

ASSESSMENT REPORT

Section 75W Modification Riverina Oils and Bio Energy Integrated Oilseed Processing and Biodiesel Facility, Wagga Wagga - (07_0146 MOD 1)

1. PROJECT BACKGROUND

Riverina Oils and Bio Energy Pty Ltd (ROBE, the Proponent) occupy a site approximately 10 kilometres (km) north of the township of Wagga Wagga, in the Wagga Wagga local government area (LGA). The site is located at 299 Trahairs Road, at the intersection of Trahairs and Byrnes Road (refer to **Figure 1**).

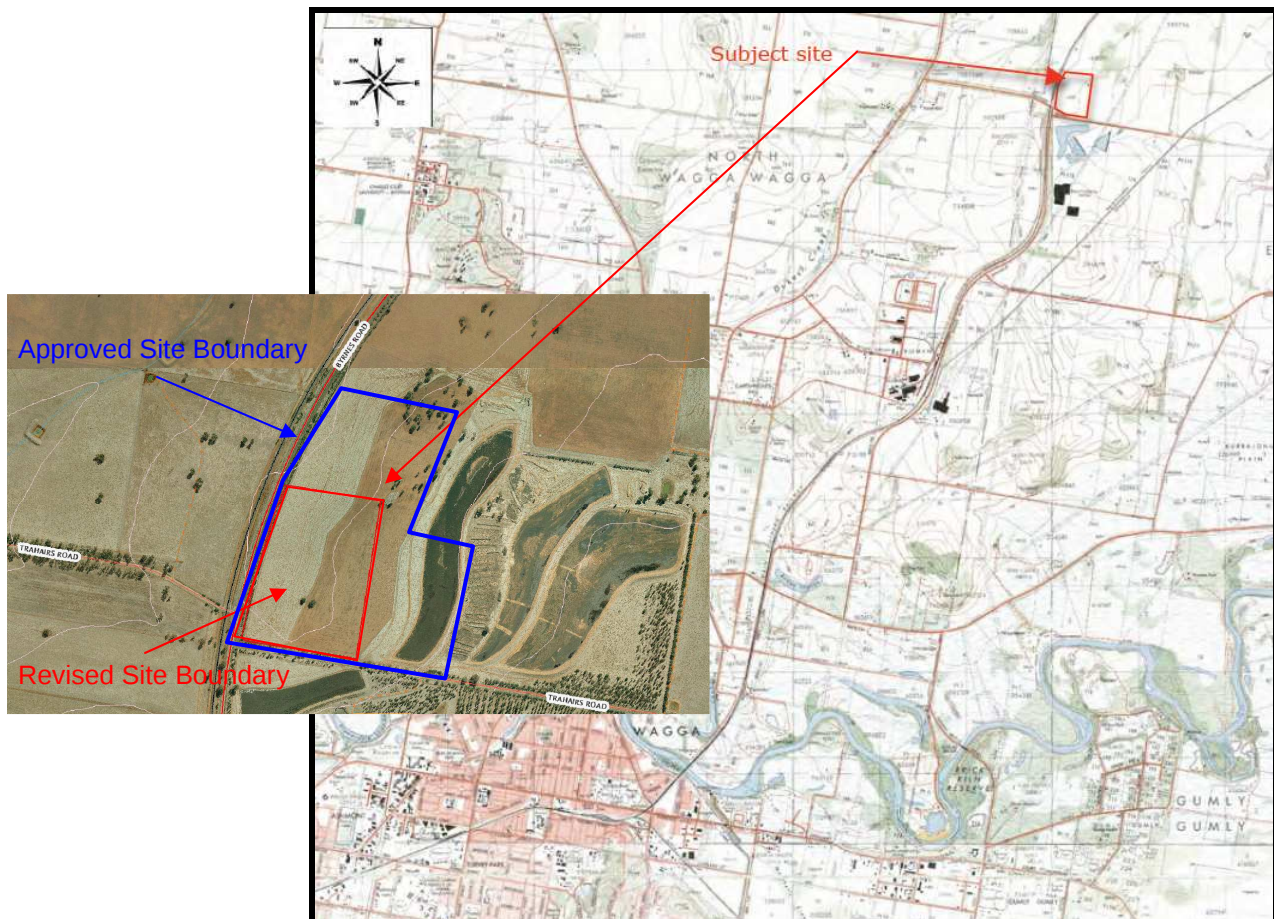


Figure 1: Regional Context

On 4 November 2008, the then Minister for Planning granted approval to an application by ROBE for the construction and operation of an Integrated Oilseed Processing and Biodiesel Plant (IOPBP). At the time of the approval, the site was referred to as Lot 1 DP 1000675 and was owned by Rivco Group Pty Ltd (Rivco). The site contained the IOPBP footprint, the irrigation area to the north and wastewater pond to the east (refer to the blue site boundary in Figure 1). The approved site layout and elevations are illustrated in Figures 2 and 3 below.

The approval provided for:

- processing of up to 75 million litres (ML) of biodiesel a year;
- the generation of co-products through the integrated oilseed crushing plant, these being 109,500 tonne (t) of vegetable protein meal, 30,000t of refined vegetable oil and 8,640t of crude glycerine; and
- on-site treatment of wastewater and its use for irrigation on 10 ha of land to the north-east of the site.

