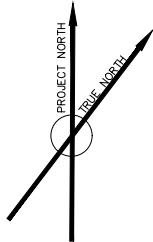
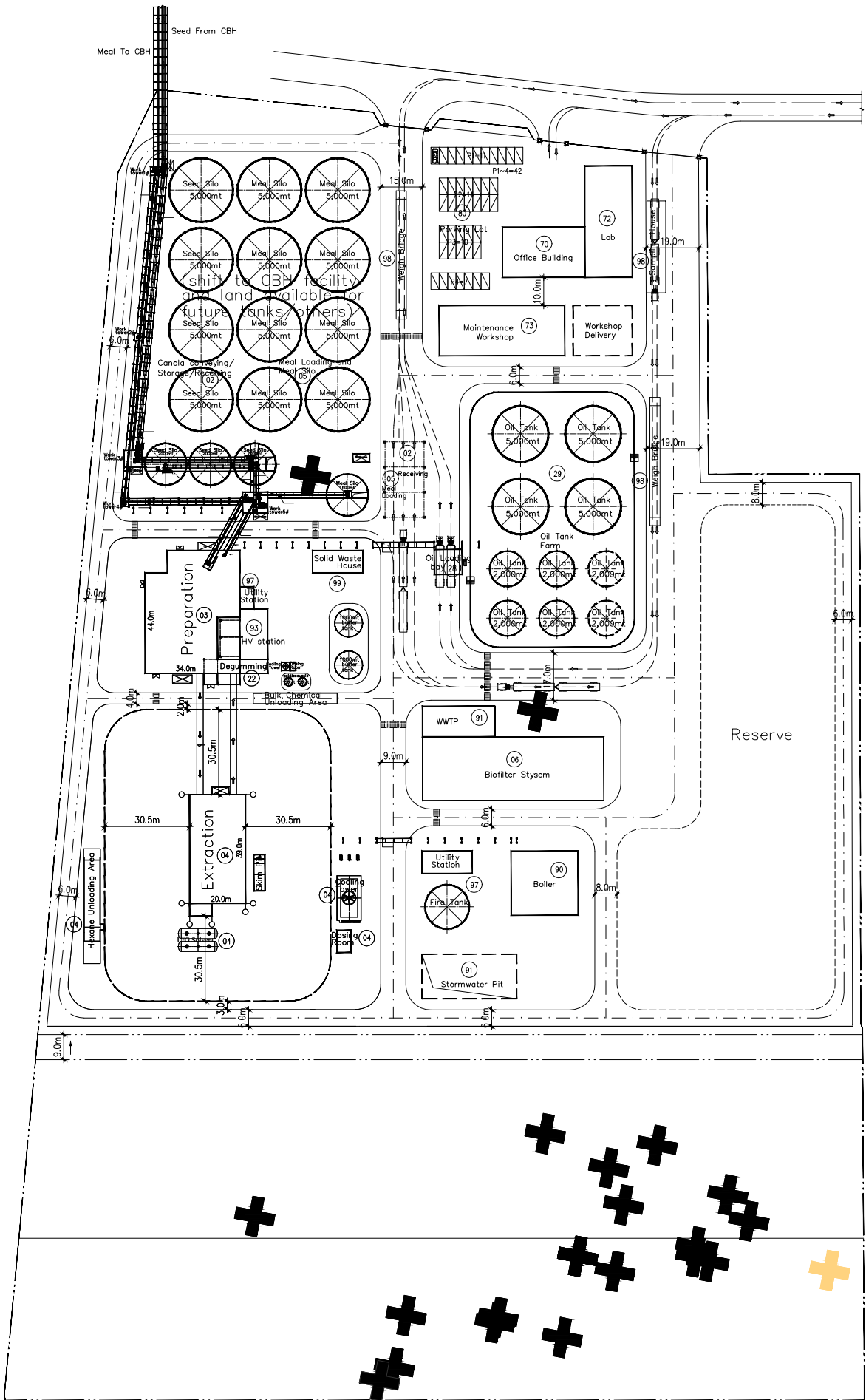


