Simplot Australia Pty Ltd

Ulverstone Production Centre
EPN 7373/2

Environmental Effects Report – WESP Project

January 2024

Tasmanian Consulting Service Pty Ltd

74 Oldaker Street, Devonport, 7310

Document: 9649-EER-Rev3
Revision: 3
Issue Date: 17th January, 2025

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Table 1 Glossary

Abbreviation	Definition
BOM	Bureau of Meteorology
COD	Chemical oxygen demand
dB	Decibels
dBA	Decibels A
EER	Environmental Effects Report
EMPCA	Environmental Management and Pollution Control Act
EPA	Environment Protection Authority Tasmania
EPN	Environment Protection Notice
FOG	Fats, Oils and Grease
GLC	Ground Level Concentration
HV	High Voltage
ID	Induced Draft
kg	Kilogram
kL	Kilolitre
Km	Kilometre
KPI	Key Performance Indicator
m3	Cubic Metre
mg	milligram
mm	millimetre
MSDS	Material Safety Data Sheet
PEV	Protected Environmental Values
PLC	Programmable Logic Controller
PM10	Particle Matter, <10microns
SDS	Safety Data Sheet
TKN	Total Kjeldahl Nitrogen
TSP	Total Suspended Particles
TSS	Total Suspended Solids
WESP	Wet Electrostatic Precipitator

Part A – Information about the Proponent

1.1 Proponent Details

Proponent entity name: Simplot Australia Pty Ltd
Proponent trading name: Simplot Australia
Registered address of proponent: 2 Chifley Drive, Moorabbin, Victoria, 3194
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1.2 Contact persons Details

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1.3 Consultants Details

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2. Part B – Information about the proposal, site and area

2.1 Proposed Activity

Activity

There is no change in the site activity as part of the proposed works. The primary site activity is **Produce Processing Works.**

The Ulverstone Production Centre processes potatoes into French Fries and Valued Added Products (Hash Browns, and Gems).

Potatoes are delivered by road, unloaded and held in storage in a total of 14 long-term & 4 short term storage sheds on site. Potatoes are transferred on demand from trucks and from the storage sheds to the main French fry lines.

The potatoes are washed, peeled, inspected and fed to cutters to make potato strips. The strips are blanched, dried and par-fried before being frozen, graded and packaged.

Potato nubbins, slivers and small off-cuts are processed via the Value Added Lines into Potato Gems, and Hash Browns.

During 2024 the factory processed 300,783 tonnes of potatoes to produce 178,210 tonnes of product. In 2023, the previous year, the factory processed 283,177 tonnes of potatoes to produce 167,661 tonnes of product.

New or existing?

The proposed works is a modification to the existing activity process, to eliminate 80% or more of the particulate that is released into the atmosphere from the existing frying operation.

The existing site operates as a Level 2 activity under Schedule 2 of the *Environmental Management and Pollution Control Act 1994* (EMPCA) and functions under an EPN 7373/2.

Product or purpose

There is no change in the site 'product' or purpose of the activity. The proposed development is a modification to the existing exhaust system to remove excess particulate from being deposited into the atmosphere.

Maximum quantity/limit

There is no change in the previously approved activity production capacity or limit/s, with respect to the activity type listed in Schedule 2 of EMPCA.

Method/s

Process Description for the proposed process modification, as provided by the equipment supplier, has been attached as Appendix A to this EER.

A Wet Electrostatic Precipitator (WESP) system works by removing fine particulate matter, mists, and aerosols from gas streams using electrical forces and a wet cleaning process. The system operates through:

1. **Ionization**: The gas stream enters the WESP and passes through a high-voltage electrical field, which ionizes the particles in the gas, giving them an electrical charge.
2. **Collection**: These charged particles are then attracted to oppositely charged collection tubes within the system. The particles accumulate on these surfaces.
3. **Washing**: A water spray washes the collected particles off the tubes, ensuring they are cleaned and preventing re-entrainment into the gas flow.
4. **Discharge**: The cleaned gas is then discharged from the WESP, and the wastewater containing the removed particles is properly treated.

This combination of electrical charging and water cleaning makes WESP systems highly efficient at capturing fine particulates, such as the oil-particulates that this project is addressing.

The remaining site methodology will remain the same.

Industry standards

No change in the applicable industry standards.

Transport

No change to ongoing site traffic or transports requirements.

Additional truck movements will occur during construction, as the additional structural steel and process equipment is brought to site. This will occur incrementally as equipment arrives from overseas or fabrication is completed. It is expected to be 5 semi loads plus 6 tray trucks maximum and only in December & January– with only one or two in any given day.

It would be through normal working hours, most likely between 8am and 2pm.

Stockpiling

No additional materials or product will be stockpiled onsite. Temporary storage of structural items may occur during construction, though it is expected the majority of structural items will only be transported to site as required (Chosen fabricator is located locally)

Major equipment

Equipment that makes up the WESP system is attached as Appendix B to this report. These items include:

- Main ID fan
- Tube cooling Fan
- Purge fan and Air Heater
- Recycle, Flush and Sump Pumps
- Instrumentation, PLC and HV Supply

Infrastructure

Existing site has an extensive list of building of various types and uses, including:

- Raw product (potato) storage sheds
- Administration, Canteen and Amenities Building
- Engineering workshops and parts storage
- Boiler house, Engine rooms and compressor Buildings
- Production warehouse/factory

Proposal timeline	The new system structural fabrication and process installation is proposed to be continue until the expected 'cut-over' date on the 3rd March, 2025. Prefabrication of structural steelwork has commenced offsite, and the main WESP system components have arrived in the state in the state and are currently on-site.
Operating hours	No change from existing site operations, with 24/7 site operations.

2.2 Location and planning context

Location

Jetty Street, Ulverstone

- CT 156910/3
- CT 212498/1
- CT 214305/1

Planning Permit

Planning permit application has been lodged with the Central Coast Council, with the Reference number **DA2024164**.

Processing of this permit is currently 'on hold' until EPA approval/authorisation has been achieved.

Land zoning and tenure

Land is zoned as **Zone 19 – General Industrial.**

The combined property is surrounded by:

- **Zone 8 – General Residential** (North)
- **Zone 18 – Light Industrial** (North, east and south)
- **Zone 23 – Environmental Management** (West)

These zones are shown in the plans below. Specific project drawings are attached as Appendix E.

2.3 Description of site and surrounds

Land Use

Land is used for Potato processing**,** producing chips, hashbrowns and the like via potato processing and frying.

The combined property is surrounded by:

- **General Residential** (North and South), nominally 20m from the northern boundary or 250m from proposed works (North) or 160m (South)
- **Mechanic Workshop (TJ Autos) and Auto Electricians (Clark Auto Electrics)** (North) nominally 20m from the northern boundary or 250m from proposed works
- **Oil & Lubricant Supplier** (South), 20m from southern boundary or 225m from proposed works.
- **Primary Education (Ulverstone Primary School)** (North-East), nominally 20m from north-eastern boundary or 450m from proposed works
- **Gym (Athlete 42), Joinery workshop (CD Joinery), Mechanic (Wayne Purton Automotive)** (East) on the Eastern boundary or 375m from proposed works
- **Council Works Depot** (East) nominally 20m from Eastern boundary or 425m from proposed works
- **Leven River and Riverbank,** on the south, east and north boundary, nominally 65m from proposed works

Topography

Refer Figure 1 below for Topography.

Subject Site is situated on flat terrain, with an elevation ranging from 10 to 30 meters above sea level. The immediate surroundings of the site also consist of flat terrain at slightly lower elevations. To the south, mountainous terrain rises to 300 meters above sea level.

