16 July 2019

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Dear Chris,

Riverina Oils – Blending tank project application

Riverina Oils operates an integrated oilseed processing plant with approval to process 200,000 tonnes of oilseed per year to produce 82,500 tonnes of edible oil and 116,000 tonnes of vegetable protein meal in accordance with Project Approval MP 07_0146 and Environment Protection Licence 13097. The factory is located in the Bomen Industrial Estate (now also SAP – Special Activation Precinct) on the outskirts of Wagga Wagga, NSW and has been in operation since late 2012.

Riverina Oils – Wagga Wagga facility has been accredited by Kosher, Halal, Certified Non-GM world class quality standard. We are exporting our oil across the globe and the US is the major customer.

Riverina Oils has prepared this application document in house for the proposed Blending tank project at their oilseed processing facility. This report provides details of:

- Description of the purpose of modification
- Proposed project details
- Existing process flow diagram and proposed flow diagram
- Description of the expected impacts of the modification

1) Contact Details

a) Applicant Details:
Riverina Oils
177 Trahairs Road,
Bomen, Wagga Wagga, NSW 2650.
ABN : 25 103 697 703
Viral Raval – Environment Manager
PH : 0499 111 246

b) Riverina Oils
177 Trahairs Road,
Bomen, Wagga Wagga, NSW 2650.
ABN : 25 103 697 703
Rakesh Gupta – General Manager Operation
PH : 0429 113 151

2) Description of the purpose of modification (as per Clause 115 of the *Environmental Planning and Assessment Regulation 2000*).

In Current set-up we have 12 oil tanks in main oil tank farm. All tanks are identical having a capacity of 350 KL / 300 tons. Please refer figure 1 for your ready reference.

Figure 1 : Existing Riverina Oils setup showing 12 oil tanks

Currently we / Riverina Oils sell 99 % pure canola oil & only 1 % blended oil, emerging markets are for a high performance blended oil. This is creating demand for blended oil of significant quantities which we cannot make with our existing tanks, to achieve this we have to install another 350 KL similar storage tank with a 50 KL churn tank (blending tank). We will fill the new tank with an oil other than canola oil as per market demand, it could be Sunflower, Safflower oil etc. etc. Oil stored in a new tank is blended with our Canola oil in certain % to make the required blend using a 50 MT churn tank (Blending tank with an agitator & steam heating coil). This new installation of tanks will be located on southern end of the existing tank farm behind tank no. T-201(as per Figure 2 and Figure 3). Blended oil in the churn tank will be loaded into Tankers/flexi bags in our existing load out bay using existing transfer pumps & pipelines.