**ATTACHMENT 2  
CONCEPT LAYOUT**

CRUX PROJECT GENERAL PLOT PLAN



Area Code	Area Description
00	General
02	Canola Conveying/Storage/Receiving
03	Preparation
04	Extraction
05	Meal Loading and Meal Silo
06	Biofilter System
22	Degumming
28	Oil Loading Bay
29	Oil Tanks Farm
30	Pipe Rack
70	Office Building
72	Lab
73	Maintenance workshop
80	Parking Lot
90	Boiler
91	WWTP & Stormwater Pit
93	HV Station
97	Utility Station
98	Weight Bridge & Sampling House
99	Solid Waste House



CHINA GRAIN WUHAN SCIENTIFIC RESEARCH & DESIGN INSTITUTE

Checked	LI B.	CRUX PROJECT	Project	CRUX
Designed	LU Y.G.		Phase	II
Drawn	LU Y.G.	GENERAL PLOT PLAN	Drawing Number	CRUX-00-PP
Date	2024.08.09		Revision	0T

**ATTACHMENT 3  
REVISED PROJECT DESCRIPTION**

## 1. Project Description

Cargill Australia Limited (Cargill) proposes to build an oilseed crushing plant adjacent to the Co-Operative Bulk Handling (CBH) Kwinana Grain Terminal in East Rockingham. The maximum capacity of the proposed plant would be 3,000 tonnes per day (tpd).

At a high level, the components of the oilseed crushing plant will encompass:

- Oilseed truck logistics facilities (seed silos).
- Oilseed processing, with the solvent hexane.
- Meal storage & loading out facility.
- Crude degummed oil (canola) storage & loading out (oil pipe to the jetty).
- Natural gas boiler.
- Wastewater treatment plant.
- Compressed air station.
- Firefighting facilities.
- Weigh bridges.
- Switchgear station & MCC room.
- Buildings including offices, laboratory, maintenance facilities, other utilities, and truck parking areas.

Subject to further discussion with Western Power, the site may also need to allow space for Western Power's substation, including the step-down transformer and switchgear.

### 1.1 Operational plant process and equipment

The key processes to be undertaken at the facility for the processing of oilseeds are as follows:

- Storage – Oilseeds are unloaded in receival pits and stored onsite in vertical steel silos.
- Preparation/Pre-pressing – Preparation includes such steps as cleaning, sifting, drying, preheating, dehulling, flaking and screw pressing. Pre-pressing splits the seed, ruptures the oil cells, and prepares the product for the solvent extraction plant.
- Solvent extraction – Extraction involves washing the product with solvent to obtain the seed oil, with meal as a product. The seed oil is produced with a small component of hexane present and is further processed and refined through distillation to remove the hexane. The meal undergoes a heating and drying process to remove hexane and moisture, with the final meal product sold as a protein source for feedstock.
- Neutralisation – Involves neutralising the fatty acids in the oil with caustic soda and phosphoric acid.
- Refining – Involves a bleaching process where trace metals and other impurities are removed from the oil using absorbing clay. The oil may then undergo a deodorisation stage where additional impurities are removed under temperature and vacuum. This stage is only a possibility at this point.
- Product Storage – The refined oils are stored in bulk storage tanks.
- Domestic and Process Wastewater Management – The onsite sources of process wastewater are the boilers, cooling towers, pre-press facility, the biofilter, the extraction facility and refinery. This water is collected and directed to the wastewater treatment plant onsite and then via a pump station on to the Water Corporation's Industrial Wastewater Treatment System.

## 1.2 Process Infrastructure Detail

Generally, construction materials for the plant design would include:

- Transfer conduits (pipes, ducting, etc.,) would be constructed of stainless steel to prevent steam corrosion
- Storage silos (meal and seed) and oil tanks would be constructed of either painted carbon steel or stainless steel
- Treatment process units and conveyor systems would use a mixture of materials such as carbon steel, stainless steel, aluminium, and plastic or composite materials
- Bunding and secondary containment infrastructure would be constructed out of concrete.