Climate

The closest monitoring site is FORTHSIDE RESEARCH STATION located nominally 9km to the east of the site.

- Annual Mean Rainfall – 937.9 mm/year
- Annual Mean MAX temp – 16.1°C
- Annual Mean MIN temp – 7.4°C

The prevailing wind direction is WEST and SOUTH-WEST. Wind Rose can be seen in Figure 2.

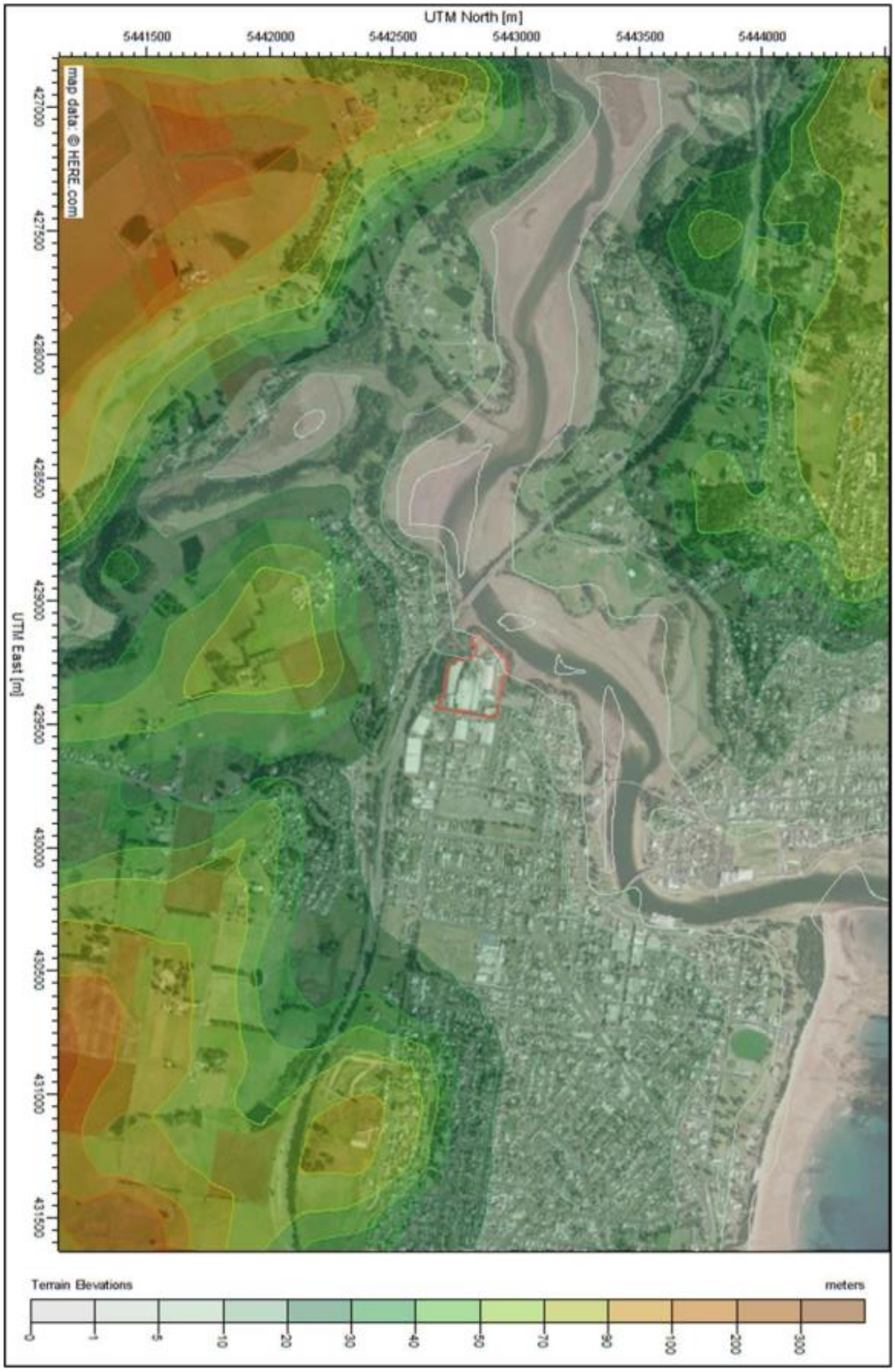

Figure 1 Topography extracted from CALMET (refer Appendix H)

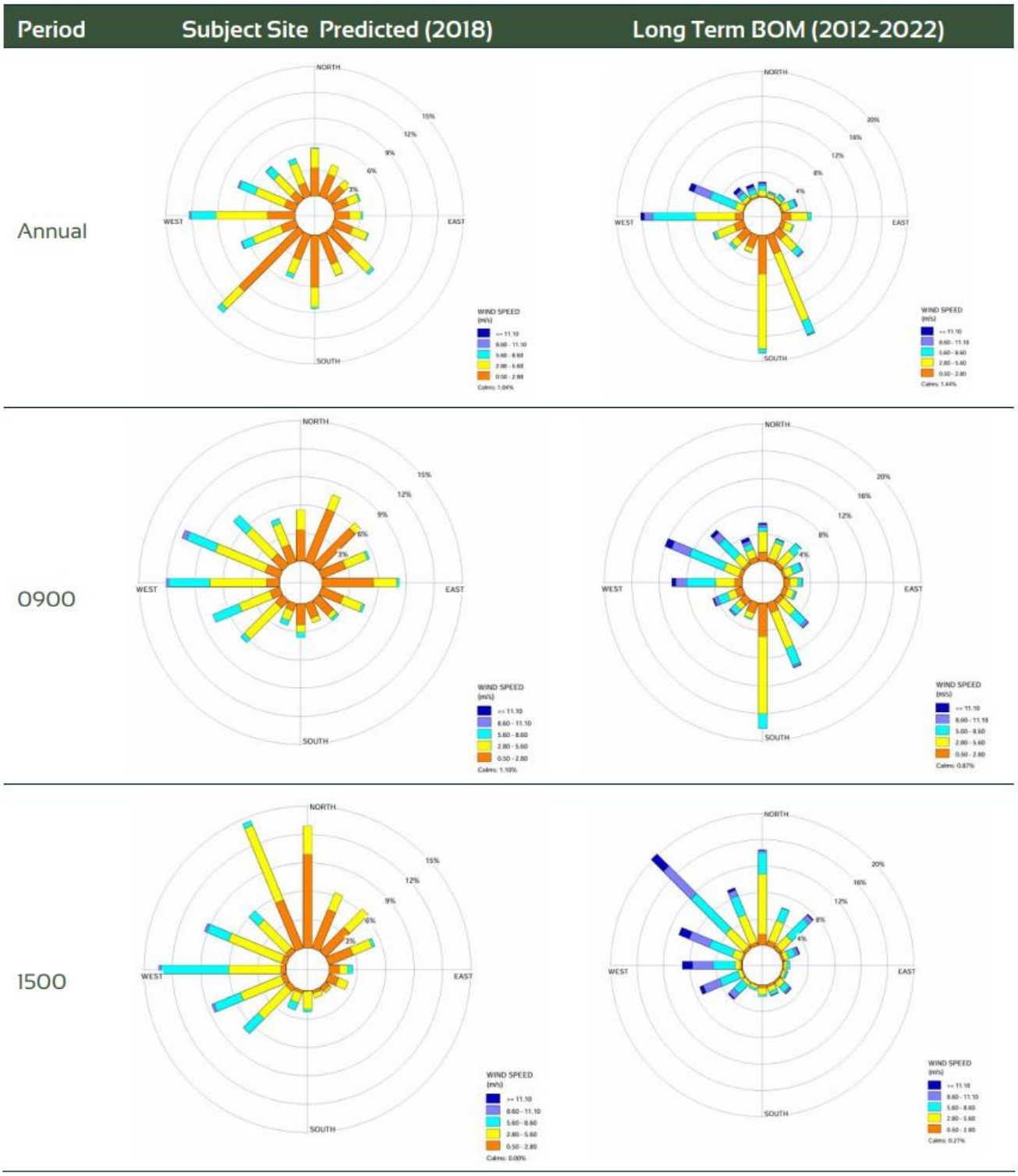

Figure 2 Comparison of Predicted (2018) and BOM observed wind Roses (2012-2022) at Devonport Airport. (refer Appendix H)