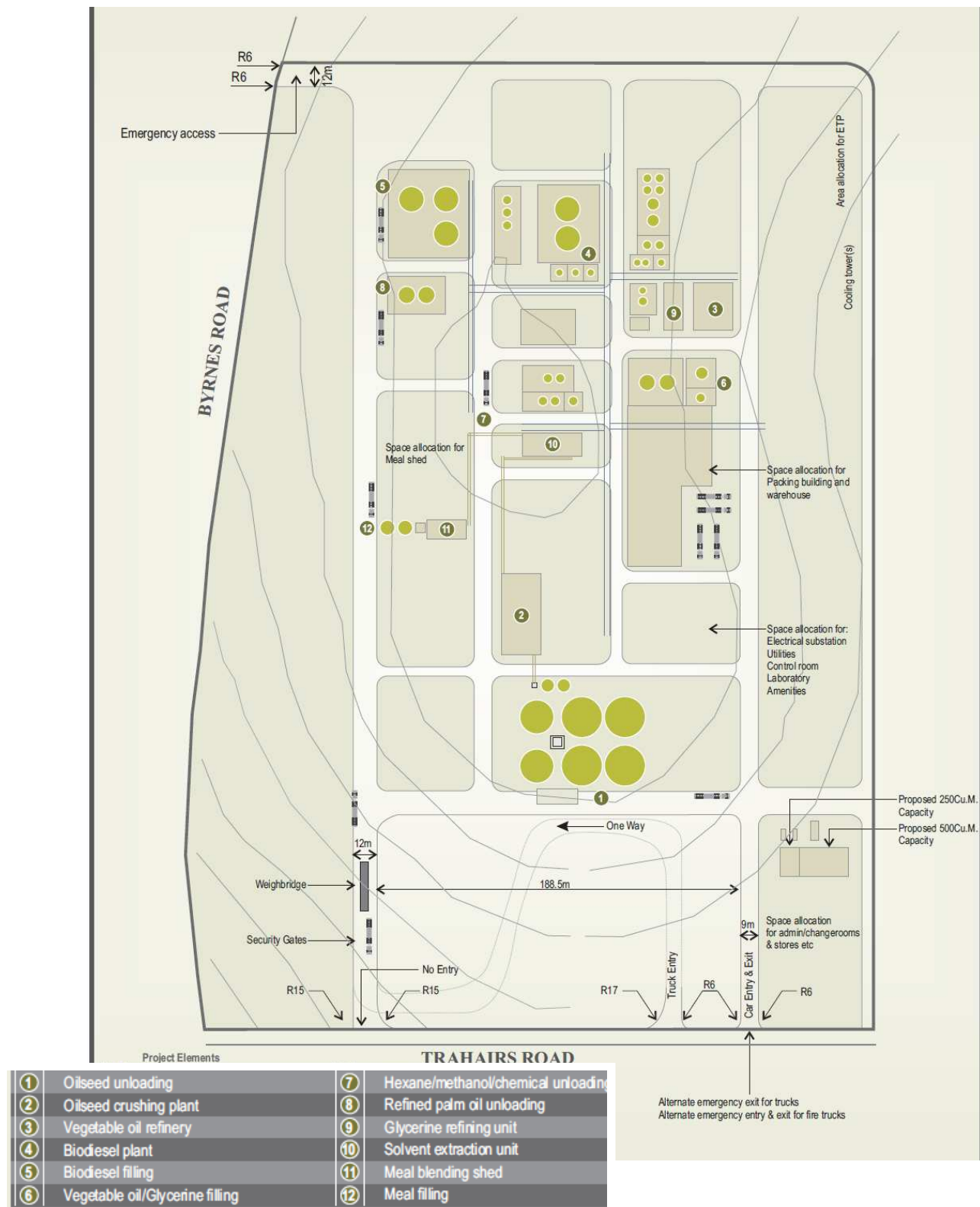


Figure 2: IOPBP Facility as approved

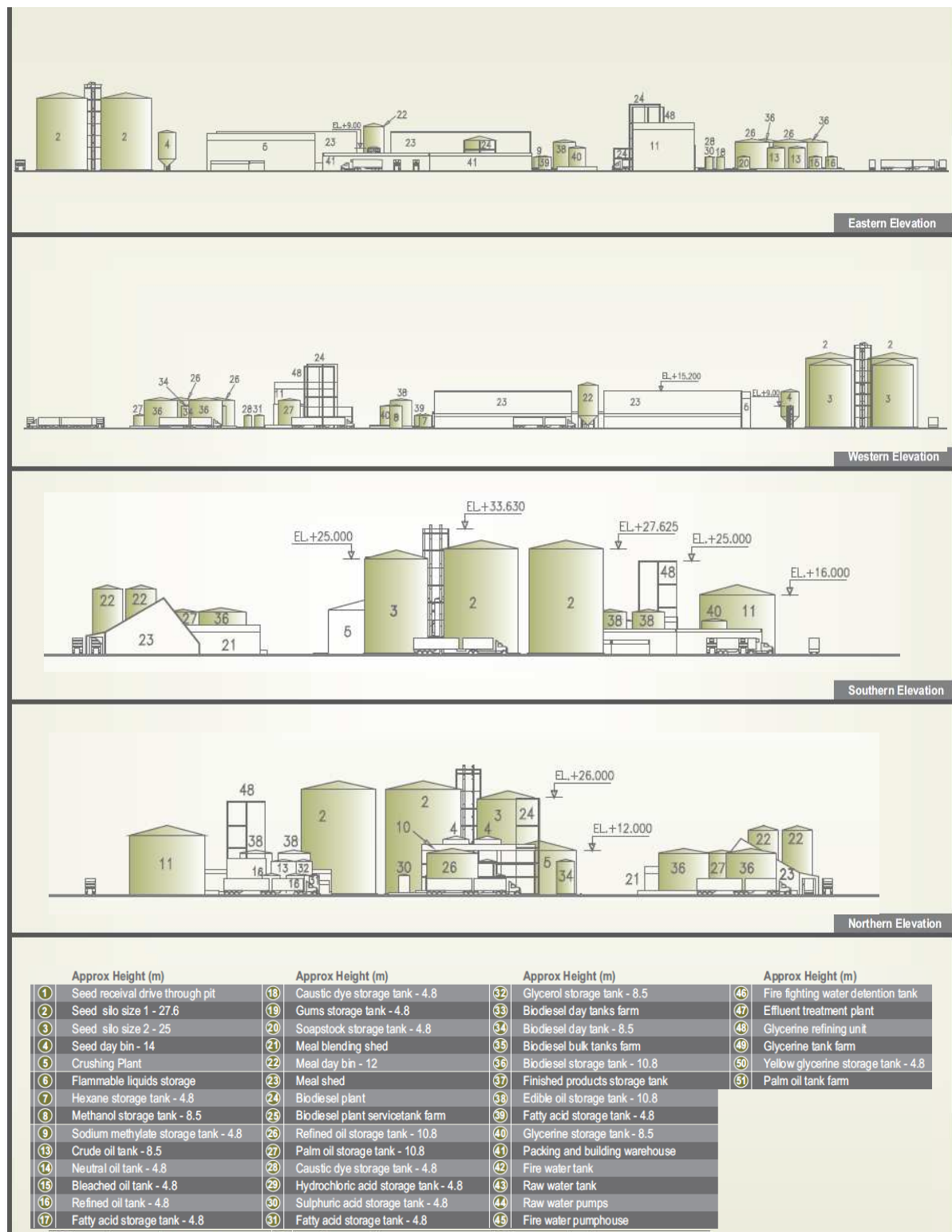


Figure 3: IOPBP Facility built components and elevations as approved (Source: EA 2008, ENSR)

The approved project essentially has two stages as part of the production of biodiesel, each yielding one or more products which would either be sold or undergo further processing (refer to Figure 4). Oilseed, primarily canola and safflower, would initially be processed in the oilseed processing refinery to produce oil cake and expelled oil. The oil cake would then be further processed to produce vegetable protein meal and refined vegetable oil. The expelled oil and the refined vegetable oil would be transferred to the Biodiesel Plant where it would undergo further processing to produce glycerine and biodiesel.

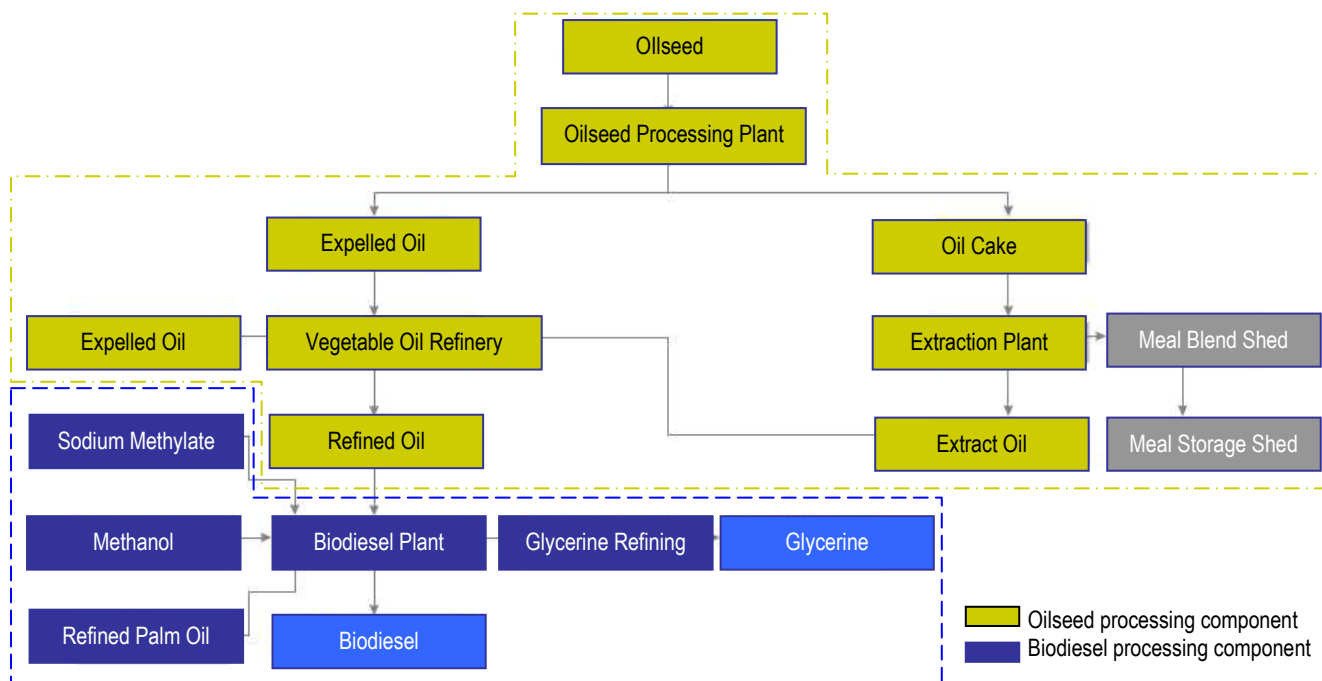


Figure 4: Process Flow Diagram

Due to a decline in the market demand for biodiesel and economic circumstances, ROBE has now determined that the biodiesel component of the project is not viable. ROBE now seeks to remove this component from the project and increase the capacity of the oilseed processing component. This has necessitated a change in the site layout and the infrastructure required onsite.

In October 2009, the Department approved a request from ROBE to undertake the construction of the approved project in stages in order to allow ROBE to commence the earthworks component of the project. The Stage 1 - Site Establishment Works component has now been completed.

2. PROPOSED MODIFICATION

On 22 October 2010, ROBE submitted a section 75W modification application to modify the project approval (07_0146).

The proposed application seeks to remove the biodiesel component of the project and increase the vegetable oil processing activities on the site. The proposed change to the operation of the site has necessitated a change in the infrastructure and building components on the site.

In general, the key components of the modification include:

- removing the biodiesel component of the project;
- changes to the site layout including building dimension and internal road layout; and
- treated effluent wastewater being stored in the effluent storage pond prior to irrigation off-site on land owned by the nearby Wool Combing Facility to the south-east of the subject site.

The site to which the project applies remains to be 299 Trahairs Road, however the site has been divided into two separate lots thereby reducing the site boundary. The modification application refers to Lot 12 DP 1130519 and covers an area of approximately 16.5 hectares (refer to the red site boundary in Figure 1).

As a result of the exhibition and post exhibition consultation process, the proposal to irrigate wastewater off-site has been removed. Instead, wastewater would be treated on-site and recycled back into the refinery process or released into an evaporation pond located within the site boundary.

A comparison of the modification components with the approved IOPBP is detailed below and in Table 1.