The oilseed crushing plant would be designed in accordance with the National Fire Protection Association (NFPA) 36 *Standard for Solvent Extraction Plants* (NFPA 36) as well as Australian and New Zealand Standard *Electrical Installations* (AS/NZS 3000:2018) as relevant. Storage tanks for combustible and flammable liquids (such as those proposed within the oil tank farm) would be designed in accordance with Australian Standard *The storage and handling of flammable and combustible liquids* (AS 1940:2017). Other process chemicals such as acid and caustic soda would be stored and handled in accordance with Australian Standard *The Storage and Handling of Corrosive Substances* (AS 3780:2023).

### 1.2.1 Receival Infrastructure

Seed would be delivered to the plant via two methods:

1. Conveyor system from neighbouring storage at CBH (refer to item (02) on concept layout plan): the conveyor system would operate at a maximum capacity of 500 tonnes per hour for the transfer of seed from the CBH facility to the onsite storage silos.
2. Onsite Truck Receival (refer to item (02) on concept layout plan): trucks would unload seed into receival hoppers for transfer to the onsite storage silos at a maximum rate of 500 tonnes per hour.

### 1.2.2 Seed and Meal Silos

Once received, canola seed would be stored in one of three storage silos, each with a capacity of 2,000 metric tonnes. Seed will be discharged from storage and transferred to the preparation building using a system of screw conveyors, drag conveyors, and bucket elevators.

Onsite meal storage facilities would include one meal silo and would have a capacity of 1,500 metric tonnes. Meal would be transferred to the CBH facility via the same conveyor system described in **Section 1.2.1** for shipping or unloaded via truck directly from the onsite meal silo (refer to item (05) on concept layout plan).

A designated footprint for additional onsite seed and meal storage has been included in the plant design and would comprise eight meal silos (each with a capacity of 5,000 metric tonnes) and four seed silos (each with a capacity of 5,000 metric tonnes). However, existing seed and meal storage facilities at the neighbouring CBH facility may be utilised with the conveyor system proposed ensuring connectivity between the two facilities as needed. Under either arrangement, seed would be transferred to the preparation building from storage via the proposed screw conveyors, drag conveyors, and bucket elevator system.

### 1.2.3 Preparation Building

Seed received at the preparation building (refer to item (03) on concept layout plan) from the three seed storage silos would be weighed and then cleaned using rotary screens to remove debris. Clean seed would then be fed into a vertical conditioner that heats and softens the seed for flaking. The conditioned seed would be pressed through flakers, as to reshape the round seed

into small discs or flakes. Flaked canola seed would then be heated in a horizontal rotary cooker to release the internal oil.

The hot treated flakes would then be fed into expellers (screw presses), for the extraction of roughly half the oil from the seed. The expelled oil, mixed with fine solids, would be discharged to a drag tank, and the remaining solids would be discharged by the expellers. Oil from the tank would then be fed into centrifuge units (decanters) to separate the fine solids from the oil. The oil would then be sent to and stored in the crude oil tank within the oil tank farm (refer to **Section 1.2.6**) prior to the refining stage (refer to **Section 1.2.5**), while solids from both the bottom of the settling tank and solids expelled from the decanters would be added to the pressed cake for further extraction within the extraction building.

#### 1.2.4 Extraction Building

Solids discharged from the preparation process would be conveyed to the extraction building (refer to item (04) on the concept layout plan) via a drag conveyor into a extractor screw feeder which acts as a plug to create a seal that prevents vapours (including hexane and water vapours) from exiting the extraction system and/or escaping back to the preparation building (more details on proposed extraction system is provided in **Section 1.4.1**). The extractor proposed is a shallow bed movable chain type, where chains and flights drag the material over a fixed screen, dropping it from the upper deck onto the bottom deck. At the end of the bottom deck, the material would then be discharged into a vapour-tight drag conveyor.

