

Sonac Australia Pty Ltd DEVELOPMENT LICENCE APPLICATION

Application ID: APP002180

Sonac Australia Pty Ltd

Expansion Project

Overview

February 2022

This report provides an overview of the proposed expansion project at

Sonac Australia Pty Ltd ACN 155 858 601 located at 281 Maryborough - Dunolly Rd, Maryborough, VIC

The information herein is to be used in conjunction with information submitted to the EPA portal for:

Development Licence Application ID APP002180.



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1. Introduction

Sonac Australia Pty Ltd (Sonac) operates an animal blood processing facility that manufactures dried protein powders; haemoglobin and plasma, that are used as ingredients in pet food, aquafeed and non-ruminant animal feeds.

Sonac is part of Darling Ingredients (https://www.darlingii.com), an international company that transforms edible and inedible residual bio nutrients into sustainable food, feed and fuel ingredients.

Animal blood is collected from abattoirs across Victoria, New South Wales and South Australia and processed at the premises. Finished products are sold domestically and internationally.

In accordance with the Meat Industry Act 1993, Sonac is licenced by PrimeSafe to operate an inedible rendering facility (License No. IR0011). As a scheduled premise, the facility holds EPA licence no. 244735 to discharge, handle, treat or dispose of waste to the environment. Sonac is also accredited by the Australian Rendering Association under AS5008:2007 in the Hygienic Rendering of Animal Products.

To improve the company's production capability, capacity, and efficiency, Sonac is proposing an expansion project and is applying to the EPA for a Development Licence (DLA) Application ID: APP002180 to enhance its production site at 281 Maryborough - Dunolly Rd, Maryborough, VIC.

The proposed expansion project is not envisaged to interrupt production and operations at the manufacturing site and will continue to operate 24hrs a day.

2. Proposal Overview

The expansion project is required to increase production capacity and meet customer and business requirements.

The proposed development is a plant expansion to:

- enable greater production capacity
- improve site access and on/off site road traffic safety
- improve wastewater treatment capability and capacity
- improve waste activated sludge handling, and create a more efficient and effective waste activated sludge system
- improve stormwater management via the construction of a storm water management system

The project is planned to occur in two stages.



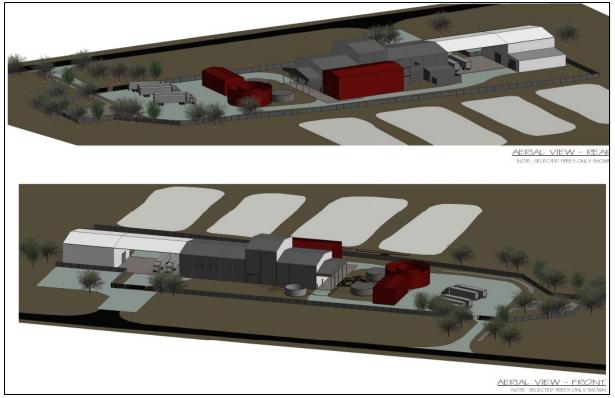
Stage 1 of the proposed expansion project consists of:

- construction and installation of a new wastewater treatment plant (WWTP) to enable future capacity expansion, increasing the processing animal blood from 30,000T to an estimated capacity of 55,000T.
- wastewater treatment plant capacity increase to 13kL/hr
- construction of a building enclosure for dewatering waste activated sludge
- installation of a sludge dewatering press
- construction and installation of a new liquid to powder drying system (box dryer) and associated equipment with rated capacity to process material at 2 tonne/hr
- construction of a fully enclosed building to house the box dryer
- construction of a stormwater management system and plan
- construction of a new access road to allow more efficient truck access and safer one way traffic flow to and from the site
- install new recycled water reuse system for RO permeate into the plant's CIP to reduce the plant's mains water use
- install connection to the Trade Waste sewer for discharge of excess permeate to Central Highlands Water (CHW). The quality of water for disposal is Class B wastewater.
- Construct a paved parking capacity for tanker trucks.