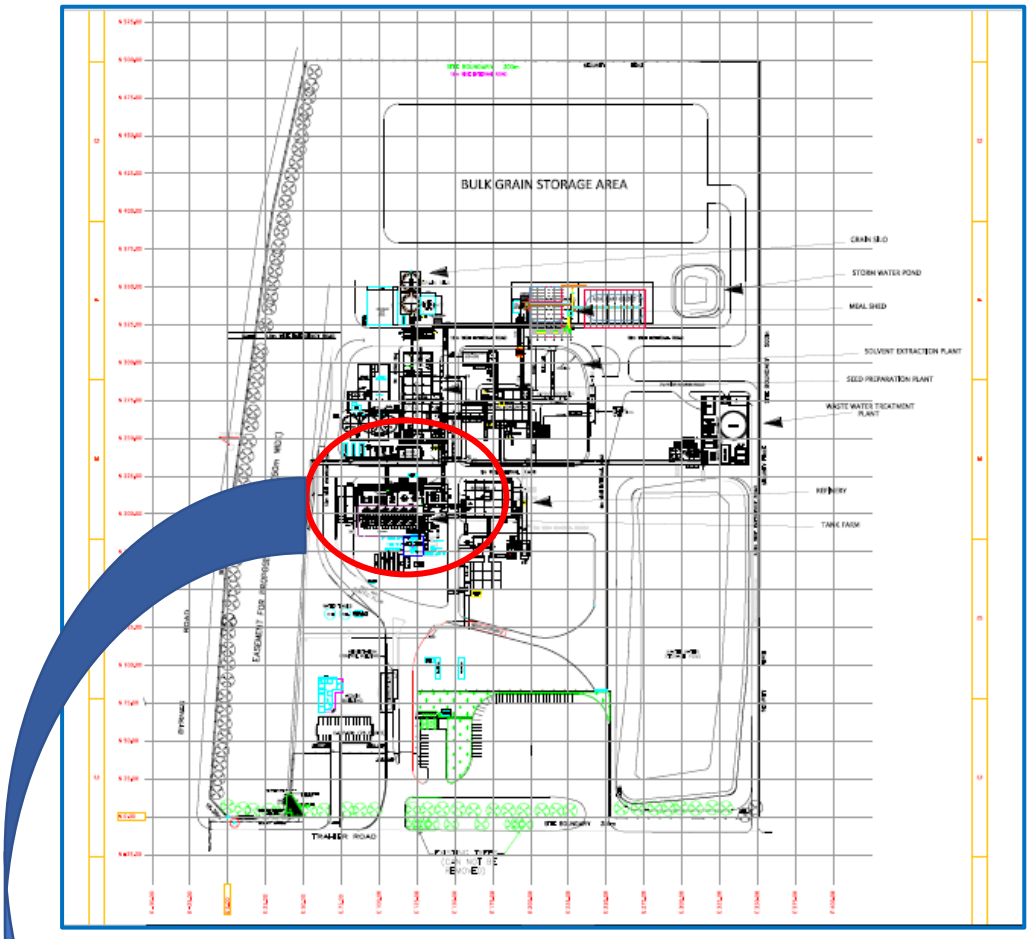

Figure 2 : Site layout & Proposed Blending Tank & Storage Tank at Riverina Oils

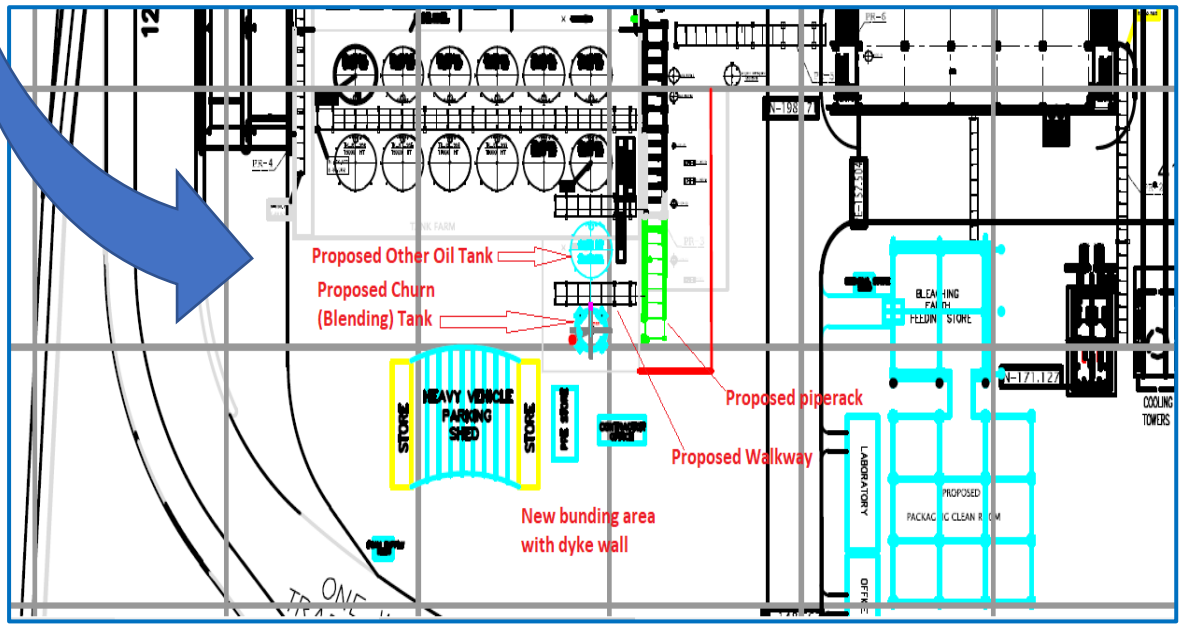

Figure 3: Proposed blending tank and storage Tanks location with dyke wall

Please refer Annexure 1 for site plan showing existing setup and proposed blending tank project on plot plan. Annexure 1 is showing all areas with labels i.e. Plants, Wastewater treatment, Tank farm, Admin building and proposed Tank farm.

Please refer annexure 1a as blending tank project component details in larger view. Further for ease of understanding and comparing all tanks please refer to annexure 1b as the existing tank elevation drawing showing tank diameter and height details. Annexure 1c as proposed **"TK ST 207"** other oil storage tank drawing showing tank height, diameter and elevation details. Annexure 1d as "**CT – 51**" churn tank (blending tank) elevation including tank height and diameter for ready reference. Annexure 1e shows overall height, diameter and elevation of existing tanks vs proposed tanks for easy comparison and Annexure 1f shows panel room architectural drawing.

3) Description of the expected impacts of the modification

As per the development approval Riverina Oils can produce up to 82,800 Tonnes of Edible oil from it's existing facility. With the additional blending tank proposal, it will remain within the licence limit so there will be no production increase beyond approval. Other expected impacts have been considered and discussed in point No. 9.

4) Demonstration that the development as modified, will remain substantially the same as the development as previously modified.

With the new proposal of the blending tank project our production capacity will remain unchanged. Furthermore, all other direct and indirect aspects considered like traffic movement, air emission, waste generation, water consumption etc. will not be impacted by the new proposal. These aspects are all discussed in point No. 9.

Riverina Oils existing and proposed production figure is showed in Table No. 1.

Consent Permissions	Existing Production Capacity	Proposed Production Capacity
Oilseed crushing capacity	200,000 TPA	200,000 TPA
Refined Vegetable Oil Production Capacity	82,500 TPA	82,500 TPA
Seed Meal production capacity	116,000 TPA	116,000 TPA
Vegetable oil storage at a time	3,730 ton	3,730 ton

Table 1 : Consent permission and production capacity (existing and Proposed)

In 2008, the Minister for Planning granted project approval (MP 07_0146) to ROBE for the construction and operation of an integrated Processing plant to process vegetable oil and biodiesel plant.

In 2009 a decision was made by ROBE not to establish the biofuel component of the project. A modification was approved in 2011 to remove the biodiesel component, alter the site layout and increase the facility output from an approved 30,000 tonnes per annum of refined vegetable oil to 66,000 tonnes per annum and reduce the output of vegetable protein meal to 90,000 tonnes per annum.

In 2015 another modification was approved that ROBE could process 200,000 tonnes per annum of oilseed and produce not more than 116,000 tonnes per annum of vegetable protein meal and 82,500 tonnes per annum of refined vegetable oil.

Currently ROBE is experiencing market demand of various blended oil across the globe and the current facility is not able to produce blended oil, hence ROBE is seeking an approval from Department of Planning to grant the permission for blending tank project at ROBE site.

ROBE wishes to install two oil tanks at existing facility with all control measures in place viz. bunding, dyke wall etc. The new project involves some of the new structures, pumps and tank setup which is shown in table 2.

After installation of these two tanks one tank (i.e. ST 207) will be used as another edible oil storage tank. ROBE will buy another oil like sunflower, cottonseed, palm etc. This oil will be from the market brought to site in tankers and filled the tank as per the orders. We will blend the required product in CT 51 tank (proposed blending tank) by taking the relevant blending oil and our canola oil from our existing oil storage tanks making a blend. To blend the oil properly CT-51 tank will have steam jacket coil fitted around the tank and an agitator to mix the two oils properly. Once the oil is blended, it will be loaded on to the truck and dispatch for distribution.

This above said whole activity involves buying edible vegetable oil from outside, though we are not proposing any production increase of existing site. Further, as per schedule 2 condition 7, ROBE will not store more than 27,000 tonnes of oilseed, more than 3,000 tonnes of vegetable protein meal, and more than 3,232 kiloliters of vegetable oil on site at any one time.

5) Description of Existing Operations & process Flow Diagram

Currently Riverina Oils purchases the majority of it's seed from within the Riverina region and further down south through NSW & Victoria based on contracts and seed availability in the market.

Based on MP 07-0146 MOD approval dated 11.11.2015 Riverina Oils crushes approx. 600 Metric ton of seed per day producing 248 Metric ton of edible oils/day and 352 Metric ton animal protein meal/day. If we consider real running time excluding shutdown is around 330 days. The same calculation been adopted for approval. The initial process of expelling the oil from the seed starts in the SPP (Seed preparation Plant), the second and final stage of oil extraction happens in the SEP (Solvent extraction Plant). All animal meal is ready after the SEP plant being stored in meal sheds after the milling operation. Crude and solvent extracted oil is kept in storage tanks and based on market demand we refine it further or make a canola oil blend to sell to customers.

Current operation process flow diagram is shown in figure 4.