While the material is being transported through the extractor, miscella (the liquid portion obtained from extraction processes comprising oils, solvents and entrained meal) would be spread over the extractor bed through various recycle pumps. The miscella would progress counter-current to the material and would leave the extractor through the hopper at the inlet. Concentrated miscella would discharge from the extractor into a full miscella tank. Hydroclones would be used to remove fines from the miscella before it is pumped further to the distillation system. Recovered fines would be distributed on top of the bed in the extractor.

At this point in the extraction process within the extraction building, miscella requires further refinement to produce oil product (refer to **Section 1.2.4.1**) and the wet-meal requires further refinement to produce meal product (refer to **Section 1.2.4.2**).

##### 1.2.4.1 Miscella refinement

Miscella from the full miscella tank would enter the 1<sup>st</sup> Stage Evaporator from the bottom inlet nozzle where it would become heated. The heat would cause the miscella to rise in the evaporator column and enter the dome separator, a cyclone-type separator fixed on top of the 1<sup>st</sup> Stage Evaporator, where it would become separated from the gases. Concentrated miscella would then flow into the Oil/Miscella Interchanger and become heated with the crude oil from further in the system.

The pre-heated miscella would then enter the 2<sup>nd</sup> Stage Evaporator where it would become heated by steam to further concentrate the miscella. The concentrated miscella leaving the 2<sup>nd</sup> Stage Evaporator would then flow to the final oil stripper, where it would be stripped with live steam from the last solvent.

The resulting oil would pass through a plate heat exchanger oil cooler and then be sent for storage in the oil tank farm (refer to **Section 1.2.4.2**) or sent directly to the refinery (refer to **Section 1.2.5**) without further cooling and then to oil storage in the oil tank farm. Condensers,

evaporators, and strippers within the extraction process are proposed to work under a vacuum system created by various steam jet ejectors.

#### 1.2.4.2 Wet meal refinement

Wet meal arriving from the extractor would be fed into the Desolventizer-Toaster (DT), a vertically oriented cylinder with multiple trays that are steam heated. The solvent-laden meal would enter the top of the DT and fall onto the first set of steam-heated trays. The meal would be evenly distributed, spread, and transported through calibrated rectangular openings in the decks by sweep arms installed in each compartment. The top trays mainly remove solvent from incoming meal by indirect steam heating.

After passing through the top trays, the meal would then drop onto the lower sparge steam trays. Through these decks, sparge steam would contact the meal directly and travel upward with the vapours counter-current to the direction of the meal. The lowest compartment would be equipped with a steam chamber for the introduction and uniform distribution of live steam, for the stripping of the final solvent from the meal and allow venting up through all the above DT trays.

Vapours exiting the DT are scrubbed by a cyclone-type Solvent Scrubber installed on top of the DT, which would send back any fines recovered after separation. Meal exiting the DT would be transported via drag conveyor to Meal Pelletizers, then to a Pellet Cooler before being conveyed to either the onsite meal silos or neighbouring storage at CBH.

#### 1.2.4.3 Solvent vapour recovery

Solvent vapour recovery would involve the condensation of solvent vapour from evaporator stages and strippers using evaporation and stripper condensers, all operating under a vacuum system maintained by steam jet ejectors. The condensates would be combined in a solvent/water separator to separate the solvent for reuse, with the resulting wastewater heated in the Re-Boiler or recovered via flash steam before discharge. Fresh solvent would be introduced from underground hexane storage tanks (refer to **Section 1.4.3**).

Vent gases would flow through the extractor condenser, and uncondensed gas and air would be directed to a vent condenser via a vent gas fan. The uncondensed vapour, containing solvent and air, would enter a Mineral Oil System comprising a Mineral Oil Absorber and Stripper. This system would absorb and strip the solvent from the vapour using packing for increased contact surface, aided by a cooler, mineral oil interchanger, and heater to maintain the required temperatures.