Table 1: Approved Development and Proposed Modifications to the IOPBP

Element	Approved	Proposed
<i>Limits of approval</i>	<u>Processing:</u> - up to 30,000 t/year of palm oil; 165,000 t/year of oilseed; 7,200 t/year of methanol; 192 t/year of hexane. <u>Output:</u> 75 million L/year of biodiesel; 30,000 t/year of refined vegetable oil; 8,640 t/year of crude glycerine; 109, 500 t/year of meal; <u>Store on site:</u> - up to 26,000 t of oilseed; - up to 3,000 t of meal; - up to 3,730 KL of vegetable oil; - up to 4,365 KL of biodiesel; - up to 430 KL of glycerine.	<u>Processing:</u> - up to 165,000 t/year of oilseed; <u>Output:</u> 90,000 t/year of vegetable protein meal; 66,000 t/year of refined vegetable oil. <u>Store on site:</u> - Up to 27,000 t of oilseed; - Up to 3,000 t of meal; - Up to 3,232 KL of vegetable oil.
<i>Construction Period</i>	60 weeks	NO CHANGE - earthworks completed
<i>Construction hrs</i> <i>Operational hrs</i>	7am - 6pm Mon - Fri, 7am - 4pm Sat. 24 hours per day, 7 days per week	- NO CHANGE - NO CHANGE
<i>CIV</i>	\$75 million	\$47.5 million
<i>Employment</i> <i>Construction</i> <i>Operational</i>	- up to 300 - up to 79	- up to 150 - up to 70
Main Built Components		
<i>Oilseed crushing plant</i>	Dimensions 42m x 20m x 8m high.	Dimensions 39m x 24m x 29m high.
<i>Solvent extraction plant</i>	Dimensions 30m x 12m x 12m high.	Dimensions 30m x 26m x 22.5m high.
<i>Meal blending shed</i>	Dimensions 12m x 8m x 10m high.	REMOVED
<i>Meal Storage Shed</i>	Dimensions 100m x 25m x 15.2m high.	Dimensions 50m x 25m x 17.5 high.
<i>Vegetable oil refinery</i>	Dimensions 24m x 20m x 12m high.	Dimensions 24m x 37m x 27m high.
<i>Storage Silos</i>	6 silos up to 27.6m high.	4 silos up to 20m high.
<i>Gravity Chute</i>	4 chutes up to 33.6m high.	Up to 27m high.
<i>Storage Tanks</i>	Multiple - up to 4.8 and 8.5m high.	- Maximum 24 tanks at 15 m high. - Maximum 7 tanks at 8m high.
<i>Reverse Osmosis Wastewater Building</i>	Not previously part of proposal.	Dimensions 12m x 20m x 5m high.
<i>Biodiesel plant</i>	Dimensions 28m x 18m x 16m high.	REMOVED
<i>Glycerine refining unit</i>	Dimensions 12m x 10m.	REMOVED
<i>Administrative Building</i>	Office and amenities buildings	Dimensions 21m x 12m x 6m high.
<i>Wastewater & Stormwater Dam</i>	- Existing 27ML dam located to the east of the site would be refurbished and used as a wastewater/stormwater storage dam. - Effluent from the process plants was to be treated in the onsite Effluent Treatment Plant (ETP) and then transferred to the existing storage pond prior to irrigation onto adjacent land.	- Construction of a new 40ML evaporative storage pond within the eastern portion of the site. - Process effluent would be treated to a tertiary level in the reverse osmosis wastewater treatment plant and recycled back into the refinery process. Approx. 50 kl would be discharged to the evaporative storage pond to be disposed of via evaporation.
<i>Treated black and grey water</i>	Sewerage would be stored in a Sewerage Holding Tank prior to being treated within the Effluent Treatment Plant and discharged into the storage pond for irrigation.	On-site storage in underground tanks prior to being treated to a satisfactory level for on-site irrigation.
<i>Associated Infrastructure</i>	Office and amenities buildings, electricity connection, sealed internal access road, steam boilers, cooling water system, weighbridge and storage and handling facilities, tanks for storing vegetable oil, biodiesel and other process chemicals, such as hexane and methanol.	- Bleaching earth storage building, weigh stations and truck covers, laboratory and workers amenities building, truck cover areas, switch room building, workshop & boiler house, grain hopper. - Tanks would no longer store biodiesel. Hexane would be stored underground.
<i>Internal Road Layout</i>	The Approved layout did not give appropriate consideration to the turning needs of B-Doubles.	Revised layout is based on a single main ring road.
<i>Site Access</i>	- Main entrance off Trahairs Road. - Emergency entrance off Byrnes Road.	NO CHANGE
<i>Trahairs Road Intersection</i>	Upgrades to the intersection of Trahairs Road with Byrnes Road	NO CHANGE - Intersection upgrades to proceed

The modified project (the Project) would involve the construction and operation of an Integrated Oilseed Processing Plant (IOPP) (refer **Figure 5** and **6**) and have a yearly manufacturing capacity of approximately 90,000t of vegetable protein meal and 66,000t of refined edible vegetable oil. The modified project would still seek to utilise canola and safflower oilseed in the production process as they are cultivated in a wide geographic region in Australia, thereby minimising transport costs.

The proposed changes in processing to be undertaken on the site have necessitated a number of plant design and layout changes which have predominantly affected the bulk and scale of the facility. These impacts are addressed in Section 4 of this report.

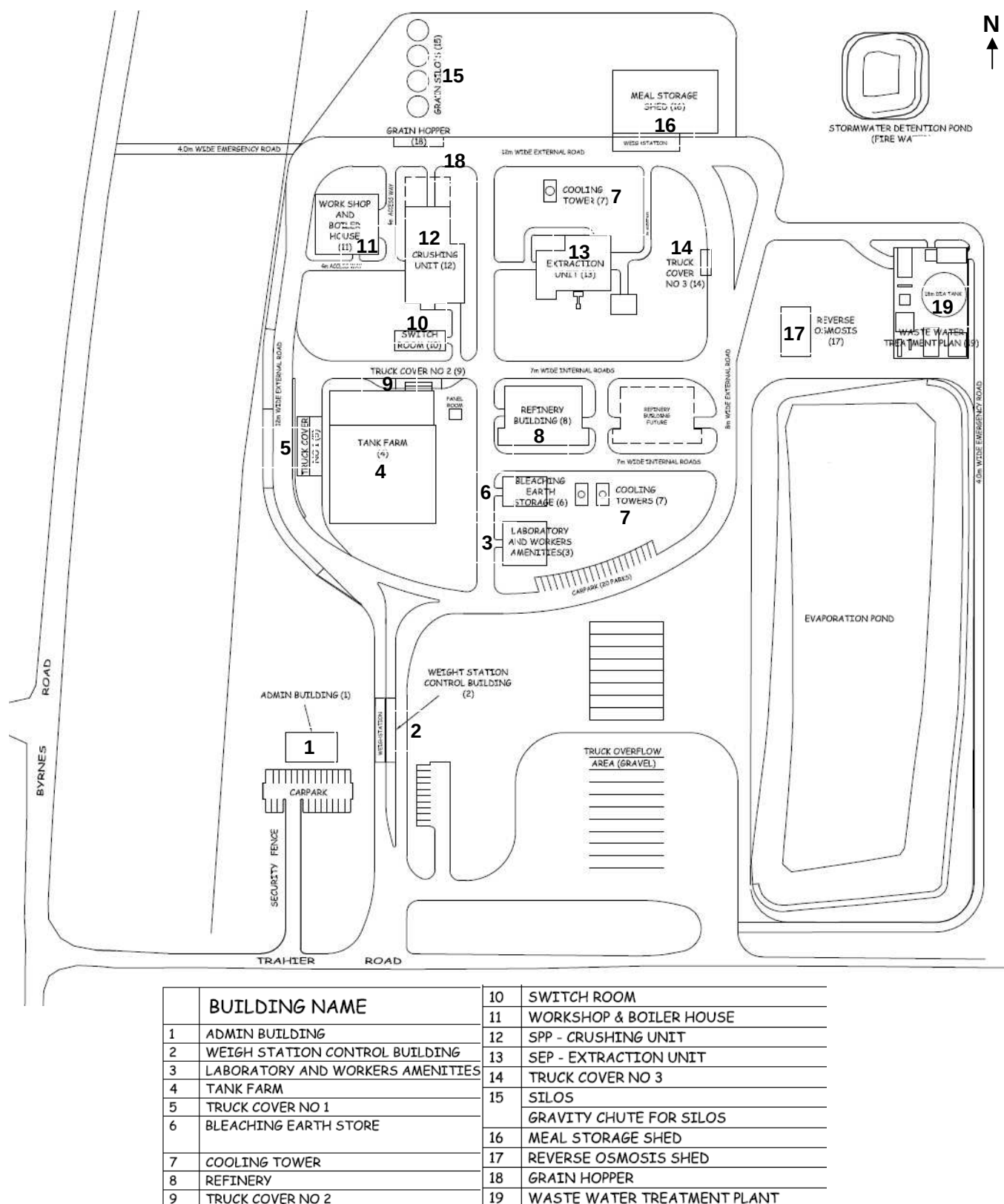
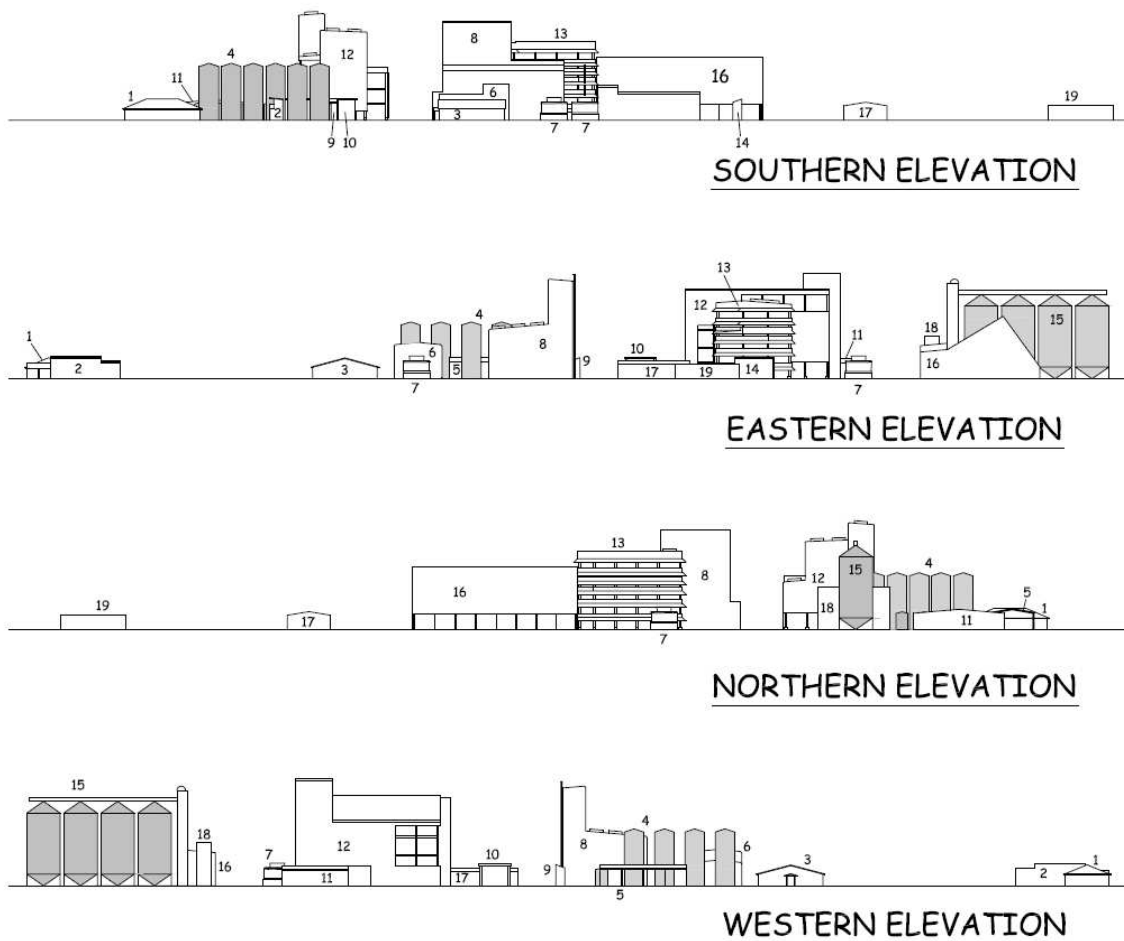