Maps and Site Plans

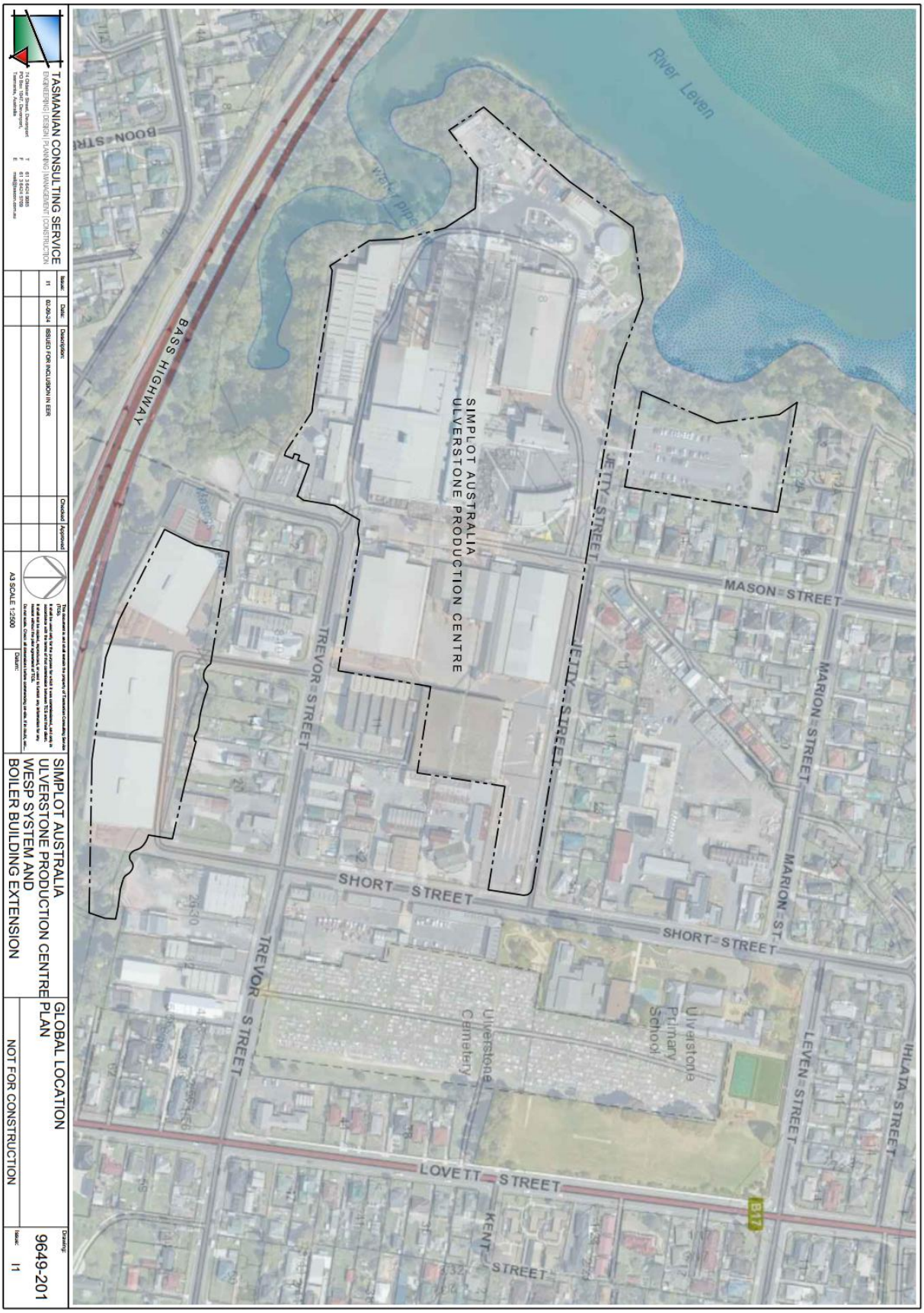

Figure 3 Global Location Plan

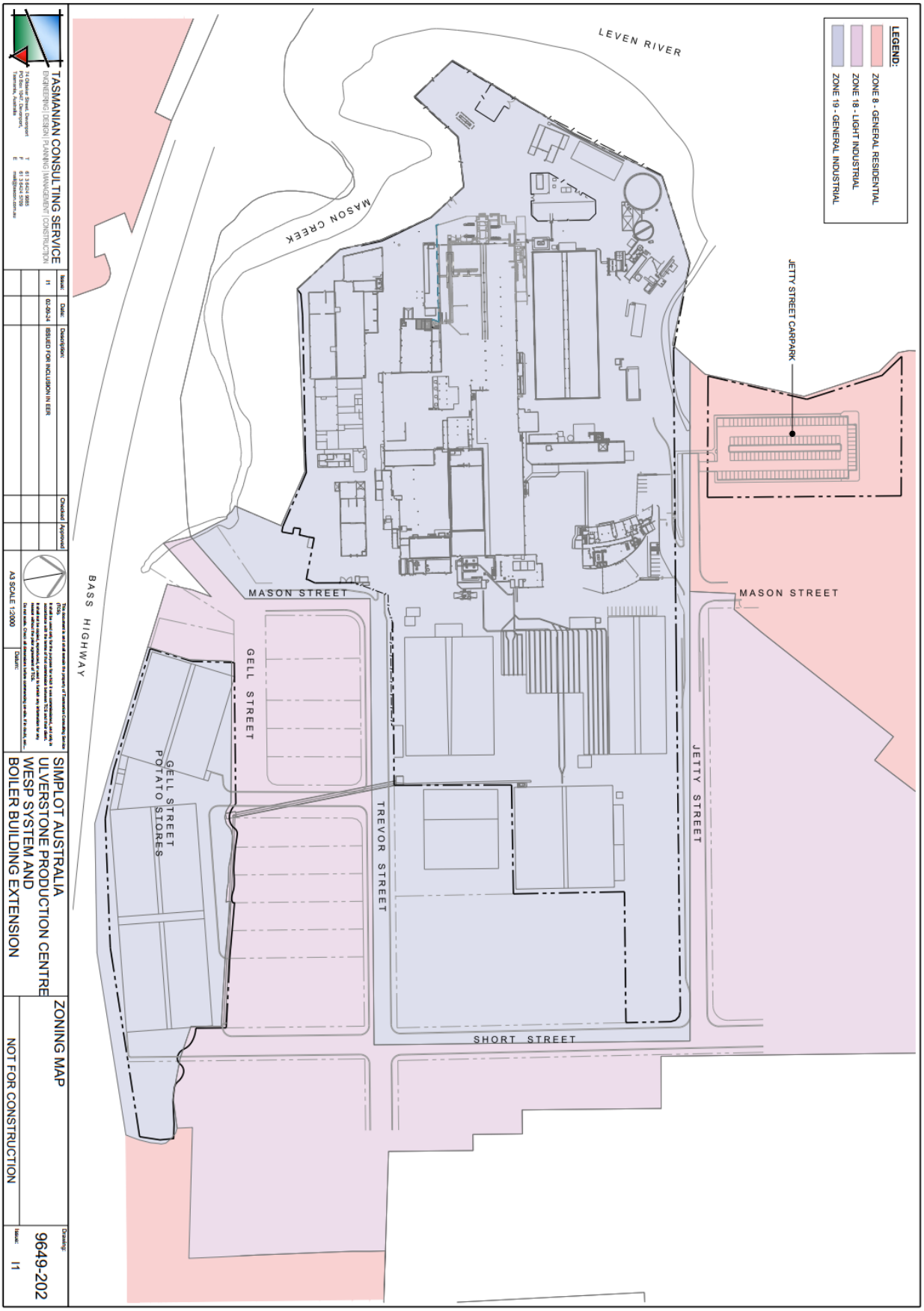

Figure 4 Zoning Map

Figure 5 Existing & New Stack locations

2.4 Project Rationale

The proposed development is primarily located on the southern side of the existing main processing factory on Certificate of Title number 212498/1, with some demolition works within the area covered by Certificate of Title number 156910/3.

The proposed development enables the installation of a new Wet Electrostatic Precipitator (WESP) equipment for the treatment of the exhaust from the existing factory fryer stacks.

Simplot undertakes routine audits, for inclusion in annual reports to the EPA as required under their EPN. These audits include reporting of any “non-trivial” environmental incidents, monitoring key environmental parameters and compiling complaints received. During these routine audits, it was observed that the quantity of fryer particulate being exhausted into the atmosphere has increased since the installation of the Line 1 batter upgrade (which included the installation of a new fryer and associated stacks) resulting in numerous neighbour complaints.

The primary purpose of this development is to improve the exhaust discharge from not only the line 1 fryer stacks, but process fryer discharges from the facility. Other options to reduce or mitigate the particulate release have previously been trialed. These included:

- Adjusting operational parameters to try to optimise the performance of the initial stack design, which were not performing as expected. (minimal change in particulates)

- Modified stack tops changed from a tapered top (designed to achieve penetration of the plume into the atmosphere), to a ‘hatted’ top (designed to cause a double direction change and condense and drop out any oil vapors). (Minor change in particulates, completed in December 2022)

- A hybrid arrangement using the original fryer exhaust ducting/oil recovery system and shared boiler stack outlet was adapted to the new fryer. (substantial change in particulates, coupled with significant drop in neighbor complaints, Completed March/April 2023).

The proposed system would take the exhaust from all site process fryers and direct these streams, via on-roof ducting, to the WESP system proposed to be installed within the existing site boiler house. The system has a performance requirement to remove an average of 80% or more particulates. The system does utilize water in this process, which is predominantly recycled, with an expected 15kL/day additional onsite water usage expected. The captured oil/particulates would be treated onsite, via the existing FOG (Fats, oil and grease) plant, which is partially recovered and sold.

As the system is connected to the multiple stacks located within the main factory, this project comprises several interrelated components as detailed below:

- Raising of Boiler house roof
  These works are required to provide the space for the main WESP unit

  These works comprise the construction of:
  - A new raised segment of roof on the north-west corner of the boiler house
  - A new maintenance access platform to the roof of this extension
  - A new stack servicing the WESP unit, with the discharge nominally 23m above ground level
  - Access stairs, walkways and ancillary works and services

- Existing stack removal
  These works remove the need for discrete stacks to each process fryer, with the exhausts from these systems redirected to the WESP. The existing seven (7) fryer stacks, including

fans where these are fitted, will each be removed to roof level and connected to a ducting system, through to the new WESP system.

- Ducting and rooftop platforms.

  The ducting to redirect the exhaust to the WESP require a series of platforms and walkways for both support and maintenance access. This ducting and platform are located on the roof of the southern side of the main factory building.

Drawings of the proposed development are attached as Appendix E.

2.5 Existing Activity

Previous Environmental monitoring results have been correlated as part of previous Annual Environmental Reviews. The 2022 and 2023 review have been attached as Appendix C & D. As the 2024 year has only recently ended, the 2024 review document is not yet complete. It should be noted that no additional complaints relevant to the site 'exhaust' during the year.