#### 1.2.5 Refinery (Degumming and Bleaching)

The refinery process would involve degumming and bleaching processes (refer to item (22) on the concept layout plan).

##### 1.2.5.1 Degumming

Crude oil from the preparation and extraction process would be transferred by a feed pump and initially heated in a heat exchanger using bleached or refined oil. Where required, additional heating would be achieved via low-pressure steam. Heated oil would then be mixed with citric acid fed by a dosing device in a dynamic contactor. The resulting mixture would be introduced into a reactor to facilitate the chemical reaction that causes lecithin to chelate.

The oil would then be mixed with diluted caustic soda, fed by a dosing unit, in a dynamic or static mixer. Heat exchangers would be used to lower the temperature of the oil prior to adding enzymes, via a dosing unit, and mixed using a high shear mixer and held in multiple-compartment reactors to ensure proper contact.

The gum phase would then be separated from the oil using a centrifugal separator facilitated by citric acid. Acid gums would be collected in the process and pumped to either a dryer or another form of treatment as suitable. The oil would then be heated again and mixed with hot water in dynamic or static mixer. After sufficient reaction time, the oil would be sent to a washing separator.

Within the washing separator, hot soft water (boiler feed water or steam condensates) would be supplied via a pressurised loop system. Wash water would be collected within a decanter, recovered oil would be recycled back to the crude oil tank and the degummed and washed oil would be dried under vacuum to reduce residual moisture. The oil would then be heated in a plate heat exchanger using low-pressure steam and then dried in a vacuum dryer. The dried oil would pass through an economizer and cooler before being transferred to the oil storage tanks within the oil tank farm (refer to **Section 1.2.4.2**) or to the bleaching stage.

#### 1.2.5.2 Bleaching

The bleaching process removes oxidized oils, residual phosphatides, soaps, trace metals, and pigments, including chlorophyll and other colour bodies. A measured amount of bleaching earth would be added to the oil and would act as an adsorbent for these impurities.

Fresh bleaching earth would be introduced under vacuum conditions at a temperature of 100–110°C. The spent bleaching earth would then be removed from the oil through filtration using a hermetic leaf filter, followed by safety filtration with a pulse tube filter.

The bleaching process would also include a bleaching earth extraction section to recover most of the oil remaining in the filter cake. This would be achieved by blowing sparge steam through the filter cake. Bleached oil would then be transferred to the oil storage tanks within the oil tank farm (refer to **Section 1.2.4.2**). Refer to **Section 1.5** for details on bleaching clay disposal.

#### 1.2.6 Oil Tank Farm

The proposed oil tank farm (refer to item (29) on the concept layout plan) would comprise a concrete bunded area with a footprint designed to accommodate a maximum of ten oil tanks. The oil tank farm would contain four oil tanks, each with a capacity of 5,000 metric tonnes, and another six oil tanks, each with a capacity of 2,000 metric tonnes. The total expected storage capacity across all oil tanks within the tank farm bunded area would be 32,000 metric tonnes.

The capacity of the bund would be minimum of 8,000 metric tonnes in accordance with AS 1940:2017, which prescribes that containment must be sufficient to hold at least 110% of the volume of the largest container stored within it, or 25% of the total volume if multiple containers are present. These tanks would be used for the storage of both crude and refined (degummed and bleached) oil.

The location of the bund and the height of the bund wall relative to the closest tank shall be such that the top inside perimeter of the bund is not inside the crest locus limit specified in AS 1940:2017. The crest locus limit may be achieved through the installation of tank shields.

The bund would be constructed of concrete to ensure it would remain impervious and capable of containing any spills and leaks. An oil-water separator device (such as a coalescing plate separator) would be installed downstream of the bund collection and drainage system and prior to being transferred to the WWTP.