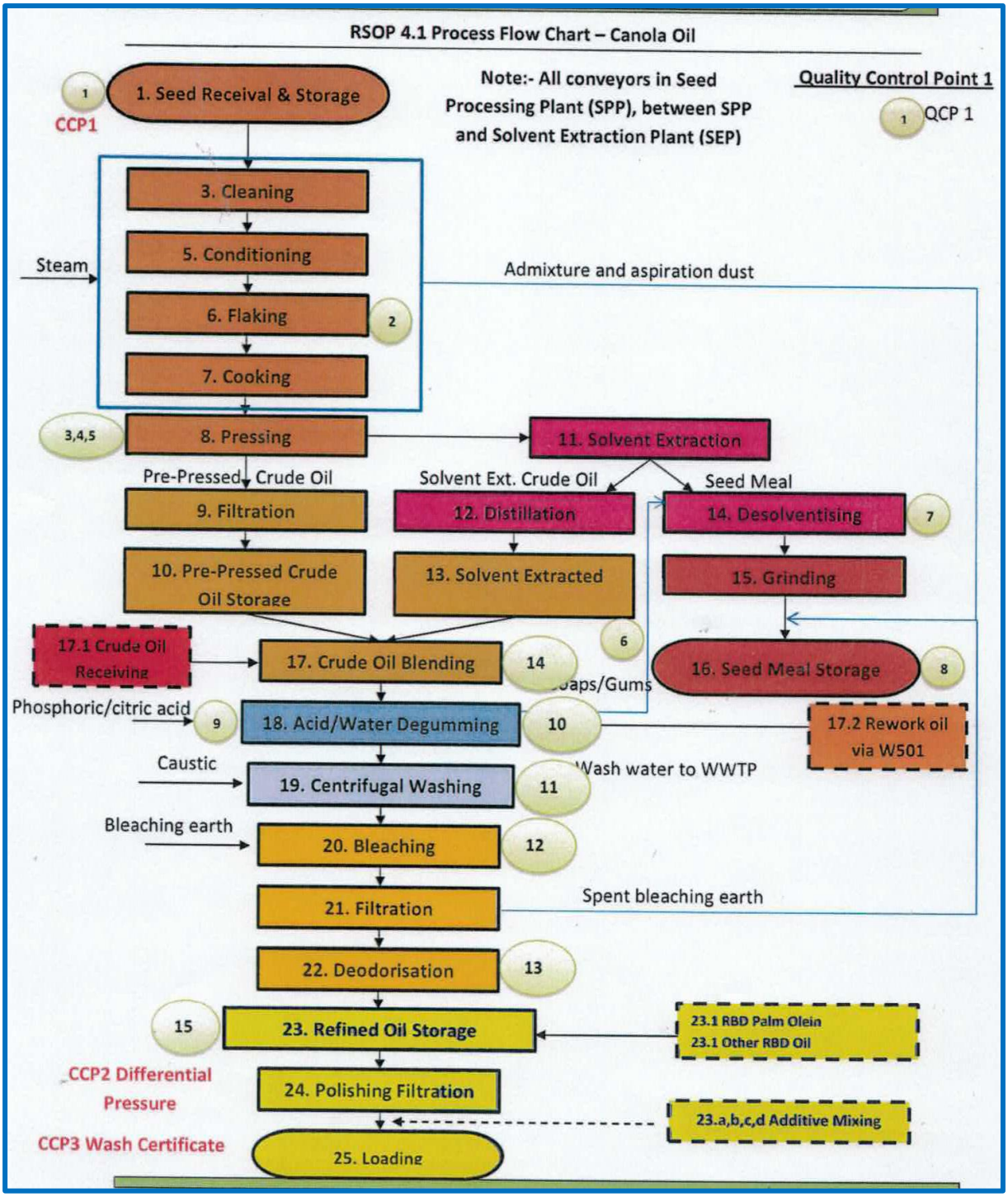

Figure 4 : Riverina Oils Existing Process flow chart

MANUFACTURING PROCESS DESCRIPTION AS PER FLOW CHART – Figure 4.

SEED PREPARATION PLANT

SEED PRECLEANING AND STORAGE

The seed is delivered to site via road in trucks and unloaded into the silos through a seed precleaning section. The seed precleaning section helps to remove any foreign material delivered with the seed, The incoming seed contains a max of 3% admix. The clean seed is conveyed to the silos with any admix collected passed through the destoner to remove all high bulk density foreign material delivered with the seed. The admix is then sent to the hammer mill ground to small particles and then mixed with the vegetable protein meal.

SEED CLEANING

Seed from the silo is taken to the Seed Preparation Plant (SPP)through a secondary cleaning section. In this section seed passes through a batch weighing scale, Destoner and a seed cleaner, to determine the process from rate the seed input rate and cumulative amount is measured at the weighing scale. The destoner removes the stones and all high bulk density foreign material, after which the seed is passed through a second seed cleaner to remove the remaining foreign material by removing the admix. The stones and high bulk density foreign material will be disposed and the admix sent to the hammer mill to be reduced in size and mix with vegetable protein meal.

PRECONDITIONING

After cleaning the seed is taken in preconditioner where the seed is heated and the moisture adjusted as per the process requirements, the preconditioner has four compartments with indirect heating chambers and live steam injection delivered into the process through swipe arms.

FLAKING

The preconditioned seed is then passed through the flaker where the seed passes through two rolls rotating in opposite directions at different speeds, the seed is ruptured to get the oil cells exposed a create and greater surface area for maximum to extraction of oil.

COOKING

The Canola seed flakes are then sent to the cooker where the flakes are heated, and moisture is adjusted as per the process requirements. The cooker has 6 compartments with indirect heating chambers and live steam injection delivered into the process through swipe arms.

PRESSING

The heated flakes are conveyed to a Mechanical Screw press where the oil is expelled from the flakes under pressure, the expelled oil is gravity feed to the oil filtration section to remove any fines and the remaining cake cooled and conveyed to the Solvent extraction plant (SEP) to remove the remaining oil.

OIL FILTRATION

The expelled oil is processed through three stages of filtration including a screening tank, pressure leaf filter and polishing filter. After the polishing filter the oil is cooled down to atmosphere temperature by a cooler and stored in the designated crude oil storage tank.

CAUSTIC SCRUBBING

All the vapour and air from the plant is sent through a caustic scrubbing section to clean and neutralise the H_2S making sure that the vent is pure and clean to the desired EPA norms.

SOLVENT EXTRACTION PLANT

EXTRACTION

The cake from the cooler in the SPP is feed to the extractor, in the extractor the remaining oil in the cake is extracted with the use of a chemical (solvent hexane) by spraying it on top of the cake bed. The cake stacked on the extractor belt Is dosed with hexane through the use of spray bars, the fresh hexane is sprayed over the cake bed from the discharge end by counter currently. The final hexane with oil is discharged by pump out from the extractor and sent to a distillation section. The cake out from the extractor contains hardly any oil and is sent to the DTDC to remove the remaining solvent content and complete drying ready for discharging.