General site complaints are summarized in these reviews, with the specific 'exhaust' related complaints summarized below. Complaints regarding the excess particulate have been reduced since the installation of both the adjusted stack tops (December 2022) and the hybrid exhaust modifications (March/April 2023).

Table 2 Stack specific complaints from 2022

Date	Complaint	Response
18th March, 2022	Email about cooking odour experienced at Henslowes Rd residence	Reviewed factory operation, responded by email
24th May, 2022	Neighbour phone call: Canola oil deposits on vehicle	Vehicle washed
9th June, 2022	Neighbour email: Canola oil deposits on two vehicles	Vehicles washed
16th June, 2022	EPA discussed contact regarding canola emissions complaint	Offered to wash vehicle if requested by contactee
16th June, 2022	Neighbour walk-up: Canola oil deposits on vehicle	Vehicle washed
2nd August, 2022	Parks and Wildlife email asking for detail around canola oil deposits, and any damage or personal health implications	Detailed response to P&W, outlining type of emission and offered to arrange car washing
25th August, 2022	Neighbour phone call: Canola oil deposits on two vehicles	Vehicles washed
25th August, 2022	Neighbour phone call: Canola oil deposits on house	Offered to wash impacted areas of house
2nd September, 2022	Neighbour business phone call: Canola oil deposits on multiple vehicles	Met and discussed. Offered to wash cars, which was taken up
3rd September, 2022	Neighbour phone call: Canola oil deposits on vehicle	Vehicle washed
13th September, 2022	EPA contact about a 2nd complaint to them regarding canola oil deposits on a vehicle	Offered car wash for complainant if EPA wanted to direct them to us
14th September, 2022	Neighbour walk-up: Canola oil deposits on house	Offered to cover cost of house wash at a suitable time
14th September, 2022	Neighbour email: Canola oil deposits on vehicle	Vehicle washed
16th September, 2022	Remote resident phone call: deposits on house	Contacted and discussed
26th September, 2022	Neighbour walk-up: Canola oil deposits on house	House washed
24th October, 2022	Three neighbours walk-up: Canola oil deposits on house	Impacted sections of homes washed

25th October, 2022	Neighbour business email: Canola oil deposits on multiple vehicles	Vehicles washed
4th November, 2022	EPA contact about emissions	Noted, offered remediation and updated on progress towards resolution
18th November, 2022	Neighbour email: Canola oil deposits on vehicle	Vehicle washed
25th November, 2022	Neighbour email: Canola oil deposits on vehicle	Offered car wash but complainant was only focused on informing Simplot
26th November, 2022	Neighbour email: Canola oil deposits on vehicle	Vehicle washed
December, 2023	**'Capped' stack tops installed**	
19th Feb, 2023	Phone call late at night went to message bank as Security were not at desk at the time. No return number left, or available from automated system. Caller was complaining of oil on house and car (Mason St), though slurred and wandering style making it difficult to interpret message.	Undertook a site walkaround at the time, reviewed fryer operation. Unable to identify any issue. No call back in following days.
24th Feb & 18th Mar, 2023	Complaint (24/2) of no long term improvement in cooking odour and intermittent high pitched sound from the factory. Follow up email (18/3) rejecting Simplot had responded.	Reviewed factory fryer operation and identified non-standard operation which was corrected. Site walkover conducted seeking to identify high pitched sound source – without identifying an obvious source. Implemented a revised steam control valve control strategy on the basis this may have been an intermittent source. Reviewed anecdotal noise and odour levels from community locations around complainant, no abnormalities were noted. Provided email response (8/3).
March-April 2023	**'Hybrid' Exhaust (utilising existing oil recovery system) installed**	
-	**No additional 'exhaust' specific complaints received since April 2023**	

3. Part C – Environmental Impacts and Management

3.1 Air Quality

An air quality impact assessment was completed by Assured Environmental which is attached in full as Appendix J. Source emission monitoring has previously been completed by Assured Environmental, and are attached as Appendix G & H.