### 1.3 Ancillary Infrastructure

#### 1.3.1 Boiler and Fuel Storage

The project proposes to install a natural gas fired boiler for immediate heating and energy needs. However, recognising sustainability initiatives and the potential for biomass fuel to serve as a renewable energy source with lower greenhouse emissions, provisions would be integrated into the project design to facilitate a future transition to biomass fuel. As such, opportunities would be sought to utilise biomass fuel sources as an alternative to natural gas where the market for a transition to biomass fuel sources.

Cargill would seek the opportunity to retrofit, or upgrade the natural gas fired boiler to utilise biomass fuels. Such fuels are expected to comprise waste, agricultural or forestry residues (such as wood chips, discarded wood, and crop residues). However, such a transition would be undertaken via an application to amend the existing works licence as to provide further information on the boiler type, exact fuel source and boiler ash treatment and management at such time.

Therefore, the proposed boiler design (refer to item (90) on the concept layout plan) would comprise a "D" type water tube steam boiler fuelled by natural gas for continuous operation with minimal supervision. It would feature a natural circulation two-drum water tube design, with carbon steel drums and electric-resistance-welded tubes. Insulation would include fiberglass and high alumina refractory for seals. The (maximum) 30 MW boiler would produce steam for processess at a pressure of 950 kPa(g), and the steam temperature would be approximately 182°C.

Auxiliary equipment would include burners with low nitrogen oxide and nitrogen dioxide (NOx) features, boiler feedwater pumps, and a spray-type deaerator. The feedwater system would include a feedwater tank, and the blowdown system would feature a blowdown tank. An economizer would recover heat and improve efficiency. The control and supervisory system would include a differential transmitter for level control, motor circuit breakers with ACS880 drives, and a touch screen for easy operation.

##### 1.3.1.1 Ash treatment facilities

No ash treatment facilities proposed as natural gas fired boiler is proposed.

#### 1.3.2 Oil Loading Bay

The oil loading bay (refer to item (28) on the concept layout plan) would be located adjacent to the oil tank farm and would include a two-truck loading gantry, with each station capable of loading oil at the rate of 150 tonnes per hour. The loading bay would be bunded to contain any spills from loading activities. Oil would also be transported to the CBH facility via a pipeline proposed to be equipped with a mass flow meter at a rate of 600 tonnes per hour. The pipeline would span an approximate distance of 2.1 kilometres.

#### 1.3.3 Solvent Unloading Bay

The solvent (hexane) unloading bay (refer to item (04) on the concept layout plan) would be located adjacent to the extraction building and would facilitate the transfer of solvents from delivery vehicles to the proposed underground hexane storage tanks (refer to **Section 1.4.3**).

Key features would include an interlocking valve system and spill containment sized to hold the maximum compartment capacity plus 10%. The area would be isolated from ignition sources, with

grounding and vent systems to prevent static sparks and ensure smooth flow. All piping would be Schedule 10 stainless steel.

#### 1.3.4 Wastewater Treatment Plant

The WWTP would receive three wastewater streams from the oilseed crushing facility including: extraction and preparation wastewater stream, refinery wastewater stream and an 'other' wastewater stream (from bunds, drainage systems and the biofilter system). Wastewater streams would be transferred to a balance tank with the diversion of high organic content wastewater to an emergency tank.

The treatment standard will be achieved using a dissolved air flotation (DAF) system for solids and fats, oil and grease (FOG) removal. Sludge would be stored in a sludge tank and dewatered using a screw press. Wastewater at the WWTP would be tested in the onsite laboratory (refer to item (72) on the concept layout plan) prior to the undertaking of licensed discharges to the sewer network for the parameters and other requirements of the Trade Waste Agreement.

Consultation with the Water Corporation has been undertaken to confirm sufficient capacity of the receiving wastewater system to accept wastewater loading from the proposed facility. A trade waste permit will be sought for the project once planning and works approvals have been received.