Figure 5: The modified site layout



	BUILDING NAME	SIZE
1	ADMIN BUILDING	21m LONG x 12m WIDE, 3m TO GUTTER, 6m TO RIDGE
2	WEIGH STATION CONTROL BUILDING	20m LONG x 13.6m WIDE, 6m TO GUTTER (SKILLON ROOF)
3	LABORATORY AND WORKERS AMENITIES	18m LONG x 18m WIDE, 3m TO GUTTER, 5.8m TO RIDGE
4	TANK FARM	24 TANKS (15m HIGH) 7 TANKS (8m HIGH)
5	TRUCK COVER NO 1	11.90m LONG x 11.9m WIDE, 4.7m TO GUTTER, 5.9m TO RIDGE
6	BLEACHING EARTH STORE	18.50m LONG x 12.6m WIDE, 7m TO RIDGE (2 THIRDS) 10m TO RIDGE (1 THIRD)
7	COOLING TOWER	8m LONG x 8m WIDE, 6.3m HIGH
8	REFINERY	37m LONG x 24m WIDE, 27m HIGH
9	TRUCK COVER NO 2	10.9m LONG x 3.5m WIDE, 5.5m TO GUTTER, 6.7m TO RIDGE
10	SWITCH ROOM	20m LONG x 7.5m WIDE, 5.5m TO GUTTER (SKILLON ROOF)
11	WORKSHOP & BOILER HOUSE	24.5m LONG x 25.4m WIDE, 6.6m TO GUTTER, 7.8m TO RIDGE
12	SPP - CRUSHING UNIT	39m LONG x 24m WIDE, 29m HIGH
13	SEP - EXTRACTION UNIT	30m LONG x 26m WIDE, 22.5m HIGH
14	TRUCK COVER NO 3	11.30m LONG x 4.2m WIDE, 5.5m TO GUTTER, 7m TO RIDGE
15	SILOS	4 SILOS - 20m HIGH x 9.3m DIA
	GRAVITY CHUTE FOR SILOS	27m HIGH
16	MEAL STORAGE SHED	42.5m LONG x 33.4m WIDE (AT WEIGH STATION) 17.5m TO RIDGE
17	REVERSE OSMOSIS SHED	20m LONG x 12m WIDE, 4m TO GUTTER, 5m TO RIDGE
18	GRAIN HOPPER	20m LONG x 6m WIDE, 12m HIGH FLAT ROOF
19	WASTE WATER TREATMENT PLANT	18m DIA TANK 4m HIGH

Figure 6: The modified site elevations

3. STATUTORY CONTEXT

3.1 Approval Authority

Section 75W of the EP&A Act confers on the Minister an implicit obligation to be satisfied that the modification request falls within this section of the EP&A Act.

The Department notes that:

- the proposed modification does not seek approval for a new and different project for which approval was granted; and
- any potential impacts would be minimal and could be appropriately managed through the existing or modified conditions of approval.

It is therefore recommended that the Director-General under the Ministers delegation of 25 January 2010, agree that the modification request falls within section 75W and the request can be determined.

3.2 Exhibition and Notification

Under section 75W of the EP&A Act, the Department is not required to publicly notify or exhibit the application. However, following a review of the modification application, the Department determined that the proposed modification should be exhibited and referred to relevant public authorities for consideration.

The EA for the modification was exhibited between 16 September 2010 and 6 October 2010 and referred to the following public authorities:

- Office of Environment and Heritage (OEH);
- Roads and Traffic Authority (RTA);
- NSW Rural Fire Service (FRS);
- Department of Primary Industries (DPI);
- NSW Fire Brigade;
- Country Energy;
- NSW Industry & Investment (I&I);
- Nature Conservation Council;
- Riverina Water County Council (RWCC); and
- Wagga Wagga City Council (Council).

During the exhibition period, the Department received ten (10) submissions for the project, including: eight (8) from public authorities (OEH, I&I, DPI, NSW RFS, RWCC, RTA, Country Energy and Council), one from a special interest group (the Eunony Valley Association Inc.), and one from a community member. A summary of the submissions is provided below and a copy of each submission has been included as Appendix B.

ROBE provided a response to these submissions on 17 January 2011 (refer to Appendix C).

Public Authorities

OEH did not object to the proposed modification, subject to the inclusion of conditions should it be approved. The conditions relate to noise, construction hours, air quality, meteorological monitoring, odour, stormwater and emergency response. OEH note they would like to be re-consulted, should the project be amended as a response to the recommended conditions of consent.

I&I raised no objection to the proposed modification and supported the nominated monitoring program as a means of early detection of trends thereby allowing some technical assessment of existing management practices. I&I advised that the Proponent's proposal not to apply effluent to pasture/grazing situations but rather to cropping areas is also highly supported.

The **DPI** requested that further assessment be undertaken on the hydrology and site water balance for the project. The DPI also expressed concerns regarding off-site irrigation. In response to this request, the Proponent submitted a revised Hydrology assessment and removed the offsite irrigation component from their project. The DPI recommended a number of conditions should the project be approved. These included the requirement for the Proponent to prepare a revised Groundwater Management Plan to address monitoring of the wastewater storage pond for leak detection, and that the proposed annual monitoring program be changed to monthly monitoring.

The **NSW RFS** raised no objections to the project. However, they requested appropriate industrial fire fighting equipment be provided at the site to prevent a fire from spreading to adjacent lands.

The **Riverina Water County Council (RWCC)** requested that additional information (water demand) be provided in order to determine potential impacts to RWCC's water supply system and to determine the headworks contributions. Additional information was provided by ROBE to the satisfaction of RWCC.

The RTA advised that the project does not represent any significant traffic related impacts compared to the approved project and noted the recommendations outlined in ROBE's documentation. The RTA raised no objection to the proposed modification subject to the inclusion of a number of conditions.

Country Energy raised no objections to the proposed modification.