3.1.1 Existing Environment

Some of the closest sensitive receptors surrounding the Project Site include:

- **Residential Areas** (North, East and South, R2-R10, R13-R28)
- **Mechanic Workshop (TJ Autos) and Auto Electricians (Clark Auto Electrics)** (North, R1)
- **Primary Education (Ulverstone Primary School)** (North-East, R10)

The receptors used in the modelling are shown in Figure 6 below.

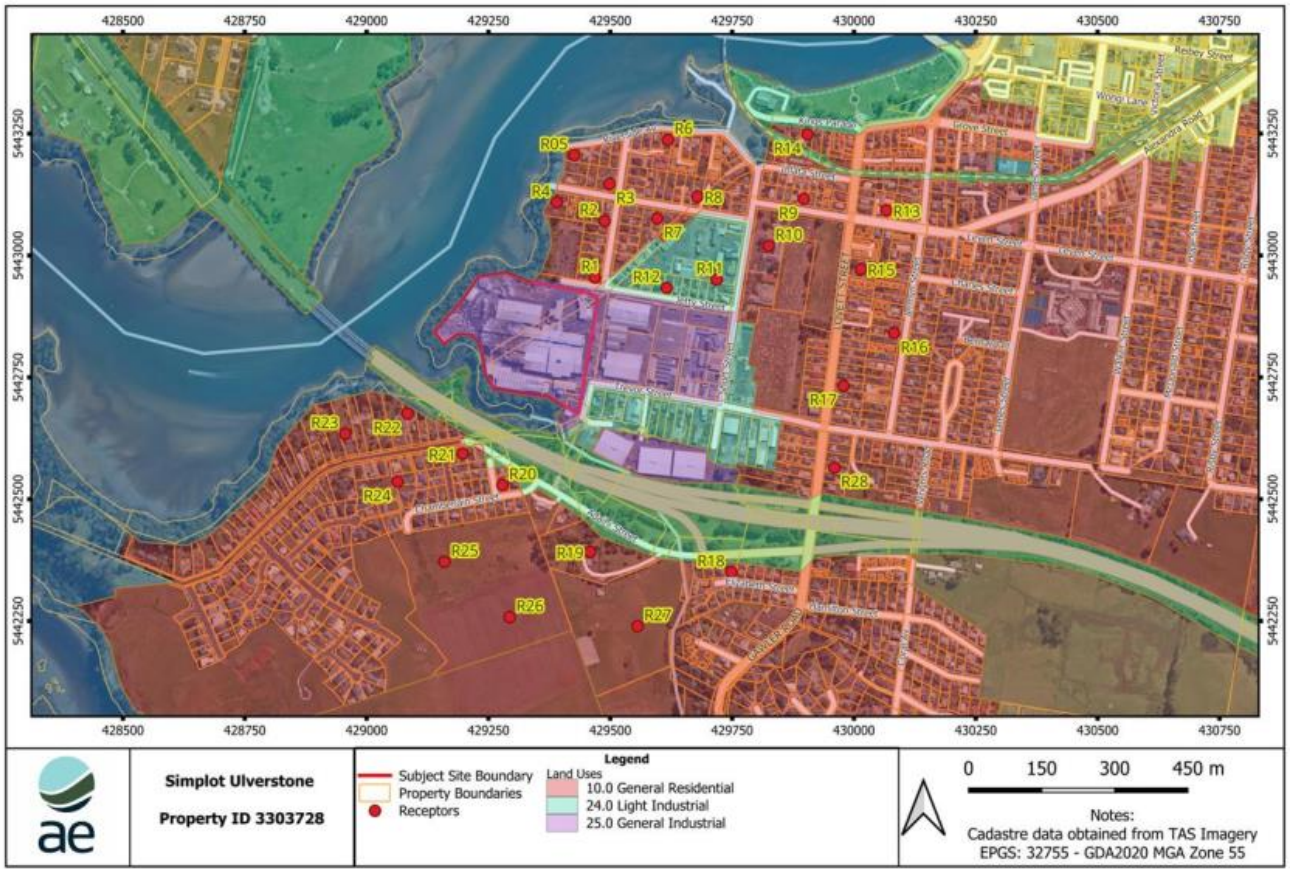

Figure 6 Sensitive Receptors and Land Zones Surrounding Subject Site (refer Appendix H)

In 2022 and 2023, Simplot received several complaints relating to the existing site operations, which are summarized in Table 2 above. The local topography, which is directly involved in the dispersion of exhaust streams, is summarized in section 2.5 above.

The local airshed is characterized by topographic features that affect airflow and local meteorology. The Project Site is situated on flat terrain, with an elevation ranging from 10 to 30 meters above sea level. The immediate surroundings of the site also consist of flat terrain at slightly lower elevations. To

the south, mountainous terrain rises up to 300 meters above sea level. The proximity of these higher elevations to the south may influence factors such as wind patterns

3.1.2 Modelling Method

The CALPUFF dispersion modelling system was used by Assured Engineering to predict emissions from the project, which could be compared to previous onsite monitoring results.

The CALPUFF modelling system treats emissions as a series of puffs. These puffs are then dispersed throughout the modelling area and allowed to grow and bend with spatial variations in meteorology. In doing so, the model is able to retain a memory of the plume's movement throughout a single hour and from one hour to the next while continuing to better approximate the effects of complex air flows.

CALPUFF uses the meteorological processing and prediction model CALMET to provide three-dimensional wind field predictions for the area of interest. The final wind field developed by the model (for consideration by CALPUFF) includes an approximation of the effects of local topography, the effects of varying surface temperatures (as is observed in land and sea bodies) and surface roughness (resulting from varied land uses and vegetation cover in an area). The CALPUFF model is able to resolve complex terrain influences on local wind fields including consideration of katabatic flows and terrain blocking.

Post processing of modelled emissions is undertaken using the CALPOST package. This allows the rigorous analysis of pollutant predictions generated by the CALPUFF system. In particular, CALPOST is able to provide an analysis of predicted pollutant concentrations for a range of averaging periods from 1 hour to 1 year.

The project implements the consolidation of the existing exhaust streams (from the existing fryer stacks) into a single, treated discharge. The location of the stacks to be removed, and the new WESP stack, are shown in Figure 5 located in the Location and planning context above.

3.1.3 Relevant Legislation

The Air Quality Impact Assessment has been conducted in accordance with the following legislation as follows:

- The National Environment Pollution (Ambient Measure);
- Environment Management and Pollution Control Act 1994 (EMPCA);
- Environmental Protection Policy (Air Quality) 2004 for Tasmania; and
- Tasmania Planning Scheme – Central Coast Local Provisions Schedule

3.1.4 Potential Impacts

Construction

During the installation of the WESP system foundations, some concrete saw cutting will be necessary. This cutting will be performed within a mostly uninhabited building, which can be effectively isolated and sealed off to prevent the escape of concrete dust. By taking these precautions, we can ensure that dust is contained within the work area, minimizing its impact on the surrounding environment.

In addition, standard concrete saw cutting procedures will be followed to further reduce dust generation. These measures include the use of water suppression or dust extraction equipment to capture airborne particles at the source, ensuring compliance with safety regulations and maintaining air quality throughout the process.