DESOVENTISING TOASTING DRYING AND COOLING (DTDC)

The cake from the extractor is feed to the DTDC where it is further heated above the hexane evaporation temperature of 63 °C to remove the solvent in various stages and with indirect steam heating and live steam injection to de-solventise(evaporate) the extracted cake. Another two stages are to dry the meal by heated air and the last stage is to cool down the meal close to ambient temperature. The meal is then feed through a hammer mill to reduce to a size required by customers and the solvent and water vapour sent to a condenser through a hot water dust scrubber.

DISTILLATION

The miscella collected is sent to a distillation section to remove and recover the hexane from the solvent extracted oil, the miscella is further heated by the vapours from the DTDC and flashed to evaporate the hexane in a distillation column. After distillation the miscella is further heated by the economiser heater and flashed to evaporate the hexane, finally it sent to the stripper where all the hexane is stripped out by introducing live steam into it. The oil is then passed through a vacuum drier and then cooled by a cooler and feed to the designated storage tank.

CONDENSATION

All the water and hexane vapours are sent to the condensers and collected in the hexane water separator. In the separator the pure hexane is separated from the water and sent back to the extractor for further reuse, after recovering the remaining traces of hexane through a reboiler the remaining water is sent to the WWTP for treatment.

SOLVENT RECOVERY

The final vent from the condensing section is passed through the solvent recovery system to recover and return all the solvent into the system. The solvent recovery is done through absorption of the solvent vapour by mineral oil, the mineral oil is then heated to strip out the absorbed solvent from the condenser.

CAUSTIC SCRUBBING

All the vapour and air from the dryer, cooler and final vent from the condensers is sent through a caustic scrubbing section to clean and neutralise the H_2S making sure that the vent to atmosphere is pure and clean to the desired EPA norms.

REFINERY PROCESS PLANT

The ROBE Refining Process Primarily Consists of Three steps as below

1. Acid Degumming cum Neutralisation
2. Bleaching
3. Deodorisation

1. Acid Degumming cum Neutralisation.

Crude oils contain free fatty acids, Phosphatides and trace metals like Iron etc., which have to be removed to produce a stable quality oil after refining. The Phosphatides present in the crude oils in a non-hydratable form, these are first heated and then treated with diluted Phosphoric acid in a high shear mixer where with intense mixing acid reacts with the Phosphatides. The mixture is then treated in a long mix reactor where after retention the non-hydratable phosphatides are converted into hydratable gums.

This mixture is now treated in a second mixing station with a diluted sodium hydroxide solution to react with the free fatty acid and phosphatides, then it is maintained for approximately 30 mins retention for proper reaction and separate of the soaps in a centrifugal separator.

The centrifugal Separators are high speed equipment where the gums and soaps by the difference in the specific gravity are separated as the heavy phase. The separated gums are sent to storage for disposal or addition to meal.

The degummed and neutralised oil after the first separation stage is now sent to the washing section where the oil is first treated with hot water.

The water mixed oil is pumped to a second stage centrifugal Separator where the wash water is separated with any remaining soap particles and other impurities.

The neutralised oil is now dried in a Vacuum drier at around 90 °C under vacuum to remove any traces of moisture.

The Oil is now suitable for the further process of bleaching.

2. BLEACHING

Neutralised oil from the previous stage still contains some traces of phosphatides, soap and other undesirable components like colour bodies, etc. which have to be removed prior to the Deodorisation Process.

Hot oil is first mixed with bleaching earth in a reactor, after the initial mixing the mixture of oil and bleaching earth is transferred to a bleacher which operates under vacuum. Here the oil is first heated and then overflows to the bleaching chambers where the oil is agitated with steam for a pre-determined retention time.

After the intense mixing of oil and bleaching earth the mixture is then transferred to two hermetic vertical pressure leaf filters operating alternatively.

The filtered oil is kept under vacuum to avoid any oxidation and is then passed through a set of 5 micron polish filters to remove any traces of impurities.

Once the first Hermetic filter becomes exhausted the oil earth mixture is switched to the second filter to continue the filtration.

The first filter is now steamed to remove the residual oil from the spent bleaching earth.

Once the steaming operations are completed the filter spent earth is discharged from the bottom through a specially designed valve by means of a vibrator.

All the spent earth discharged contains upto of 20% oil which is sent to be blended into the vegetable protein meal.

The entire operations of the Refinery processing plant are automated and are contained in close loop system without any manual operation, at no point is the oil or any processing aids exposed to eliminate any possibility of cross contamination.

This step of Pre-treatment and Bleaching will remove traces of Phosphatides, soaps and colour bodies like chlorophyll which are unstable compound and if not removed will affect the quality of the oil overtime.

3. DEODORISATION

Bleached oil from the bleacher still has free fatty acids and odoriferous compounds like Aldehydes and ketones.

The Oil is first sent through a deaerator wherein residual oxygen if any is removed.

The Oil is then heated through a series of heat exchangers to a higher temperature before it enters the deodoriser.

The Deodoriser is a vertical stack reactor comprising of several trays operating under High vacuum.

The heated bleached oil enters the Deodorisers first compartment where it is further heated to higher temperature by means of High-Pressure Steam.

The heated oil then cascades down to the bottom trays where dry sparge steam through a culinary filter is injected through Mammoth Pumps, apart from causing vigorous agitation this process strips the volatile fatty acids and other low molecular odoriferous compounds under vacuum.

The Oil travels through the series of trays and after an approximate retention of 60 minutes is cooled inside the deodoriser to a lower temperature, this is accomplished by mixing with the incoming bleached oil there by effecting a large heat recovery.

The Oil is then cooled subsequently by a series of heat exchangers to temperature around 40 °C and passed through polish filters for storage.

The Free fatty acids and other volatile compounds which leave the outlet of the deodoriser are condensed in a specially designed scrubbing system to recover the fatty acids.

The Refined, Bleached and Deodorised oil now has a free fatty acid content of less than 0.05%, Phosphorous content of less than 1 ppm, Trans fatty acid content is less than 0.5% is bland in taste and has high keeping quality.

6) Description of Proposed operation and flow diagram

The blending project will only include 2 additional tanks set up near the exiting tank farm area. We will buy different edible oils from market and based on the order we will make a blend and load a truck at our existing loadout bay. As per the figure 3 new the tanks will be commissioned at the corner of the existing oil tank farm towards the southwest side with additional bunding, piping and pumps. All the proposed list of equipment and other items is mentioned in table 2. Flow diagram of proposed process is shown as figure 5 and new process flow diagram shown as figure 6.