Wagga Wagga City Council acknowledged that the proposed modified development is one of the Nation's largest value-adding agricultural investments directly supporting the region's agricultural sector through cereal grain production and vegetable protein meal. This together with the logistical transport components and the direct economic impact of an additional 70 operational jobs, with up to 150 jobs during the construction phase, are of great value to the local economy. Further, Council noted the indirect benefits from such stimulus into the economy that ultimately contribute to the social wellbeing of the community. Council advised that they support the modified IOPP from a sustainable economic and population growth perspective. Notwithstanding, Council requested that the potential visual, odour and noise impacts of the modified project be considered. Further, Council requested that the Department have due regard to relevant land use planning and development plans for the area.

Special Interest Groups & General Public

Two objections were received during the exhibition period, one from the Eunony Valley Association Inc. and one from a member of the public. The key issue raised in these submissions related to;

- visual impacts;
- noise and odour impacts;
- water demand and source;
- irrigation and wastewater management; and
- integrity of the environmental assessment.

The Department has considered all submissions and the Proponents' Response to Submissions Report in the assessment of the proposed modification.

4. ASSESSMENT

In its assessment of the merits of the project, the Department has considered the following:

- the November 2008 Project Approval for the Riverina Oils and Bio Energy Biodiesel Facility (07_0146);
- the *Riverina Oils & BioEnergy – Integrated Oilseed Processing Plant Vol 1-2 Environmental Assessment, August 2010* prepared by Lennon Salvestro Planning;
- submissions and response to submissions report titled 299 Trahair Road, Wagga Wagga, Response to Submissions – 07_0146 Mod 1 *Integrated Oilseed Processing Plant, 17 January 2011*;
- the relevant environmental planning instruments, policies and guidelines; and
- the relevant provisions of the EP&A Act, including the objectives of the Act.

The Department considers the key issues for the proposed modification to be:

- Visual amenity; and
- Water (including wastewater).

The following is the Department's assessment of the key issues associated with the project. Other issues are discussed in Table 4.

4.1 Visual Impact

Issue

The proposal could result in unacceptable visual impacts.

Consideration

The current approval for the IOPBP provides for a development with significant built structures with a maximum height of 27.6 metres and ancillary structures (gravity chute) with a maximum height of 33.6 metres. The approved structures along with their maximum heights are detailed in Figure 3.

During the exhibition and assessment of the original IOPBP, the potential visual impacts from the facility were not raised in any submissions. Both the visual impact assessment prepared on behalf of ROBE, and the Director-General's assessment report prepared for the approved project, determined

that the visual impacts would be limited and unobtrusive provided that a Landscape Management Plan is prepared and implemented to provide screening of the facility.

ROBE's current proposal broadly involves removing the biodiesel processing component of the project and increasing the oilseed processing component. This has necessitated a change in the site layout and the height and scale of some components of the built infrastructure. The modified building heights and bulk have been determined based on the equipment to be housed and the technology being employed.

A comparison of the approved and modified built structures is detailed in **Table 2**.

Table 2: Main Built Components - Approved Development (IOPBP) Vs Proposed Modification (IOPP)

Element	Approved - IOPBP	Proposed - IOPP
<i>Oilseed crushing plant</i>	▪ Dimensions 42m x 20m x 8m high.	▪ Dimensions 39m x 24m x 29m high.
<i>Solvent extraction plant</i>	▪ Dimensions 30m x 12m x 12m high.	▪ Dimensions 30m x 26m x 22.5m high.
<i>Meal blending shed</i>	▪ Dimensions 12m x 8m x 10m high.	▪ REMOVED
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<i>Storage Tanks</i>	▪ Multiple - up to 8.5m high.	▪ Maximum 24 tanks at 15 m high. ▪ Maximum 7 tanks at 8m high.
<i>Reverse Osmosis Wastewater Building</i>	▪ Not previously part of proposal.	▪ Dimensions 12m x 20m x 5m high.
<i>Biodiesel plant</i>	▪ Dimensions 28m x 18m x 16m high.	▪ REMOVED
<i>Glycerine refining unit</i>	▪ Dimensions 12m x 10m.	▪ REMOVED
<i>Administrative Building</i>	▪ Office and amenities buildings	▪ Dimensions 21m x 12m x 6m high.

During the exhibition period of the modified project, submissions raised concerns regarding the scale of the development and the impacts that the development could have on visual amenity and the natural landscape. More specifically, issues were raised in relation to the consistency of the proposal with Council's standards for ridgeline development, justification for the increased building height and bulk, and proposed measures to mitigate the potential visual impact.

As part of the modification application, ROBE prepared an assessment of the potential visual impacts associated with the modified project.

ROBE's Visual Impact Assessment

ROBE's visual impact assessment for the IOPP identified seven receptor precincts (A-F) (refer to **Figure 7**). Upon a site visit and physical analysis, three of these seven receptor precincts (C, E and G) were considered to be unaffected and did not require additional consideration. Further assessment on the views from residents to the west of the site was also provided at the Department's request.

ROBE surveyed the potential visual impact of the proposed development from specific properties within each precinct. ROBE's visual assessment concluded that while the existing site is located on a ridge and would be visible from the north, east and west, receptors are well removed from the site and views to the development would be from a distance, screened by existing vegetation and natural topography.

The following figures illustrate the locations of the receptor precincts and provide an indication of the view of the already approved IOPBP compared with the proposed IOPP at specific residents within each precinct.

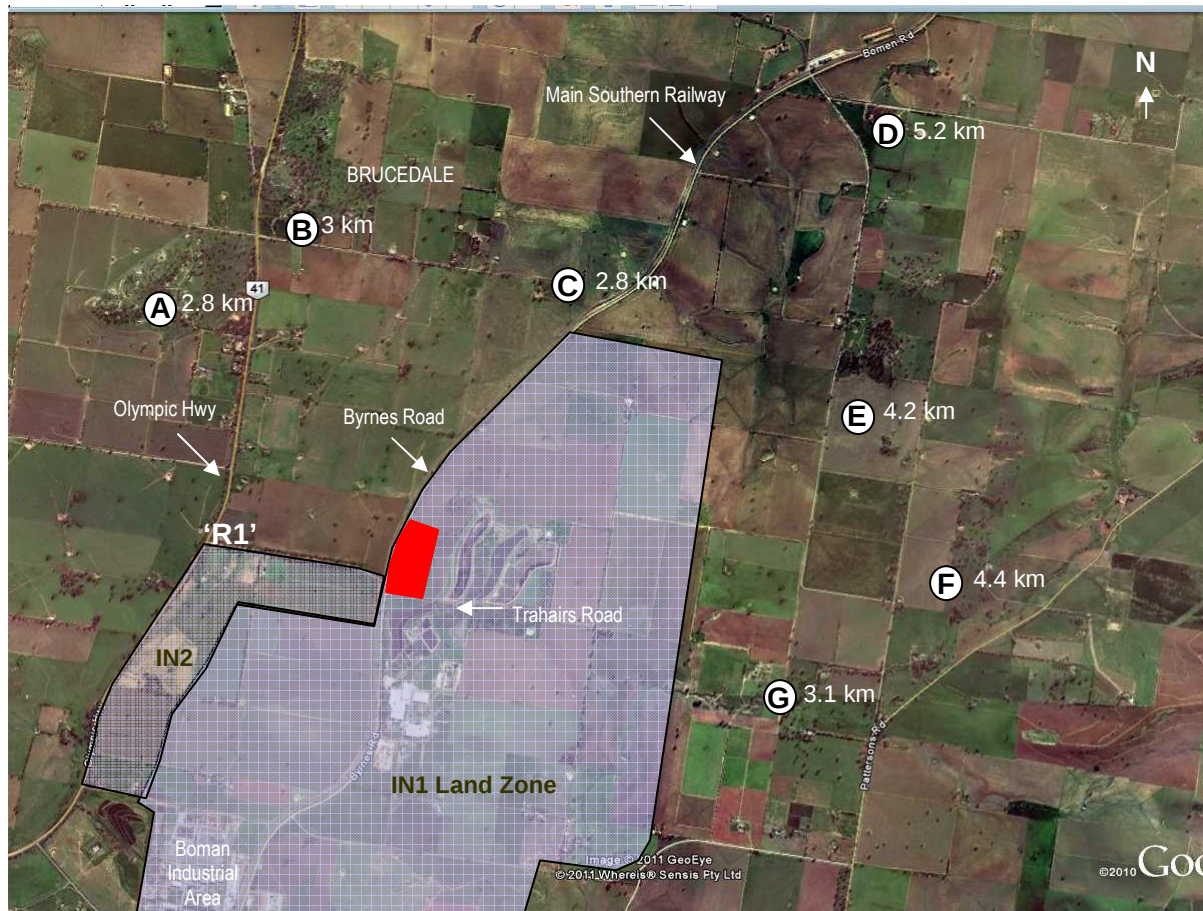


Figure 7: Site Location & Visual Receptor Precincts

Table 3: Site Location & Visual Receptor

Receptor Precinct	Description
A	Brucedale rural residential areas.
B	Two elevated dwellings orientated towards the site with clear views through to the northern and partial western elevation of the site.
C	Receptors site is level with development site. However, the residence is not orientated towards site. No further investigation required.
D	Elevated dwellings over 4.5 km to the north-east of the site.
E	Elevated dwellings to the north-east. Views largely screened by mature pines and eucalypts at these properties. No further investigation required
F	Langrigg Hall – Elevated residence. Clear views from front garden of residence through to site. Residence orientated towards site
G	Waterview located on the plain. Homestead not orientated towards site and outbuildings blocking views through to site. No further investigation required
R1	Residences to the west of the site.