The WWTP has been designed to meet the treated wastewater specifications as follows: volume flow of 25.9 kL/h, Chemical Oxygen Demand (COD) of 4,583 mg/L, ammonia and ammonium (NH<sub>x</sub>-N) of 41 mg/L, Suspended Solids (SS) of 72 mg/L, oiliness of 34 mg/L, and a temperature of 35°C. These treatment specifications would be subject to the Trade Waste Agreement and would be adjusted as required by the Trade Waste Agreement.

### 1.4 Pollution Control and Management

#### 1.4.1 Extraction Systems and Biofilter

Exhaust, including fugitive odours from the preparation and extraction buildings, would be aspirated via a collection system for treatment as follows:

- In Preparation, ducting would connect to the vertical conditioner and flakers, and pass through a Cyclone for solids removal. Ducting would also connect to the horizontal rotary cooker, expellers, drag tank, and centrifuge (decanter), and pass through a Packed Water Scrubber for vapour and solids removal. The duct paths from the cyclone and packed water scrubber would then combine and pass through another Packed Water Scrubber for humidification.
- In the Extraction, ducting would connect the Vent Gas Fan to a scrubber for the reduction of pollutants (e.g., H<sub>2</sub>S), then merge with ducting from the pelletising units before passing through a packed water scrubber for humidification.

Both extraction and preparation collection systems would have their own centrifugal fans, which would create negative pressure at the equipment connection points as to move air into the biofilter plenum. Cyclones and/or scrubbers would provide treatment of foul air as it passes through the extraction systems prior to receipt at the biofilter.

##### 1.4.1.1 Biofilter design

The design philosophy for the biofilter for air treatment revolves around creating a system whereby microorganisms treat large volumes of odorous air before exhausting the treated air to the environment. The biofilter proposed would consist of two separate treatment units separated by a solid concrete wall. Each treatment unit features a 'hopper-front' design whereby the end

walls slope to a lower front. This design would facilitate easy access for loading and replacing the biofilter medium whilst preventing any leakage of untreated air. The air distribution system would include a full plenum floor air distribution system and a concrete air inlet distribution header chamber, to ensure even distribution of air across the biofilter bed.

The biofilter would be equipped with a water irrigation system to maintain the moisture levels of the biofilter medium and support the growth of microorganisms that degrade pollutants. Additionally, the system includes a water collection and drainage mechanism to gather excess water, which would then be transferred to the WWTP via a sump and sump pump.

The preparation building would be enclosed and maintained under negative pressure to limit any fugitive emissions. Extracted air from the building would be emitted to the atmosphere via roof stacks at high velocity to guarantee a high dilution of the plume. Further, point source extraction will occur at several process levels and directed through a cyclone prior to a scrubber and then to the biofilter.

The extraction building would adopt an open design with a fully sealed process area for operations to avoid release of fugitive emissions. Foul air would be extracted from point sources through operations and would be treated through several stages with a final polishing phase at the extraction biofilter.

The biofilter emission point would comprise the footprint of the biofilter system with emissions comprising treated air. An operational odour analysis (OOA) was undertaken for the project in accordance with the DWER *Guideline: Odour Emissions* (DWER, 2019) and was provided as Appendix 2 of Attachment 8 of the Works Approval application. The location review and the OOA indicated that the proposed operation would present low residual potential impact and that the offsite odour footprint would be limited mainly due to:

- the enclosed preparation building with extracted air pushed through roof stacks at high speed;
- the multiple extraction points strategically positioned throughout the preparation process to extract the flour air and direct it to a cyclone, then a scrubber/humidifier, and finally to the preparation biofilter;
- the sealed extraction system with high level H<sub>2</sub>S air treated through a first scrubber stage before being diluted and polished through the extraction biofilter.

#### 1.4.2 Above Ground Storage Tanks

Secondary containment for the oil tank farm has been detailed in **Section 1.2.6**. The buffer tank and the acid and caustic tanks, all located adjacent to the preparation building, would also be designed with secondary containment to hold at least 110% of the volume of the largest container stored within it, or 25% of the total volume of multiple containers.

