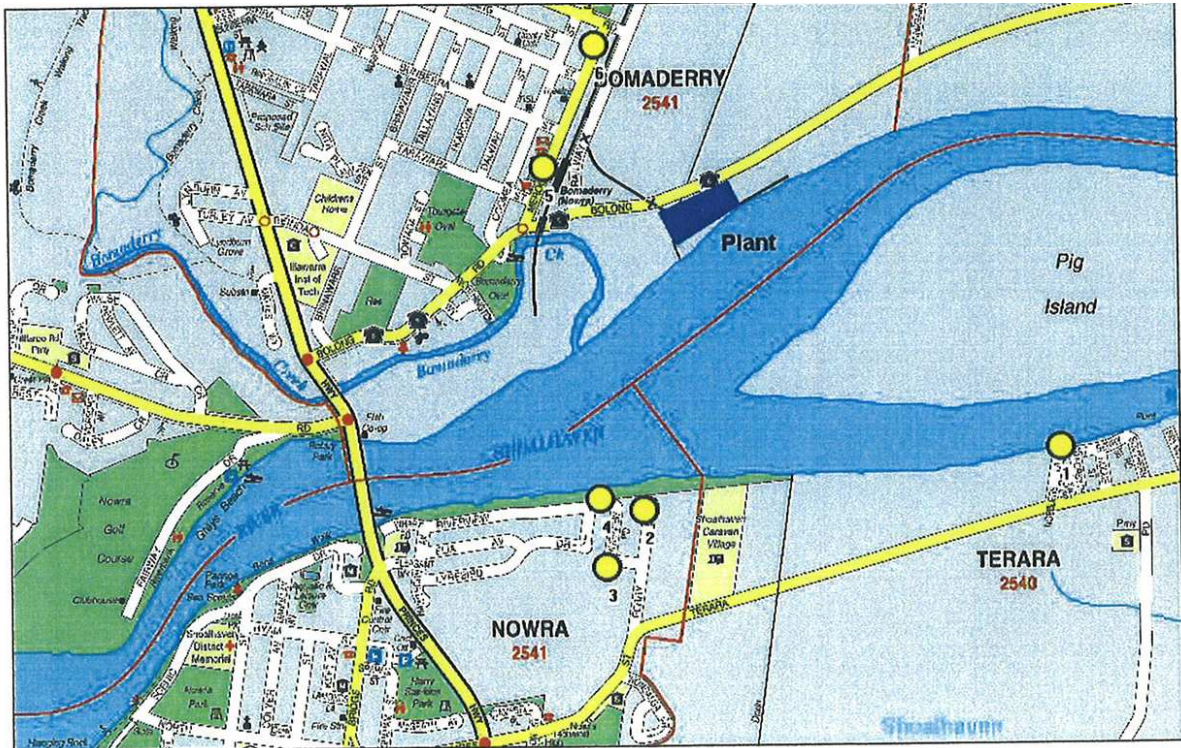
### Additional odour controls<sup>2</sup>

- Duct medium priority odour sources to bioscrubber. These sources include:
  - Farm tank (located near ethanol plant)
  - Ethanol plant Jet cooker retention tank "F7"
  - Glucose plant enzyme tank
  - Ethanol plant decanter feed tank
  - Ethanol plant yeast propagators (tanks 1 to 5)
  - DDG (liquid) plant vent condenser drain
  - DDG (solids) plant decanters 1 and 4 and decanter feed
- Duct low priority odour sources to bioscrubber. These sources include:
  - Residual emission from the DDG dryer building
  - DDG (solids) plant *load out shed*
  - Glucose plant drum vacuum receiver

- Distillery plant molecular sieve vacuum drum
- Ethanol plant jet cookers 1, 2 and 4
- Glucose plant cooker A&B flash tanks
- DDG (liquids) plant light phase recovery tank
- Glucose plant ion exchange effluent tank
- Ethanol plant starch factory rejects collection tank
- Duct individual starch and gluten dryer discharge points to common tall stack.
- Pelletise DDG product.

Notes: 1 Equivalent to the Stage 1 odour controls in the Odour Audit prepared by GHD, 2007;  
2 Equivalent to the Stage 2 and 3 odour controls in the Odour Audit prepared by GHD, 2007

**APPENDIX 4  
REFERENCE MAP FOR NOISE LIMITS**



Key

● Receiver Location



## APPENDIX 5 TRANSPORT MAPS