Sr. No.	Item No.	Item Description	Existing	Proposed changes	Comments
1	TK – ST - 207	Other Oil Tank	Not available in existing plant / tank farm	New Tank needs to be installed	Tank capacity is 300 MT and is identical of existing oils tanks
2	CT - 51	Blending Oil Tank	Not available in existing plant / tank farm	New tank needs to be installed	Tank capacity is 50 MT with jacket and agitator. Steam will be used as utility.
3	P203	Oil Pump	Not available in existing plant / tank farm	New pump needs to be installed	
4	P204	Oil Pump	Not available in existing plant / tank farm	New pump needs to be installed	
5	Bunding Area	Tank farm bunding area	Not available at present	Dyke with bunding and impervious flooring with proper draining facility needs to be provided for tank installation.	It will be integrated with main oil tank farm i.e. TF1 or existing tank farm bunding area.
6	PR3	Piperack	Not present	Need to extend the exiting piperack to new tank area for utility and electrical connection.	
7	F203	Filter	Not present	5 micron filter needs to be installed for final filtration of blended oil.	
8	TKAT	Additive Tank	Not available currently		
9	Panel Room	Panel room	Not present	6 X 4 X 3.5 meter high room	

Table 2 : Consent permission and production capacity (existing and Proposed)

Flow Diagram of Proposed Blending Project at ROBE - Wagga

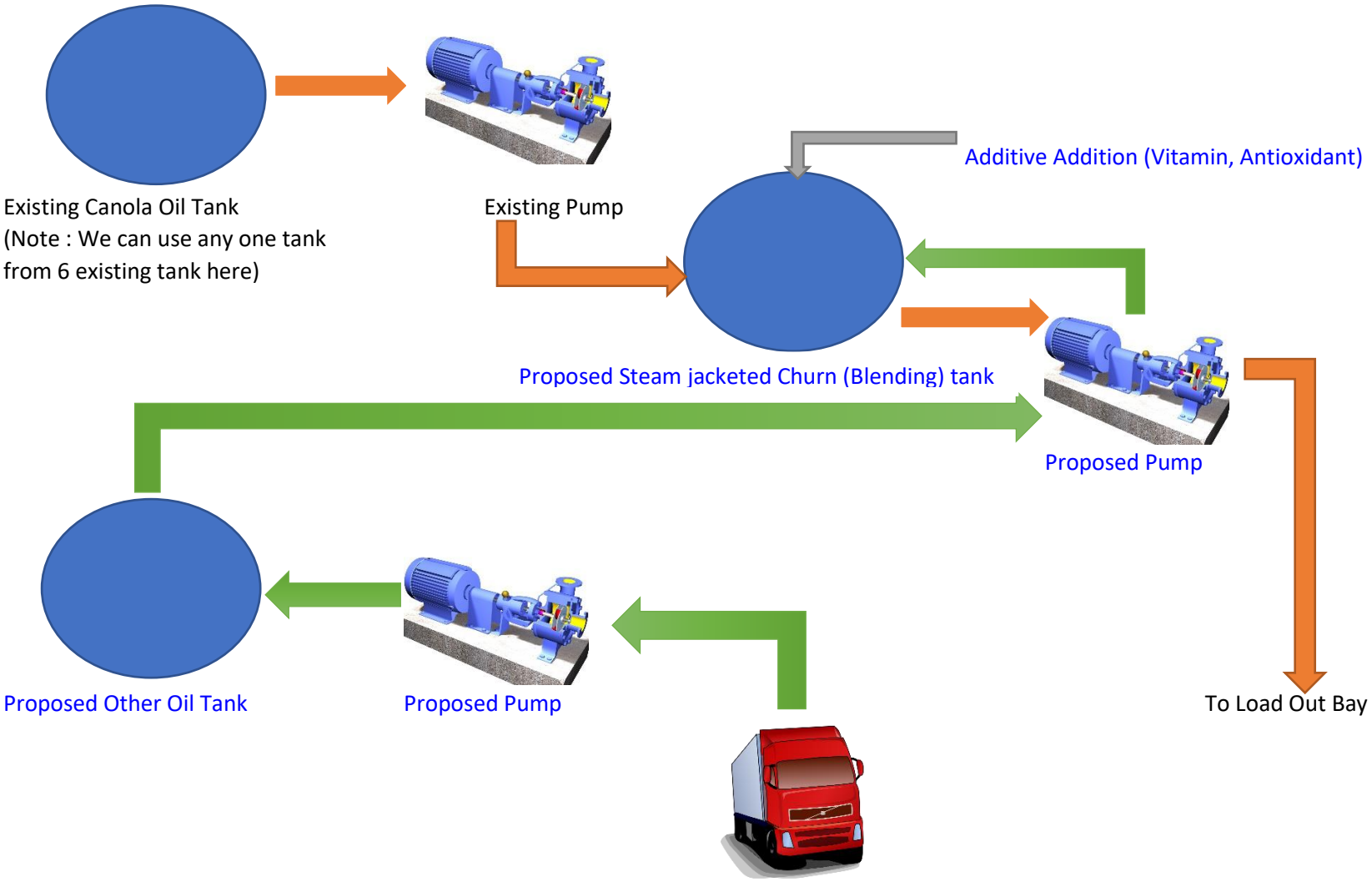

Figure 5 : Process Flow Diagram of proposed blending tank project

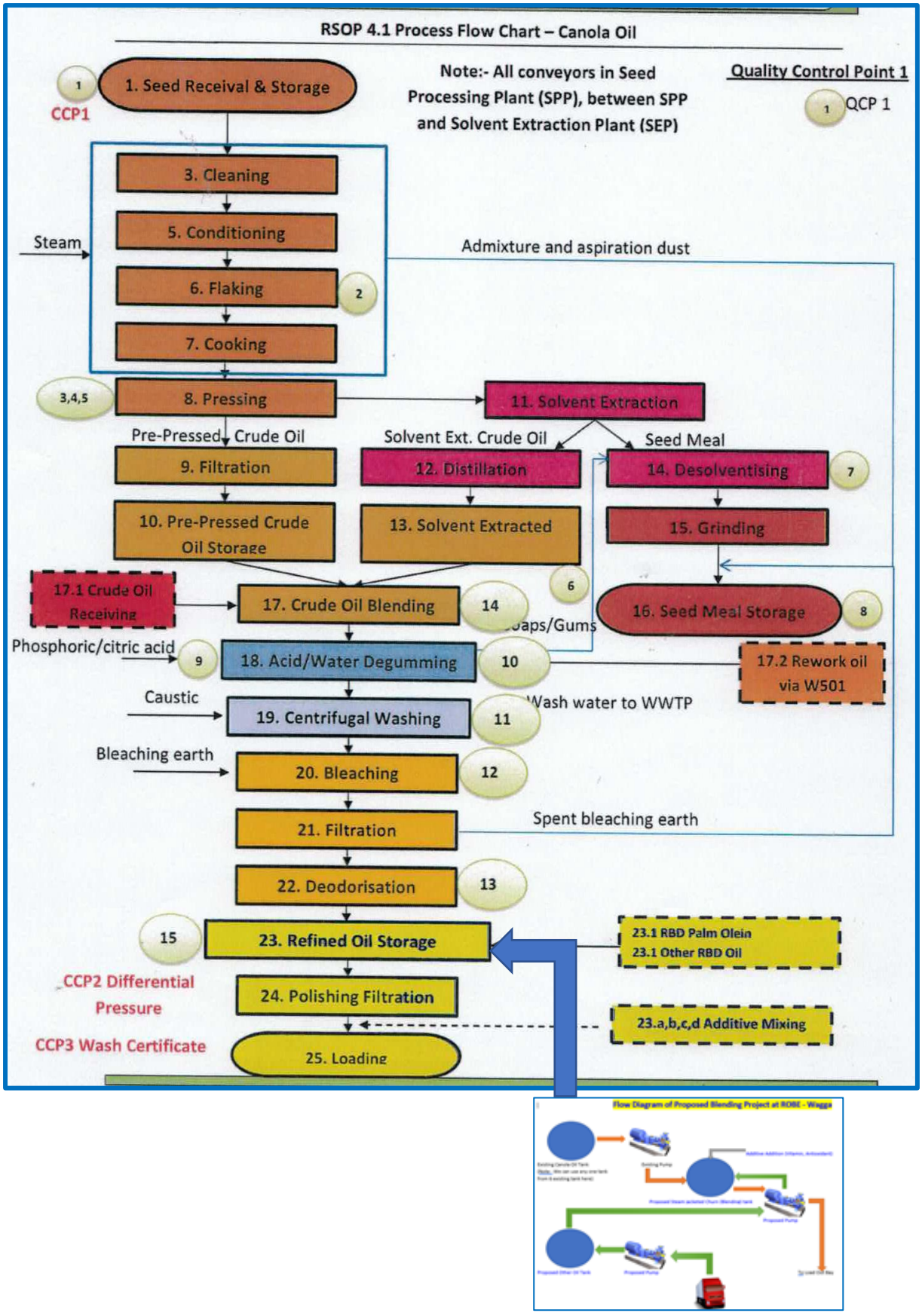

Figure 6 : Proposed Process flow diagram (No change in process just addition of two tanks and loading to trucks after blending

Proposed activity only happens after point No. 23 of process flow diagram shown as figure 6. There will be no relation with production with this approval. We will utilise same loadout facility to unload the oil. Proposed blending tank process P&ID diagram is attached as annexure 1g.

7) Hazard Analysis: Please refer attached another separate report.

8) Waste Management:

During construction some project waste will be generated like construction waste, metal steel scrap, electrical cables, cotton rags, plastic bags, packing viz. cardboard and wooden pallets, welding rods etc. We will follow our Waste management plan during operation where no additional waste is being generated as it's only the purchasing of oil and selling back to the customers. For more details, please refer our Waste management plan as annexure 1h.

9) Impact on other Environmental Factors

There are many environmental factors that have been considered in relation to the proposed blending tank projects. Riverina Oils has considered Noise, Air emission, Utility i.e. Air , water and steam, traffic and parking, visual impacts as below:

9.1 Noise and Vibration : The proposed tank farm project involves commissioning of 2 tanks and their connected pipeline, cable work and earthwork on site during construction phase. With no major construction jobs except the tank foundation works and the tank setup with cranes neither task emits any noise during operation, the operation of pumps will generate noise though it will be within approved limits. The department of Planning and Environment CoA 24 and Environment Protection Licence 13097 Clause L4.1 specify the following noise limits for the existing ROBE facility are as follows:

Noise Limits (dB(A))

Day	Evening	Night	Night	Location
$L_{Aeq\ (15\ minute)}$	$L_{Aeq\ (15\ minute)}$	$L_{Aeq\ (15\ minute)}$	$L_{A1\ (1\ minute)}$ or $L_{A\ max}$	
35	35	35	45	At any residence or other sensitive receiver

As a part of MOD 2 approval after the successful production increase ROBE has completed a noise assessment by GHD in July 2016. In this Noise monitoring we have identified & considered 9 nearby receptors in the study. Please refer Table 3 and figure 7 which is showing surrounding receptor locations. We have considered 3 different points outside the ROBE fence as a monitoring location which can be seen in figure 8.

Receiver	Easting	Northing	Distance to site boundary (km)
R1	537248	6121739	1.5
R2	537625	6121799	1.9
R3	538090	6121848	1.0
R4	537968	6122862	1.5
R5	537760	6123116	1.75
R6	538140	6123263	1.5
R7	538268	6123807	1.9
R8	540329	6119814	1.9
R9	540594	6119575	2.25

Table 3 : Surrounding sensitive receptors

Figure 7 : Site Boundary and surrounding sensitive receptors

Figure 8 : Site Monitoring location

Based on noise study table 4a shows noise monitoring results at three corner boundary locations (L1 to L3) for two 15-minutes measurement (M1 and M2).

	Location 1 (L1)		Location 2 (L2)		Location 3 (L3)	
	M1	M2	M1	M2	M1	M2
L_{Aeq} site contribution[1]	**41.5**	**42.1**	**47.2**	**49.1**	**44.5**	**45.1**
Low frequency check (LCeq – LAeq)	**11.4**	**11.0**	**9.9**	**8.8**	**15.2**	**14.9**
Measurement commenced	20:07	20:22	21:09	21:24	19:55	20:10
Measurement ceased	20:22	20:37	21:24	21:39	20:10	20:25

Table 4a : Site Monitoring results dB(A)

Receiver	Noise limit	noise level	Compliance with the noise limit
R1	35 $L_{Aeq(15min)}$	23	-12
R2	45 L_{Amax} or $L_{A(1min)}$	25	-11
R3		26	-9
R4		25	-10
R5		26	-9
R6		26	-9
R7		24	-11
R8		19	-16
R9		17	-18

Table 4b : Noise levels at surrounding sensitive receptors from existing operations, dB(A)

Further, Noise levels from the ROBE facility at sensitive receivers are shown in Table 4b and comply with EPL 13097 Clause L4.1 noise limits.

Low frequency characteristics are not expected to be audible at the receiver location, however noise emission would be compliant with the noise limits if a 5 dBA penalty was applied for low frequency noise characteristics.