Operation

The primary goal of the project is the removal of at least 80% of the particulate from the exhaust streams going to atmosphere. The WESP manufacturer provided an in-stack concentration of 79 mg/Nm3 for total particulates, which complies with the 100 mg/m3 in-stack particulate concentration for '*any trade, industry or process and any fuel burning equipment or industrial plant'* as detailed in the Environment Protection Policy (Air Quality) 2004. A comparison with previous monitoring, completed in 2023, has confirmed this concentration is a reduction of 80% compared to previous monitoring data. The modelling undertaken by Assured Environmental, which looks at the likely dispersion of the remaining exhaust in the local vicinity, concluded that, based on the provided system parameters, local geography and climate, for the WESP system:

- Predicted TSP (Total Suspended Particle) concentrations are significantly below the annual criterion of 90 µg/m3;
- PM10 (Particle Matter, <10microns) concentrations are within the acceptable limits for both 24-hour and annual averages at the receptors and Subject Site boundary.

The results of these concentrations from the modelling show that the expected maximums, at both the boundary and the receptors, are satisfactorily below the performance criteria and would be a noticeable reduction to the local community.

This indicates that the concentration of particulates after the installation of the WESP will be below the set maximum levels ensuring that air quality standards are met. From the conclusion of this report:

"Assured Environmental was appointed by Tasmanian Consulting Services to carry out an Air Quality Assessment for the proposed installation of the WESP. The dispersion modelling has identified that particulate (TSP and PM10) concentrations will comply with the relevant criteria."

Table 3 Predicted GLC at Discrete Receptors - Total Contribution (refer Appendix H)

Pollutant	Averaging Period	Maximum at Receptors (µg/m^3)	Maximum at Boundary (µg/m^3)	Criteria (µg/m^3)	Compliant
TSP	Annual	30.5	31.6	90	Y /Y
PM_{10}	24 Hours	27.6	35.1	50	Y /Y
	Annual	15.9	16.9	25	Y /Y

Table 4 Predicted GLC at Discrete Receptors - Without Background (refer Appendix H)

Pollutant	Averaging Period	Maximum at Receptors (µg/m^3)	Maximum at Boundary (µg/m^3)	Criteria (µg/m^3)	Compliant
TSP	Annual	0.94	1.96	90	Y /Y
PM_{10}	24 Hours	8.8	16.3	50	Y /Y
	Annual	1.06	1.96	25	Y /Y

The intended monitoring on installation of the WESP system is noted in section *3.7 Monitoring*.

Odour

Odour reduction is not the primary object of this project, but it would be uncontroversial to offer that the removal of oil-particulates being exhausted will reduce the odour perception. Based on Simplot's North American experience, there is confidence that the perceived odour from the factory will be reduced.

However, the equipment supplier will not engage with quantifying that reduction of odour, from the use of their equipment, and is very sceptical we could generate data that would support the proving of some limit. Simplot are confident that as we achieve an average 80% particulate removal, there will be a reduction in odour yet are currently unable to put a number on this amount. It is proposed that odour testing be completed at the same time as the discharge testing to quantify the reduction and inform potential future improvements.

3.1.5 Residual Impacts

As the projects primary goal is the improvement of air quality through the removal of particulate matter, the residual air impacts are primarily during construction, which are are not expected to be significant. With the proposed and expected mitigation measures, the residual impacts would be less that a typical residential construction project.

The normal operation of the WESP is not expected to pose a significant risk of environmental harm or nuisance to surrounding residential premises or the nearby school and business receptors identified around the Project Site.

3.2 Water Quality

3.2.1 Existing Arrangement

The existing site utilizes a FOG & Trade waste system to treat any potentially contaminated water stream prior to them leaving site. Continued monitoring of the effectiveness of this system, including the capture of key performance indicators, is conducted continually and reported to the EPA.

The existing site is situated on the banks of the Leven River and Masons Creek, which are part of the North Central Coast & Rubicon Catchments under the PEV settings in Tasmania.

3.2.2 Potential Impacts

Construction

During the installation of the WESP system foundations, some concrete saw cutting will be necessary. Standard concrete saw cutting procedures will be followed to reduce dust generation. These measures include the use of water suppression, creating a potential contamination risk.

To prevent contamination during construction, sandbagging will be used around drains and pits to prevent construction debris or contaminants from entering the stormwater system. These sandbags act as physical barriers, blocking any runoff that might carry dust, dirt, or other materials into the drainage network, which could eventually flow into natural water bodies. This method is effective in controlling sediment and preventing pollution from construction sites. Additionally, regular monitoring and maintenance of the sandbag barriers will ensure they remain intact and functional, further minimizing the risk of contaminating nearby waterways during the construction process. It should be noted that the quantity of potential contaminants (dust & debris) is expected to be low for this project as there are negligible earthworks involved.

Operation

The upgrade will result in an increase in the quantity of oil-contaminated wastewater generated. This additional wastewater will be treated onsite using the existing FOG (Fats, Oils, and Grease) infrastructure, with the quantity being negligible when compared to the existing throughput. No discharge from the proposal will be directed to nearby waterbodies, with all wastewaters to be treated onsite via the existing FOG & trade waste infrastructure. The average site discharge quantity was 4,848kL/day in 2023, with the expected additional wastewater generated by the WESP being 8kL/day, or an additional 0.17%. The remaining 7kL of expected daily water usage is anticipated to be lost to evaporation.

Typical oil removal occurs via the sites main trade waste treatment through a clarification step, that promotes the removal of solids (both solids that float, and solids that settle) which reduces oil concentration in the trade waste stream. Known high-oil streams (largely from the fryer area of the factory, which will include the waste streams from the proposed WESP plant) are directed to the FOG system, which acts as a pre-treatment step for oil removal. The FOG system has a buffer tank and a recirculating centrifuge system that generates 1000G oil separation force to improve oil separation. The buffer tank and the underflow from the FOG plant are then added to the overall factory inflow to the clarifier, for further separation.

Continued monitoring of the trade waste discharges, in line with the existing site practices, will continue, which includes the reporting and monitoring of:

- Temperature (Degrees Celsius)
- Daily Discharge volumes (kL)
- Oil & Grease quantities (kg/day)

- pH
- COD (Chemical oxygen demand) (kg/day)
- TSS (Total Suspended Solids) (kg/day)
- Total Phosphorous (mg/L)
- Total Nitrogen (mg/L)
- TKN (mg/L)
- Ammonia NH4-N (mg/L)

The proposed system will predominately re-cycle water but will result in a site increase of water consumption of nominally 15m^3/day. The oil removed from the exhaust, which is currently expelled into atmosphere, will no longer potentially contaminate the surrounding areas, including the adjacent waterways.

During operation, the WESP electrodes and tubes are cleaned periodically via internal sprays located in the top of the vessel. The sprays are fed by the Flush tank pump and use hot water mixed with caustic chemical. The duration and frequency of the cleaning is adjusted by the operator but the initial setpoints are spray for 90 seconds, every 90 minutes using approximately 16 liters of caustic per day. These setpoints will be revised during commissioning to ensure optimum performance. Once the WESP is shutdown at the end of a production cycle (every four weeks) the system will be inspected. When required, the ducting will be cleaned internally using a high-pressure jet. This is the same process that's used to clean our existing fryer exhaust ducts/stacks, which uses cold water, without any chemical addition.

MSDS documents for the chemicals used, both the defoamers (FOMEXDELTA & XFO-35D) and caustic (Divergard Caustic Soda Liquid) are attached as Appendix M, N & O respectively. As mentioned previously, no discharge from the proposal will be directed to nearby waterbodies, with all wastewaters, including the cleaning streams, to be treated onsite via the existing FOG & trade waste infrastructure. The proposed internal drainage surrounding the WESP installation is all directed to the site trade waste system, enabling the capture of any minor spill or leaks that may occur.