Figure 8: Receptor Precinct A – Brucedale Drive – Proposed.



Figure 9: Receptor Precinct B – Mary Gilmore Road – Approved and Proposed.



Figure 10: Receptor Precinct C – Location along Byrnes Road – Proposed.



Figure 11: Receptor Precinct D - Howard's 'Bindalee' Residence (Elevation 289 metres) – Approved and Proposed.



Figure 12: Receptor Precinct E – Elevated dwellings to the northeast – Proposed.



Figure 13: Receptor Precinct F – Langrigg Hall (Elevated residence) – Approved and Proposed.



Figure 14: Receptor Precinct G – 'Waterview' located on the plain – Approved and Proposed.

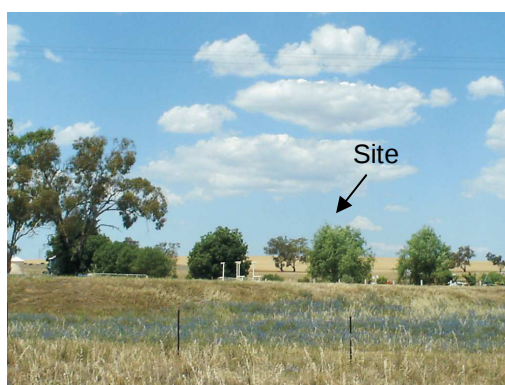


Figure 15: Receptor R1 – 'Residences located to the west of the site.'

ROBE considered that the visual impact of the modified IOPP is comparable with the approved IOPBP. Perimeter landscaping and paddock plantings at receptor locations, along with any future industrial developments in the precinct would assist in reducing the visual impact of the plant over time.

Notwithstanding, ROBE identified a number of both on-site and off-site mitigation measures to further improve visual amenity. These are detailed in both the EA for the modification and ROBE's submissions report, and include:

- developing a detailed landscape plan post approval;
- maintenance of and additional plantings to existing landscape screening to the west and south of the site;
- landscape buffer plantings to the north of the site;
- landscape treatments to the Langrigg Hall Property (Receptor Precinct F);
- offsite landscape works to private properties where on-site works would either be insufficient or would not mitigate effectively in the short to medium term;
- utilisation of materials and colours for building design that would be non-reflective and easily absorbed into the landscape;
- minimal lighting within the site to ensure no off-site impacts occur; and
- installation of awnings to all wall openings of the Solvent Plant building to provide weather protection and to reduce light escaping the building.

In addition to implementing the above mitigation measures, ROBE expresses a willingness to undertake off-site landscape works on private properties where on-site works would not mitigate visual impacts effectively in the short to medium term. Further, ROBE proposed to establish a community liaison group to explore landscaping options for individuals, as well as keeping communication lines open for discussion and exchanging information about aspects of the development and any issue that may arise.

The Department's Visual Assessment

The Department has considered the potential visual impact of the proposed modification. As part of its assessment, the Department identified three key aspects:

- justification for the change in height and scale of the plant;
- the strategic planning for the area; and
- potential impact of the modification with the approved plant.

As part of the assessment, the Department requested that ROBE justify the proposed height and scale of the IOPP.

In response to this request, ROBE investigated opportunities to reduce the building height and bulk of the plant. In summary, ROBE advised that the process buildings that dominate the development are functional units to house equipment. They stated that it was not possible to reduce the building size, footprint or height of the plant while housing the process equipment and technology required to operate efficiently and sustainably.

In addition to the above justification, ROBE provided three dimensional plans of the main buildings which demonstrated that the processing equipment utilises the full extent of each building. The Department considers reasonable justification for the scale of the buildings has been provided.

An important consideration of the potential visual impact of the proposal is the strategic planning for the surrounding area which underpins the future planning direction and long term development of the area.

There are three (3) significant strategic land use planning and development plans designed to achieve appropriate land use outcomes and economic development for the area surrounding the development site. These include:

- the **Wagga Wagga Local Environmental Plan 2010**, which zones the subject site IN1 Industrial;
- the **Bomen Strategic Master Plan 2009**, which provides the strategic framework for industrial development at the Bomen Business Park over the next 30 years; and
- the **Wagga Wagga Bomen Development Control Plan 2010**, which includes Industrial Development Design Principles stating that development is to be suited to its site in terms of the nature of the use, relationship to adjoining uses and availability of land for industrial development. Further, it lists the permissible uses of the IN1 General Industrial zone which include amongst other things; heavy industries, rural industries, storage premises, and freight transport facilities.

Based on a review of the above listed plans, the Department considers that the proposed IOPP is consistent with the objectives and principles of these land use and development plans and Council's strategic planning for the area. The land immediately surrounding, and including, ROBE's site incorporates 1780 ha of industrial zoned land (IN1 and IN2) and the 2325 ha Boman Business Park (refer to Figure 16).

Further, the **Bomen Masterplan** and **Boman Structures Plan**, which have been prepared by Council to direct development in the 'Bomen Business Park', identify the ROBE's site as being located in part 'General Industrial' and part 'Rail Dependent Industrial' precincts (refer to Figure 16). In addition, the aims within these plans identify the future Bomen Business Park as, amongst other things:

- the intermodal transport terminal for industries and businesses across south-eastern Australia;
- a well-planned place of industry that takes full advantage of its location, accessibility and infrastructure; and
- supplied with infrastructure for transport, energy, communications and resource and materials sharing that is economically and environmentally effective.

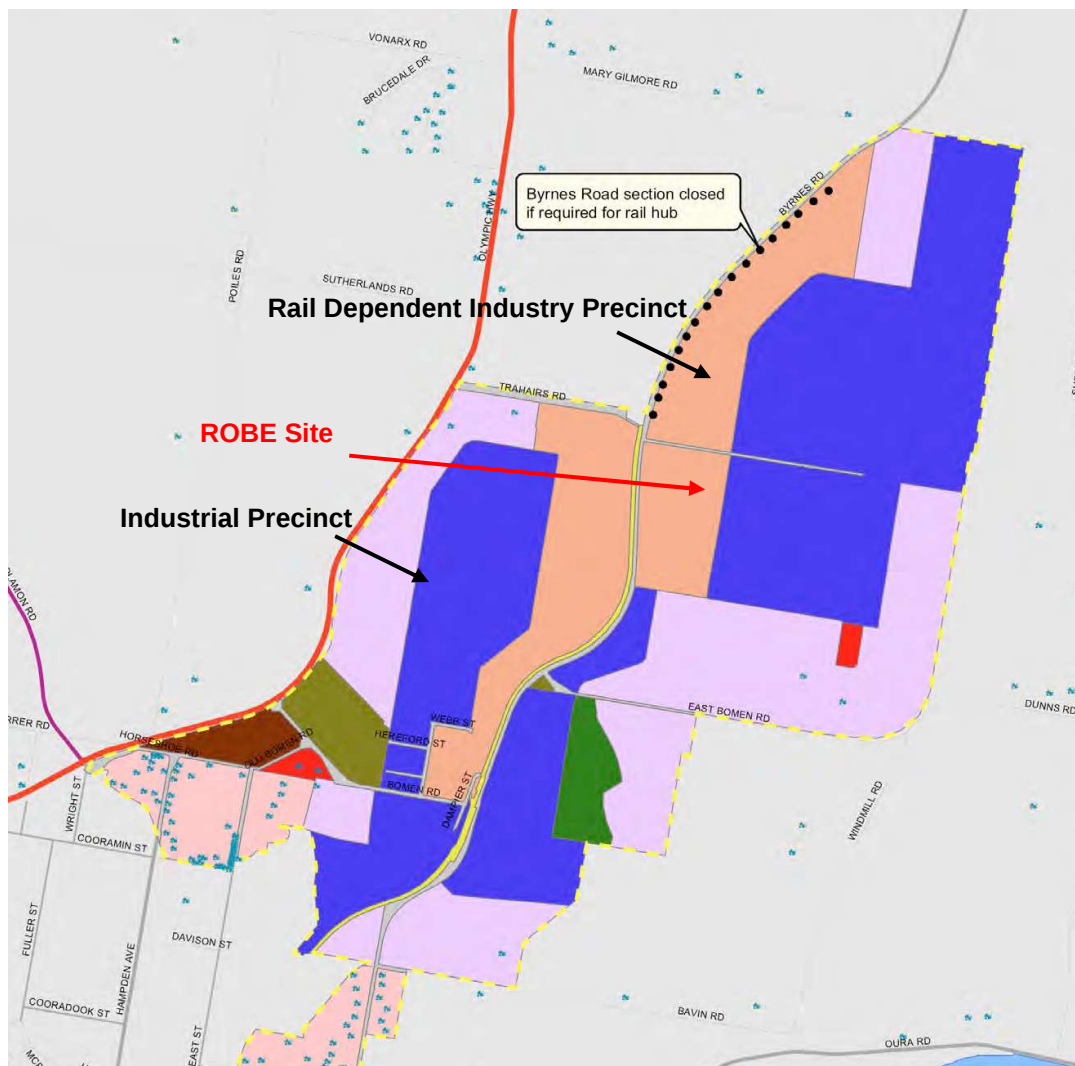


Figure 16: Bomen Business Park, Character Precinct Map

It is evident from a review of the above listed strategic land use planning and development plans that the site and surrounding area lends itself to further industrial development. While the approved development could potentially impact on the surrounding area, the impact of this site would potentially be reduced over time as further industrial development occurs within the surrounding industrial zoned land and the Bomen Business Park.