In addition to engineered controls, a regular inspection program for the detection of spills and leaks would be undertaken by plant operators for all above ground storage tanks.

#### 1.4.3 Underground Hexane Storage Tanks

Key design criteria for the three underground tanks (two hexane storage tanks each with 150m<sup>3</sup> capacity and one safety surge tank with 150m<sup>3</sup> capacity) include secondary containment as double-skinned tank walls and interstitial leak monitoring. The tanks would be equipped with sufficient corrosion protection, including cathodic or anodic protection systems. The combined holding capacity of the underground safety surge tank and the dry skim pit compartment would be 1.5 times the capacity of the largest aboveground tank or vessel in extraction.

The construction of the tanks would use stainless steel for the interior and carbon steel with protective coatings or stainless steel with cathodic or anodic protection for the exterior.

The depth of the safety surge tank would be designed for gravity flow from the skim pit, with a minimum slope of 1%. Safety devices, such as high-level switches, would prevent overfilling, and low-level switches would ensure the underground safety surge tank remains empty. All of which would be subject to regular inspections by plant operators to confirm working condition.

#### 1.4.4 Extraction Building Containment

The extraction plant would be protected by a foam deluge system. Containment would be designed for foam deluge-protected process buildings to ensure safe management of liquids during fire protection system activation. The primary containment would include a perimeter wall capable of holding 15 minutes of sprinkler flow, the largest solvent spill, and foam. Overflow weirs to secondary containment would allow excess water to drain safely while containing solvents.

#### 1.4.5 Oil and Hazardous Material Spills

In addition to engineered controls, management of spills during operations will be documented in the Operational Environmental Management Plan for the plant and in accordance with the *Rockingham Industrial Zone Water Management Strategy* (Hyd2O, 2013) and will include but not limited to:

- Spill management procedures will be in place and educated to all workers as part of Cargill's environmental training and induction process.
- Spills are to be treated as environmental incidents and managed in accordance with Cargill's non-conformance and corrective action procedures.
- Regular inspections would be undertaken to identify spills and leaks and check that appropriate storage, handling, and signage is available.

### 1.5 Waste Management

A summary of the estimated waste volumes and their storage and disposal arrangement is provided as **Table 1**. The solid waste house will be built with an impermeable (likely concrete) floor and enclosed for protection against rainfall ingress.

**Table 1: Waste Management**

Waste	Estimated volume	Storage Infrastructure	Location of Storage Infrastructure	Disposal Methods
Biofilter solid wastes (mulch)	~ 900 m <sup>3</sup> /year	Not stored when removed from Biofilter	N/A	Collected by licenced contractor for re-use (off-site land application)
Clays from refining	~ 200 tonnes/month	Industrial skip bin (~10m <sup>3</sup> capacity)	Solid Waste House	Collected by licenced contractor for re-use (composting)
WWTP solid wastes (biosolids cake)	~ 45 kg/day	Industrial skip bin (~10m <sup>3</sup> capacity)	On-site WWTP	Landfill via licenced contractor
Process wastewater	~ 25.9 kL/hour	On-site WWTP	On-site WWTP	Licenced pumped transfer to the Water Corporation's Industrial Wastewater Treatment System in accordance with Trade Waste Agreement.
Organic waste (seed waste)	~ 40 tonnes/month	Industrial skip bin (~10m <sup>3</sup> capacity)	Solid Waste House	Collected by licenced contractor for re-use (off-site land application)
Recyclable wastes (timber, oily rags, cardboard, shrink-wrap etc)	~ 5 tonnes/month	Industrial skip bin (~4m <sup>3</sup> capacity)	Workshop & Solid Waste House	Recycled via licenced contractor
General waste	~ 8 tonnes/month	Industrial skip bin (~4m <sup>3</sup> capacity)	Workshop & Solid Waste House	Landfill via licenced contractor