The proposed upgrade will not increase water catchment areas or alter the site's surface water catchment and treatment requirements. The existing waterways (Leven River (western boundary, 180m from project) and Masons Creek (southern boundary, 65m from project)) will remain unaffected, as the upgrade is designed to maintain current water management practices. In fact, the development aims to reduce the primary source of potential contamination from the site, being the particulates found in the exhaust streams, thereby enhancing overall environmental protection. The careful planning and design of the upgrade ensure that the site's water-related infrastructure and natural resources are preserved and potentially improved. The closest component of the project to an existing waterbody would be the system pumps, which will be contained within the existing boiler house building and is nominally 65m from Masons Creek.

3.2.3 Residual Impacts

The normal operation of the WESP will not introduce any additional risk of environmental harm or waterway contamination. The proposed system will remove the potential contamination source relating to the settlement of the exhaust stream particulates, which is expected to have an improvement on the nearby waterways. Monitoring of the FOG & Trade waste operational and discharge parameters will continue, with any deviations from the KPIs addressed if they occur.

3.3 Noise emissions

Several site noise assessments have been completed by Tarkarri Engineering, which are supplemented with a technical memo, specific to the WESP project, which are attached as Appendix I, J & K.

3.3.1 Existing Environment

Under Environmental Protection Notice (EPN), No. 7373/2, the Ulverstone plant has an obligation to demonstrate continuous improvement in reducing noise emissions towards meeting a set of target noise emission limits. To assist in this an environmental noise model of the plant has been developed to allow for the ranking of noise sources regarding their contributions to emission levels at noise sensitive locations.

Figure 7 Sound model plan, showing model receiver positions 1-3, 5-7, U1 & U2 (Refer Appendix J)

3.2.2 Required Levels

The noise emission requirements are specified in section N1 and N2 of the EPN for the Ulverstone potato processing plant:

- **N1 -** Noise measurements from the activity when measured at any noise sensitive premises in other ownership and expressed as the adjusted time average A-weighted sound pressure level must not exceed 65 dBA at any time
- **N2 -** The person responsible must exercise best endeavours to reduce noise such that noise emissions form the activity when measured at any noise sensitive premises in other ownership and expressed as the adjusted time average A-weighted sound pressure level are:-
    - 55 dBA between 0700 hours and 2100 hours (Day time); and

    - 50 dBA between 2100 hrs and 0700 hours
- Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dBA
- The time interval over which noise levels are averaged must be 10 minutes or an alternative interval specified in writing by the Director
- All methods of measurement, including adjustments for tonality, impulsiveness, modulation and low frequency must be in accordance with the *Tasmanian Noise Measurement Procedures Manual*, issued by the Director of Environmental Management

3.3.3 Potential Impacts

Construction

During the construction phase, some additional noise may be generated, but it is expected to be similar to or less than the typical operational noise of the plant and comparable to any standard construction activity, such as residential building work. The noise levels should remain within acceptable limits and will not be significantly disruptive to the surrounding area.

To aid in the mitigation of this noise, several measures will be implemented. These include limiting the construction works to daytime hours to minimize impact, using noise barriers or temporary soundproofing around particularly loud equipment, and ensuring that machinery and tools are well-maintained to reduce excessive noise. The majority of the structural and mechanical components for the project will be prefabricated off-site, with predominately bolted connections utilised onsite to limit the actual quantity of work, and therefore amount of noise emissions, generated.

Operation

The proposed WESP system includes three (3) new potential noise sources, which are shown in Figure 8 below:

- Purge Air Fan
- Tube Cooling Fan
- ID Fan

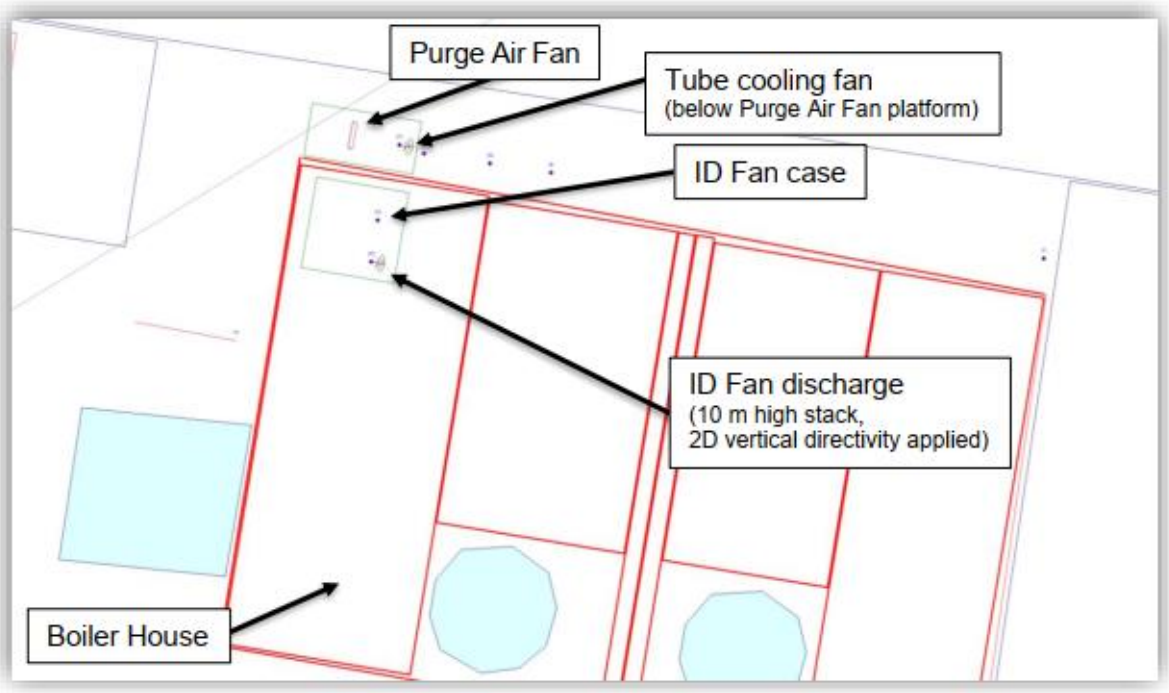

Figure 8 Noise Model view with WESP noise sources marked (Refer Appendix J)

From the conclusion of the Tarkarri report, with the modelling results shown in Table 5 below:

"Predicted sound pressure levels from the Wet ESP are upwards of 15 dB below predicted overall levels and upwards of 12 dB below the target night noise emission limit of 50 dBA (lowest applicable noise emission limit under the sites EPN). Predicted dBC levels from the Wet ESP are less than 15 dB higher than predicted dBA levels from the system (where the difference is greater than 15 the noise emissions are considered to produce excessive low frequency acoustic energy).

Given the above, the proposed Wet ESP wouldn't add a significant level of noise emissions from the Simplot plant to the surrounding environment. The additional sources of noise wouldn't constrain Simplot from pursuing continuous improvement in reducing noise emissions towards meeting the target noise emission limits under the site EPN."