There are no significant LAmax or LA1 events therefore the LAmax / LA1 noise emission from the site are compliant with the noise limits. Please refer annexure 2 - Noise Monitoring report for Riverina oils as a ready reference.

9.2 Air Emission: Proposed blending tank project does not include any emission stack or any chemicals in tanks which can emit any fumes or CO_2 into the atmosphere. We will keep the Oil under nitrogen blanketing to prevent the oil vapours escaping from the oil tanks via the breather valve. There will be marginal greenhouse gas emission and it will reflect in our energy bills as our electricity will be increase but we will remain well below the limit of 48,844 KWH/ day as per the Environment assessment report. There will be no dust emission from the project either from the construction phase as it includes foundation and concrete works, or from the operation phase when tank will be commissioned and starting dispatch of oil.

As per GHD odour audit in April 2014, there is a minor localised 'oily' odour associated with this part of the plant (refer page 34 – section 5.2.6 of annexure 3A). Which is insignificant and basically product aroma only. Please refer attached annexure 3A - Odour assessment study for ready reference.

Further, Annexure 3B - Air / odour Management Plan prepared by GHD in April 2018 also considered oil tank farm as diffusive source of odour only as per page No. 29 – 5.2.6. which is insignificant and hence not considered any mitigation measure to be taken on this in report (please refer page No. 34 – point 6.3).

As a part of Air monitoring ROBE has engaged the services of GHD Pty Ltd (GHD), GHD reviewed and reported on quarterly air emission monitoring laboratory data for the Bomen facility until Jan 2017 which was requirement after the MOD 2 approval. From Jan 2017 we have then engaged with Airlabs Environmental Pty Ltd (Airlab) to undertake the sampling and laboratory analysis. Airlab is NATA accredited for emission sampling and laboratory analyses as requested for the quarterly monitoring event. Airlab conduct quarterly sampling of three (3) air emission points for a range of parameters specified in the ROBE EPL #13097.

The emission to atmosphere from the ROBE plant is permitted at seven discharge points, the in-stack concentration limits for specified pollutants at each point are specified in section L2 of EPL. They are presented in below table - 5. Recent Q – emission testing report is attached herewith as ready reference as annexure 3C.

EPA ID Number Discharge Point, DP	Type of monitoring	Required for monitoring after 23 February 2015	Location Description	In-stack concentration limit 100 percentile limit
2	Discharge to air	Yes	Combined vent servicing	H2S – 5 mg/m3
3	Discharge to air	Yes	Solvent extraction plant scrubber	VOCs - 40 mg/m3 H2S – 5 mg/m3
14	Discharge to air	Yes	Filter blowing vapour scrubber	VOC – 40 mg/m3 H2S – 5 mg/m3

Table 5 : Summary of EPL 13097 requirements – in-stack concentration of pollutants

EPA Identification No.	EPA Location Description	EPA Emissions Parameters (Conc. Limit in mg/m³)	2018-19			
2	Combined Vent Servicing TAG704,705,2705,2713 & 2782C	H_2S (5)	<0.2	<0.2	<0.2	<0.2
3	Solvent Extraction Plant Scrubber	H_2S (5)	3.6	4.1	4.4	4.0
		VOC (40)	0.35	<0.03	<0.03	<0.04
14	Filter Blowing Vapour Scrubber TAG 629 & 6325B/532B	VOC (40)	6.8	25	9.3	18
		H_2S (5)	4.0	0.61	0.15	2.7
Date of Testing			05.07.19	25.09.18	07.01.19	01.04.19

Table 6 – Quarterly Air emission testing repots data for 2018-19

As seen from table 6 ROBE is conducting Quarterly emission monitoring with Airlab and all results are well within the limits. The proposed blending tank project will have insignificant air and odour issue based on the above reports as this will be the same oil in the tanks.

9.3 Utility consumption: Proposed blending tank project will use some marginal steam but overall water consumption will remain same. There will be no additional gas consumption required as we currently have a boiler in place which is generating steam. No water is being used as its just storage

of oil and dispatch of oil, no addition of cleaning of tanks is involve during operation hence there will be no water consumption and wastewater generation from the proposed project. All rainwater collected in bunding area will be sent to the WWTP for treatment, this will ensure there will be no soil pollution if any canola oil particle is mixed with the water. At WWTP, oil will be collected on FOG separator and the remaining water treated via primary, secondary and tertiary treatment process.

9.4 Traffic and Parking : As mentioned above traffic will increase by one truck per day which we can accommodate in our outside car park area to avoid any congestion on Trahairs road. Riverina Oils uses radio to communicate with each truck drivers to register when they come to site, based on site access and availability of space in the factory a Gatehouse employee will allow the truck to come in for safe and easy traffic movement inside factory. As per AEMR 2018 report we were using only 29 trucks against approval of 37 trucks/day and the addition of one more truck per day will not affect existing traffic management plan. Please refer annexure 4 - traffic management plan attached herewith.

ROBE has engaged GHD for post commissioning validation in June 2014. This report includes noise study from traffic movements at nearby 3 (three) receptor locations as shown in table 7. Receptor locations where noise sampling has done is shown in figure 9.

Receiver	Easting	Northing	Distance to site boundary (km)	Attended Noise Monitoring Location
R1	537248	6121739	1.5	
R2	537625	6121799	1.9	L3
R3	538090	6121848	1.0	L2
R4	537968	6122862	1.5	L1
R5	537760	6123116	1.75	
R6	538140	6123263	1.5	
R7	538268	6123807	1.9	
R8	540329	6119814	1.9	
R9	540594	6119575	2.25	L4

Table 7 : Sensitive receptors details

Figure 9 : Noise Monitoring locations

Conclusion from this study indicates that ROBE is compliant with their traffic noise / noise level at receptor end. Please refer attached Annexure – 5 (ROBE Compliance Noise monitoring report Aug 2013).

9.5 Visual Impacts : The current approval for ROBE with a maximum height of 27.6 meters and ancillary structures (gravity chute) with a maximum height of 33.6 meters. Proposed blending tank project will have two major components i.e. tanks having 15 and 12.5 m height. Currently we have 12 oil tanks in the main oil tank farm and all tank heights are same i.e. 15 meters. Proposed blending tank will be part of existing the tank farm and will be installed on the southwest side of the existing tank farm. Additionally, ROBE is proposing to install 2 new pumps and additive dosing tanks which require power, this will require an additional MCC room near the existing tank farm MCC. Details of the existing and proposed structures are shown in table No. 8. Please refer annexure -1 for exact location and layout of tanks along with ancillary structures for proposed blending tank project.