Lastly, the Department has also considered the visual impact of the modified IOPP with the approved IOPBP.

There are already a number of substantial industrial and rural industrial buildings which feature prominently in the wider landscape, including the Wool Combing Facility (refer to Figure 17 below) which is within 750m of ROBE's site. Other industrial uses in the area include the Renewed Metal Technologies, Buckman Laboratories and other operations within the Bomen Industrial Estate.

Other key features in the local visual environment include the Main Southern Railway Line and Byrnes Road to the west of the site and the ponds associated with the Wool Combing Facility to the south and east.



Figure 17: Existing Wool Combing Facility

The Department considers that while the modified project could result in additional height and scale when viewed from some visual receptor precincts, other views from receptor precincts would be comparable, if not improved due to the condensed site footprint.

Receptor Precincts A and B, located north-west of the subject site, are considered to have distant comparable views to the IOPP and the surrounding industrial zoned land. It is anticipated that the horizon will not be broken by the additional height and bulk of the IOPP from any view from these receptor dwellings. While views from Receptor Precincts C, north of the site, are partially screened by paddock vegetation and are considered comparable with the approved IOPBP.

Views from Receptor Precincts D, E, F and G are considered to be comparable with the height, bulk and scale of the approved IOPBP. It is considered that the views are from a distance and the visual impact of the IOPP would be reduced over time with future development in the industrial zone. The Department agrees with ROBE that vegetation planting at receptors in Precinct's D and E, perimeter planting at the IOPP, and paddock planting in Receptor Precinct's F and G would further screen views to the IOPP and future development within the industrial zone.

The Department considers that receptors located to the west of the site would have the greatest potential impact from the modified IOPP given their proximity to the subject site. However, the Department considers that the visual impact from the proposed IOPP would still be similar with the approved IOPBP. In order to manage any potential impacts, the Department has recommended conditions requiring ROBE implement a detailed Landscape Plan, which includes perimeter planting along the western perimeter of the site.

Conclusion

The Department acknowledges the issues raised in submissions concerning the potential visual impact of the proposed modification and has carefully considered the issue in its assessment of the proposal. However, the Department considers that ROBE has provided adequate justification for the increase in building height and bulk of the modified IOPP. Further, the Department is satisfied that the proposed modification is consistent with the strategic planning for the area and considers that future development within the IN1 and IN2 land zones is likely to screen the site and further reduce the visual impacts of the site to surrounding visual receptors.

The Department is therefore satisfied that the visual impacts are acceptable within its strategic context and can be adequately managed to an acceptable level.

The Department also acknowledges that ROBE intends on consulting nearby properties concerning the option of undertaking off-site visual mitigation measures (eg off-site planting). The Department considers that this should further manage the potential visual impacts of the proposal.

Notwithstanding, the Department has recommended a condition requiring ROBE to prepare and implement a comprehensive Landscape Management Plan to mitigate visual impacts from the proposed site. The Plan requires the Proponent to implement a number of measures on the IOPP site to screen and reduce any potential impacts.

The Plan includes requirements for the Proponent to:

- consult Council and submit the Plan to the Director-General for approval prior to commencement of construction;
- include details of screening trees to be planted along the boundary of the site;
- use predominantly endemic species;
- where practicable, provide for the early planting of advanced plants along the boundary of the site to minimise the visual impacts of the project;
- include a program for implementation; and
- provide for the maintenance of landscaping on site.

4.2 Water (including wastewater)

Issue

That the project could potentially result in impacts to groundwater.

Consideration

Water Supply, Stormwater, Groundwater & Wastewater – Approved Project

The approved IOPBP required approximately 1ML of potable water per day (or 330 ML per year) as part of the operations of the project, which would be supplied by Riverina Water County Council. The potable water would be utilised in the processing components of the project, such as for the generation of steam, the cooling of various heat exchangers and for floor wash down.

Approximately 170 kilo litres (kL) of wastewater was to be generated a day and treated on-site in a wastewater treatment plant prior to being stored in the refurbished wastewater storage pond and used to irrigate 10 ha of land to the north-east of the site.

Domestic sewerage on-site was to go through a coarse screen strainer then into a sewerage holding tank. The wastewater would then undergo extended aeration before treatment within the effluent treatment plant and subsequent storage in the refurbished wastewater pond prior to irrigation.

A detailed soil, irrigation and groundwater assessment was undertaken in accordance with the DECC's *Environmental Guidelines: Use of Effluent by Irrigation* (2004), to assess the potential soil and water impacts of this wastewater disposal strategy.

The Department was satisfied that the project would not result in unacceptable soil, surface and groundwater impacts during construction and operation of the approved IOPBP provided conditions detailed in the approval were adhered to. The conditions included; the implementation of erosion and sediment controls, the preparation and implementation of a Stormwater Management Scheme, and wastewater, soil and groundwater monitoring in accordance with OEH's and DPI's requirements.

Water Supply, Stormwater, Groundwater & Wastewater – Modified Project

Process Wastewater

As part of the modification application, ROBE now proposes to incorporate an on-site reverse osmosis wastewater treatment plant to treat the 350 kilolitres/day (kl) of process wastewater estimated to be generated by the IOPP. The treatment process would enable approximately 300kl of treated wastewater to be recycled back into the refinery process. The wastewater treatment process involves treatment to a tertiary level. As a result of this modification, off-site irrigation of process wastewater is no longer proposed.

Evaporative Storage Pond

ROBE proposes to construct a new 40 ML evaporative storage pond within the eastern portion of the site to remove the need to refurbish and utilise the existing off-site 27 ML dam. The preliminary design criteria for the evaporative pond have been specified in ROBE's submissions report and shall be further developed in consultation with the DPI and the OEH prior to construction to ensure there is no impact to groundwater or the uncontrolled release of contaminated water.

Approximately 50 kl of residual treated wastewater would be discharged to the evaporative storage pond to be disposed of via evaporation. Discharge concentrations would be in accordance with OEH's specified concentrations. The salts in the evaporation pond would be monitored and assessed in accordance with the waste classification guidelines and disposed of at an appropriately licensed waste facility.

Stormwater

A stormwater system designed in consultation with the OEH and Council would ensure that peak discharge from the development site would not exceed peak discharge of the undeveloped site. A small stormwater detention pond located to the north of the wastewater treatment plant (3 ML) would ensure the rural runoff rate is maintained while preserving minimum requirements for fire water.

Water Demand and Source

The proposed modification would require 590 kl of water per day. Source water would be supplied by Riverina Water Country Council (RWCC) who has confirmed this figure is satisfactory for restarting/commissioning the production process (per comm. Jason Ip, RWCC). Following restarting/commissioning, in addition to the 300 kl of treated wastewater recycled back into the refinery process from the treatment plant, RWCC would supply up to 300 kl of water per day to replace water lost in production.

Black Water (sewage) and Grey Water

The site is not currently connected to Council's reticulated sewer system. ROBE's long term intention is for all black and grey wastewater to be disposed of to Council's sewer network. However, Council's network will not be available until there is a critical mass of development in the surrounding industrial area.

In the interim, ROBE proposes to install an underground black/grey wastewater treatment plant to treat effluent to a satisfactory level for on-site irrigation. Approximately 2500 litres/day of black/grey wastewater would be piped from amenities across the site to underground storage tanks that would be located to the west of the main administration building. All plant associated with the black/grey wastewater treatment plant would be enclosed and underground. The treated wastewater would be delivered to a 450L pump well then irrigated to the effluent disposal area located on the western boundary of the site.

During the assessment of the modified project, DPI raised concerns regarding the hydrological assessment. Specifically, the lack of discussion on potential impacts due to potential leakage or overflow from the evaporation pond on surface or groundwater. Notwithstanding, DPI noted the change in methodology to treat and reuse wastewater using reverse osmosis. Due to the reduced potential impacts to the surface and groundwater by reusing wastewater, DPI consider the modification can be approved subject to the requirement for a groundwater management plan which includes a groundwater monitoring program, a groundwater response plan, and a surface water response plan for the site.

Conclusion

With regard to process wastewater, the Department and OEH are satisfied that any potential impacts from the project can be managed through the implementation of the proposed reverse osmosis tertiary treatment system, and the implementation of a soils and water management plan and monitoring program prepared in consultation with the DPI and OEH.

With regard to black/grey wastewater, Council and OEH raise no major concerns with the proposed aerated wastewater treatment system nor ROBE's proposal for onsite irrigation of this treated wastewater provided that Council, OEH and NSW Health are consulted on the final design of the system and irrigation is carried out in accordance with the relevant guidelines.