Table 5 Predicted sound pressure levels

Predicted sound pressure levels (dBA)						
Receiver	ISO			WCW		
	Total	Wet ESP		Total	Wet ESP	
		dBA	dBC		dBA	dBC
1	56	26	*41*	59	33	*41*
2	53	25	*40*	56	31	*43*
3	56	26	*41*	59	32	*43*
4	44	17	*31*	49	25	*35*
5	49	30	*43*	53	34	*44*
6	57	32	*46*	59	35	*48*
7	48	32	*46*	54	38	*48*
U1*	63	34	*46*	66	39	*48*
U2*	57	37	*50*	58	40	*51*

3.3.4 Residual impacts

Ongoing noise monitoring will be undertaken on completion of the project to ensure the accuracy of the modelling and compliance with the site conditions, once the system is running. The proposed system will not be the governing noise discharge from the site and will therefore not interfere with ongoing noise reduction projects over the rest of the site into the future.

3.4 Waste

The proposed system will produce additional oil waste, consisting of the particulates that are removed from the fryer exhausts. This additional waste will be treated onsite via the existing FOG (Fats, Oils, and Grease) system and infrastructure.

Minor additional general waste and cardboard is expected to be generated during the construction, including packaging, concrete debris and steel debris. Cardboard and other recyclables will be recycled, while other debris will be disposed of at an approved refuse site.

3.5 Environmentally Hazardous Substances

The proposed works will not substantially increase the site's need to store or use environmentally hazardous materials. The ongoing activity will involve:

- Minor quantities of lubricants and oils, which are essential for the operation of the equipment.
- Small quantities of Defoaming Agents (MSDS attached as Appendix L & M)
- Small quantities of Caustic Soda Liquid (MSDS attached as Appendix N)

These materials will be stored in existing bunded storage areas, ensuring compliance with all relevant environmental regulations. As a result, the risk of environmental impact remains minimal, and no significant changes to current storage practices required.

3.6 Other off-site impacts

The proposed upgrade is not expected to have a meaningful negative impact on adjacent residences, businesses, or the nearby school. In fact, the upgrades are designed to improve overall air quality in the surrounding area, directly addressing concerns previously raised by the local community. The proposed works include advanced filtration and emission control systems, which will reduce the release of oil particulates. While not the primary intention of the project, odour emissions are expected to also be reduced.

3.7 Monitoring

It is proposed that a 2-day program of stack testing for particulate and odour within the first 12 weeks in operation, which will be initiated once the system has been deemed stable and in a ‘normal operation’ mode. This will provide the opportunity to do 3 tests with factory and ambient conditions stable, with the expectation of proving the 80% average removal efficiency, when compared to the previous testing.

The test procedure will be consulted and confirmed with EPA prior to testing commencing. This short-term monitoring will verify that the upgraded systems are functioning as intended and that the improvements in air quality are realized and noise levels correspond to the modelled values. The operation of the oil recovery system in the waste system will also be tested, as mentioned in section 3.2. This will ensure that the particulates that are captured from the factory exhausts are adequately treated prior to the release into the TasWater system, in compliance with the site’s trade waste agreement.

Once this testing confirms the project has achieved the particulate and odour performance goals, the standard site licence monitoring protocols will continue, providing ongoing assurance that the site operates within the required environmental guidelines.

3.8 Decommissioning and rehabilitation

The proposed development will not alter the existing decommissioning or rehabilitation obligations of the site, with no additional considerations or requirements from the existing structure and infrastructure already found onsite.

Upon completion of the project's lifespan, all steelwork associated with the development will be scrapped or recycled in accordance with industry standards, ensuring that valuable materials are repurposed rather than wasted. Any additional materials used during the development will be carefully evaluated and disposed of in compliance with relevant environmental and regulatory requirements. This approach ensures that the site's long-term rehabilitation plan remains intact, and the environmental impact is minimized.

3.9 System component failures

As with any piece of complex equipment, component failures in the WESP system can affect different subsystems in various ways, with impacts ranging from minimal to critical.

For example, a failure in the tube cooling system generally has no immediate effect on the system's performance. The tube cooling system primarily helps reduce buildup on collection surfaces and aids in the flushing process, but its failure won't disrupt operations in the short term.

On the other hand, the effect of a failure of the high-voltage (HV) system is unclear, with the quantity of particulates removed via other systems unknown. As this partially treated exhaust could lead to non-compliance, it is proposed that a limited test of a HV failure be conducted, to allow an operational plan to be developed should failure occur in the future.

Select Subsystem failures:

- Tube cooling system – No performance effect. Only reduces buildup and flush.
- Purge Air system – Immediate Shutdown. No instantaneous effect, but there is a risk of getting particulates in the HV insulators
- HV system – Process gas is able to continue passing through, with system able to continue. Performance effect unknown and is proposed to be tested within 6 months of commissioning.
- Flush system – No immediate system risk, but over time there will be a voltage drop, resulting in reduced performance.
- Gas Exhaust system -Immediate Shutdown as exhaust flow is ceased.
- Recycle/Quench system – Thirty minutes of ongoing use, depending on temp of incoming process. Likely result in buildup of solids within system.

Continuous monitoring of internal system parameters (such as temperature, flow rate etc) is conducted via the systems PLC. The response to any breakdown or out-of-range parameter would be based on the Operational Plan mentioned above, ensuring the system meets the requirement of 80% average particulate removal.

4. Part D – Summary of Proposed Management Measures

Table 6 Proposed Management Measures

No.	Proposed Management Measure	Timeframe
1	Complete noise level checks to confirm validity of noise modelling	Within 30 days after commencement of operations.
2	System performance testing, to confirm minimum 80% average particulate removal	Two days of testing within the first three months of operation, Ongoing testing to be scheduled or evaluated based on results, if deemed necessary.
3	Odour testing at stack, with specific methodology of testing to be confirmed and communicated/consulted to the EPA prior to testing	Within the first three months of operation (pending EPA confirmation of methodology)
4	Continued monitoring and reporting as per existing EPA requirements	Ongoing
5	Trial operation without HV system engaged	Within the first six months of operation

5. Part E – Public and Stakeholder Consultation

The proposed development will directly address the concerns raised by neighbors regarding particulate and air quality, as recorded in the complaints log in Part B above. Although no specific public consultation is planned for this development, these concerns have been taken into consideration and will be actively managed throughout the project's implementation.

The development's primary goal is the implementation of enhanced measures to improve air quality, ensuring a more pleasant environment for the surrounding community. A positive consequence of this with also be the reduction of odour emissions, though this is a side-effect of the particulate removal and not the main objective. Furthermore, ongoing lines of communication between the public, the Environmental Protection Authority (EPA), and the site will remain open, allowing for continuous monitoring and response to any additional concerns that may arise. This approach underscores our commitment to maintaining a positive relationship with the community and adhering to environmental standards.

6. Appendices

Please see Table 6 below for a list of the appendices associated with this report.

Table 7 List of Appendices

Appendix	Title	Author	Pages
A	System Description	LDX	6
B	Design Base & Equipment List	LDX	16
C	2022 Annual Environmental Performance Review	Simplot	36
D	2023 Annual Environmental Performance Review	Simplot	36
E	WESP System and Boiler Extension Drawings	TCS	62
F	Source Emissions Monitoring – Ulverstone Plant 14945	Assured Environmental	28
G	Source Emissions Monitoring – Ulverstone Plant 15064	Assured Environmental	28
H	Air Quality Impact Assessment – 15799	Assured Environmental	34
I	Ulverstone potato processing plant environmental noise survey 2024 5941_AC_R	Tarkarri Engineering	43
J	Technical Memo 5942_AC_R (Noise Assessment)	Tarkarri Engineering	6
K	Ulverstone potato processing plant environmental noise survey 2022 5716_AC_R	Tarkarri Engineering	38
L	XFO-35D MSDS	Ivanhoe Industries	6
M	FOMEXDELTA MSDS	Diversey	5
N	Caustic Soda Liquid (Divergard) LC46 SDS	Diversey	8