Main Building component		
Element	**Approved**	**Proposed**
Oilseed Crushing Plant	• Dimensions 39m X 24m X 29m high	
Solvent extraction Plant	• Dimensions 30m X 26m X 22.5m high	
Meal storage Shed	• Dimensions 50m X 25m X 17.5m high	
Vegetable Oil refinery	• Dimensions 24m X 37m X 27m high	
Storage Silos	• 4 silos upto 20m high	
Gravity Chute	• Up to 27m high	
Storage Tanks	• Maximum 24 tanks at 15 m high • Maximum 7 tanks at 8m high	• Approval taken for 24 but installed only 12. • One tank at 15m high and • Second tank at 12.5m high
MCC room for power	• Not previously as a part of proposal	• Dimension 6m X 4m X 3.5m high
Reverse Osmosis wastewater building	• Dimensions 12m X 20m X 5 m high	
Administrative Building	• Dimensions 21m X 12m X 6m high	
Associated Infrastructure	Bleaching earth storage building, weigh station and truck covers, laboratory and workers amenities building, truck cover areas, switch room building, workshop and boiler house, grain hopper.	
Site Access	• Main entrance off Trahairs road. • Emergency entrance off Byrnes road.	

Table 8 : Approved and Proposed building and ancillary structures with their dimensions (Please note "m" = Meter in above table)

Environment assessment for ROBE site was done by Lennon Salvestro Planning in August 2010 which includes visual impact assessment (Section 13 of the document) of the site. Please refer annexure – 6 as Visual impact assessment for ready reference.

Please refer below figure showing receptors near ROBE site.

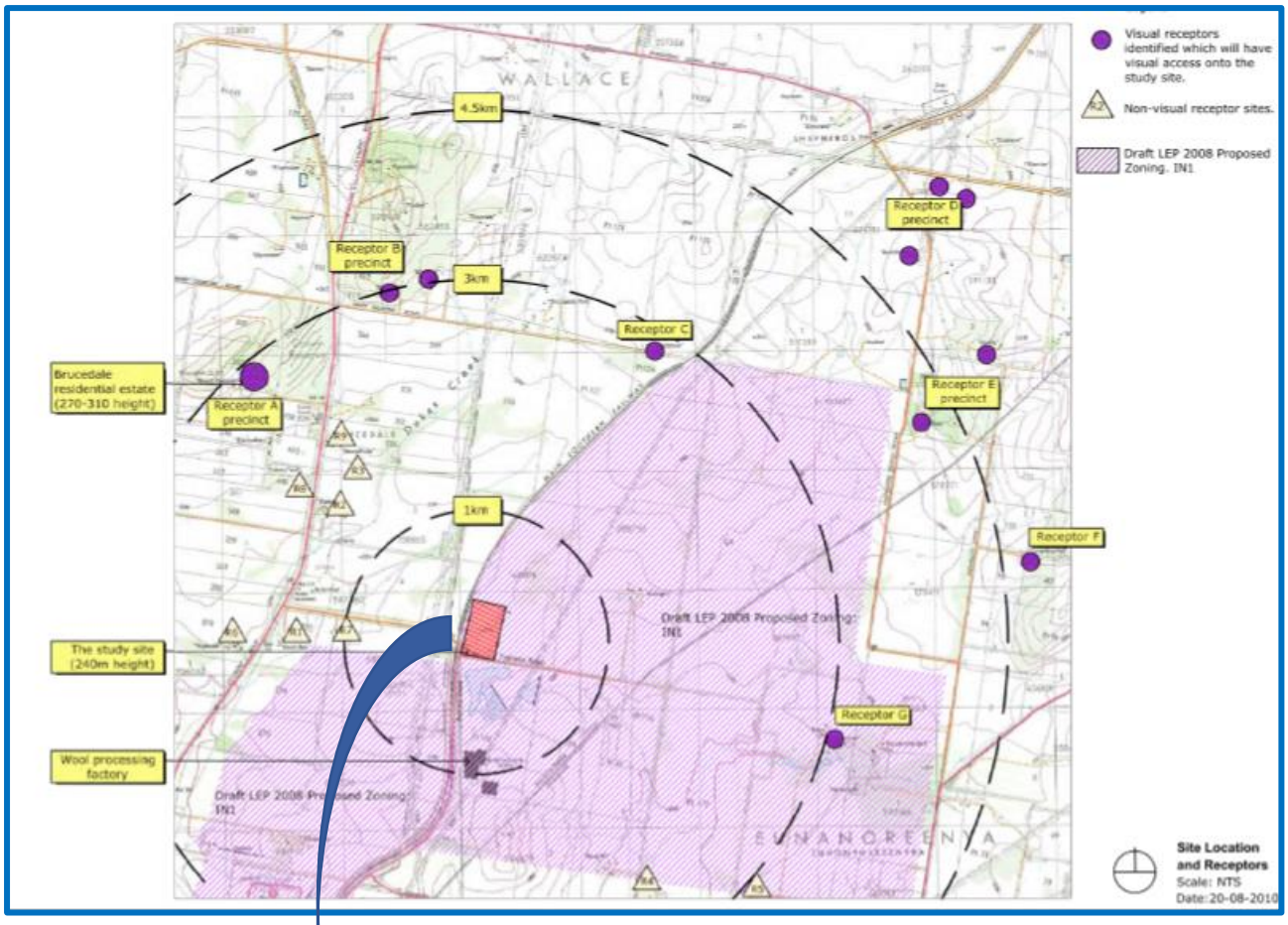

Figure 10 : Visual receptors across ROBE site

Proposed Blending tank project Area

From the proposed project two new tanks and one MCC room will be the only structures coming and situated on the southwest corner of exiting oil tank farm. From all directions visual impact has been considered and is shown in table 9.

Sr. No.	Side	Receptor	Impact
1	North	C & B	No impact as tank is screened by existing oil tanks and SPP SEP plant
2	North-West	D & E	No impact as screened by SEP and REF plant
3	West	F G	Not visible from here due to SEP building Visible from here but no major impact as per visual assessment report
4	South-west	No receptor	No impact
5	South	No receptor	No impact
6	South-East	No receptor	No impact and screened by tree at byrnes road and Trahairs road
7	East	No receptor	No impact and screened by tree at byrnes road
8	North-East	Receptor A	No impact as screened by existing oil tanks and tree line on byrnes road

Table 9 : Visual Impact receptor across ROBE site - Bomen

From above table only receptor G can view the proposed tanks and rest of the receptors are already screened by either tree line or existing plant structures and tank farm. As per visibility assessment of the report based on site visit and physical analysis, three of these seven receptors (C, E and G) were considered to be unaffected and did not require additional consideration.