Notwithstanding, the Department has recommended that the following additional conditions be incorporated into the modified approval. The Proponent shall:

- ensure that peak stormwater discharge from the development site does not exceed peak discharge of the pre-development site;
- prepare and implement an updated Soil and Water Management Plan for the project. The plan shall include:
 - a Stormwater Management Scheme and monitoring program;
 - a Wastewater and Irrigation Management Plan and monitoring program; and
 - a Groundwater Management Plan and monitoring program;
- prepare a groundwater baseline monitoring report within three months of the plant being operational;
- ensure that no runoff or spray from the wastewater irrigation goes beyond the boundary of the site;

- ensure that the volume of wastewater directed to the irrigation area does not exceed the capacity of the area to assimilate wastewater or cause groundwater pollution; and
- connect to Council's sewer infrastructure once it becomes available in the vicinity of the site and disposal of all black wastewater in accordance with a trade waste agreement, unless otherwise agreed to be the Director-General.

4.3 Other Issues

Table 4: Summary of Other Issues

Issue	Assessment	Recommendation
Traffic	▪ The proposed modification would result in a reduction in both construction and operational traffic. ▪ In terms of construction traffic, the modification would result in around 50% less traffic (ie 300 to 150 vehicle movements a day). ▪ While heavy vehicle traffic during operations would be around 15 less movements per day (ie 90 to 75). ▪ The Level of Service (LOS) of the surrounding street network is not expected to change during the operation of the project. ▪ ROBE has committed to providing a painted Channelised Right Turn (CHR) and Auxiliary Left Turn (AUL) treatment in accordance with Austroads guidelines at the intersection of Byrnes and Trahairs Road, as well as an upgrade of Trahairs Road to provide access to the site. ▪ The RTA agrees that the modified proposal does not represent any significant traffic related impacts relative to the approved project and is satisfied that the proposed intersection treatment works would safely cater for traffic generated by the modified facility. ▪ Notwithstanding, the RTA has recommended a number of additional conditions which have been incorporated into the modified approval. ▪ The Department is satisfied that traffic impacts associated with the modified plant can be managed.	Recommended conditions require ROBE to: ▪ undertake road safety treatment works at the intersection of Byrnes Road and Trahairs Road prior to the construction of the IOPP; ▪ emergency vehicle access to Byrnes Road in accordance with RTA guidelines; and ▪ parking, driveways, signage, access and internal roads designed according to relevant guidelines and Australian Standards.
Odour	▪ The odour assessment for the approved IOPBP concluded that odour concentrations at all sensitive receptors would not be offensive and comply with the relevant OEH criteria. ▪ An odour assessment prepared for the modified IOPP determined that odour emissions would be less than the approved project and would comfortably comply with the relevant criteria. ▪ Notwithstanding, the existing approval conditions require ROBE to undertake emission validation compliance monitoring to demonstrate performance and monitor in accordance with the site's EPL. ▪ The Department has recommended a further condition be added to the approval requiring contingency measures be implemented should the validation monitoring identify an exceedence. ▪ The Department is therefore satisfied that impacts from odour would be adequately managed.	Recommended conditions require ROBE to: ▪ prepare a revised CEMP for the modified project ▪ undertake additional odour mitigation to the satisfaction of the Director-General, should any exceedences be identified in the odour audit of the facility.
Air Quality	▪ ROBE undertook a detailed air quality assessment as part of the original IOPBP proposal. The assessment indicated that the key sources of emissions from the approved facility would be Volatile Organic Compounds (VOCs), hydrogen sulphate (H₂S), nitrogen oxides (NO₂) and sulphur dioxide (SO₂). ▪ With the removal of the bio-diesel component of the approved project (a significant contributor to VOC emissions), the IOPP is not expected to result in any additional impacts with regards to VOC emissions. ▪ Likewise, predicted NO₂ and SO₂ emissions are expected to be low and similar to that already assessed under the existing project approval. ▪ The OEH supports the proposed modification and has not recommended any additional conditions of consent	Recommended conditions require ROBE to: ▪ Implement additional air quality mitigation measures should any exceedences occur to the satisfaction of the Director-General and OEH.

Issue	Assessment	Recommendation
	relating to air quality. ▪ The Department is satisfied that air quality impacts can be adequately managed.	
Solid Waste	▪ Solid waste generated on-site would include waste from the oilseed crushing plant, vegetable refinery and effluent treatment plant. These wastes would be collected and disposed of by a licensed waste contractor to a licensed facility. ▪ The Department considers that construction and operational waste can be managed through implementation of a Waste Management Plan. ▪ No additional conditions are recommended.	▪ N/A
Noise	▪ A noise impact assessment for the modified IOPP project concluded that: - noise from construction activities would comply with the OEH's construction noise guidelines; - operational noise would comply with the existing noise limits in the Project Approval; and - traffic noise as a result of heavy vehicle movements during operation is expected to be negligible and meet the requirements of the OEH's Environmental Criteria for Road Traffic Noise. ▪ Under the existing Project Approval, ROBE is required to undertake a noise validation assessment to ensure noise emissions meet the relevant noise limits and implement contingencies should exceedances occur. ▪ The Department and OEH are satisfied that noise impacts from the modified project would be negligible.	Recommended conditions require ROBE to: ▪ undertake additional noise mitigation to the satisfaction of the Director-General, should any exceedances be identified in the noise compliance validation of the facility.
Hazards	▪ A Preliminary Hazard Analysis (PHA) for the modified project concluded that the IOPP is not considered potentially hazardous or offensive. ▪ The Department's Hazards Unit has reviewed the PHA and is satisfied that it is consistent with the Department's guidelines, supports its recommendations, and agrees that the facility is not hazardous or offensive. ▪ Given the removal of the biodiesel component of the project, the Department has recommended the removal of a number of hazard related conditions. ▪ The Department is therefore satisfied that hazards and risks associated with the modified facility can be managed.	Recommended conditions require the removal of certain hazard related conditions, including the need to undertake: ▪ a Hazard and Operability Study; ▪ a Final Hazard Analysis; and ▪ a Road Transport Study.
Fire Risk	▪ ROBE's analysis of the potential for plant fire events in accordance with the Department's Hazardous Industry Planning Advisory Paper No.2 and No. 4 concluded that all plant fire events would be contained within the site. ▪ The NSW RFS raised no bush fire concerns with the modified facility and recommended industrial fire fighting equipment be installed on-site. ▪ The Department agrees with ROBE's analysis and has incorporated the NSW RFS's recommendation into the modified approval. ▪ Under the existing consent, ROBE is also required to prepare a Fire Safety Study for the site in consultation with the NSW RFS, prior to the commencement of construction. ▪ The Department is therefore satisfied that risks from fire would be adequately managed.	Recommended condition that require ROBE to: ▪ prepare a Fire Safety Study in consultation with the NSW RFS and include the installation of industrial fire fighting equipment on-site.
Greenhouse Gas Emissions	• A greenhouse gas assessment concluded that both the construction and operation of the IOPP is not considered to be a significant contributor of GHG emissions. • ROBE has committed to the preparation and implementation of an Energy Savings Action Plan for the project, which would be prepared in accordance with the requirements of OEH and the <i>Guidelines for Energy Savings Action Plans (DEUS 2005)</i> in order to maximise energy efficiency associated with the IOPP. The Energy Savings Action Plan would include details of greenhouse gas abatement measures and energy efficiency	• N/A

Issue	Assessment	Recommendation
	measures for the operation of the proposed IOPP. • The Department is therefore satisfied that GHG impacts from the IOPP would not be significant and can be adequately managed through existing conditions of approval.	

All other issues are considered to be minor and able to be managed through the conditions of consent and implementation of standard safeguards and measures.

The Department has assessed the project, in accordance with the requirements of clause 8B of the *Environmental Planning and Assessment Regulation 2000* (the Regulations), and considers that all potential impacts of the project can be suitably managed to ensure an acceptable level of environmental performance is achieved.

5. RECOMMENDED CONDITIONS OF APPROVAL

The Department considers that the proposed modification would not have any impacts beyond that assessed and approved.

The Department has recommended amendments to the current project approval to provide for the modification within the terms of the approval and the management of potential impacts and has incorporated conditions recommended by Council.

6. CONCLUSION

The Department considers that the project would directly support the region's agricultural sector through cereal grain production and vegetable protein meal. This together with the direct economic impact of up to 150 construction jobs and an additional 70 operational jobs are of great value to the local and regional economy.

The Department has assessed the merits of the proposal in accordance with the requirements in clause 8B of the Regulations. This assessment has found that the proposed modification is unlikely to cause any significant impacts beyond that assessed and approved.

With regard to the potential impacts of the modification on the surrounding area, the Department considers that ROBE has provided adequate justification for the increase in building height and scale of the IOPP. Further, the Department is satisfied that the proposed modification is consistent with the strategic planning for the area and considers that future development within the IN1 and IN2 land zones is likely to screen the site and further reduce the impacts of the site to surrounding receptors.

Consequently, the Department is satisfied that the modification should be approved.

7. RECOMMENDATION

It is RECOMMENDED that the Director-General:

- approve of the proposed modification under section 75W of the EP&A Act; and
- sign the attached instrument (tagged A).

Christine Chapman
Industry



F-9-11

Chris Wilson
Executive Director
Major Projects Assessment



Sam Haddad
Director-General
28/4/2011