Stage 2: The proposal is for the construction of:

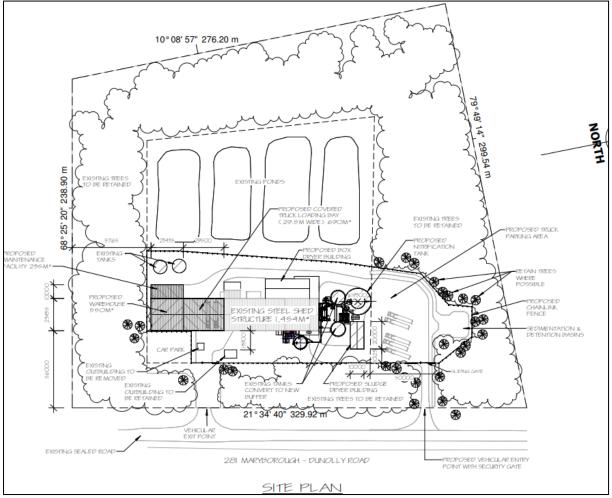
- warehouse building for goods storage located north of the main building (550M²)
- covered truck loading bay (29.5M wide, 690M²)
- maintenance facility (235M²)





Sonac proposed expansion project Stage 1 – Red, Stage 2 White





Sonac proposed expansion project Stage 1 and Stage 2

3. Scope

The scope of this expansion project proposal applies to the current operating site located at 281 Maryborough - Dunolly Rd, Maryborough, VIC.

4. Company Legal Entity

This Development Licence application is made by

Sonac Australia Pty Ltd (Sonac) ACN 155 858 601 ABN 52 155 858 601.

Refer to the Company legal entity form extract from ASIC: Attachment 1.

5. Land Use



5.1 Planning and other Approvals

A Planning permit application is required for the proposed expansion project and has been submitted to the Central Goldfields Shire Council and is currently being assessed.

The following regulatory authorities have been engaged, directly or by Council, with the development proposal for the planning permit application process:

Central Highlands Shire Council	Conceptz Pty Ltd, town planning consultants have applied to the Council on behalf of Sonac Australia for a Planning Permit.
	The proposal is for buildings and works in the industrial 1 zone, create access to a road in a road zone, category 1, reduction of car parking, approval of a bushfire management plan and removal of native vegetation.
	The various authorities as described below have been engaged;
CFA	Central Highlands Shire Council has received 'Conditional consent' to the grant of a permit. CFA, as a Referral Authority pursuant to Section 55 of the Planning and Environment Act 1987 (Act), has considered and does not object to the grant of a permit for the above proposal subject to any mandatory conditions specified within the planning scheme ; and The Bushfire Management Plan, Version F dated 8/09/2021 included in the Bushfire Management Statement Reference No. 21.120 prepared by Regional Planning and Design must be endorsed to form part of the permit and must not be altered unless otherwise agreed in writing by the CFA and the Responsible Authority.
North Central CMA	Central Highlands Shire Council has received consent from NCCMA ref: NCCMA-F-2021-01314 on 17/11/21 with the following 'pursuant to Section 56 of the Planning and Environment Act 1987, does not object to the granting of a permit subject to the following conditions'. There are 5 conditions that must be met for the consent.
Department of Transport	Central Highlands Shire Council has received consent from the department of Transport ref: PPR 37797/21 on 24/11/21. 'The Head, Transport for Victoria has considered this application and does not object if the



Department of Environment, Land, Water and Planning	permit is subject to the following conditions' There are 4 main conditions and 11 sub conditions that must be met for the consent. Additional conditions - 'The applicant is required to obtain separate approval for working within the road reserve.' Central Highlands Shire Council has corresponded with and received consent from DELWP ref: Ref: SP478111 20211129 RB on 29/11/21 with the following 'The application was referred to the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987) as a referral authority pursuant to Section 55 of the Planning and Environment Act 1987. The Secretary to
	the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987) is a 'recommending' referral authority under Clause 66.02-2, and does not object to a planning permit being granted but recommends that the following conditions are included on the permit: <i>Notification of works, Protection of retained native</i> <i>vegetation, Native vegetation removal, Additional</i> <i>Information/Permit Notes</i>
Goulburn Murray Water	Central Highlands Shire Council has corresponded with and has received consent from GMW ref: GMW Ref: PP-21-01113 Doc ID: A4200256 dated 19/11/21 . GMW 'has no objection to this planning permit being granted subject to the following conditions: 1. There must be no transport of sediment or other materials to waterways either during or following construction activities. 2. Stormwater run-off from buildings and other impervious surfaces must be dissipated as normal unconcentrated overland flow or directed to storage tanks or dams. Any stormwater discharge off-site must be to a legal point as nominated by the Responsible Authority and all infrastructure and works must be in accordance with their requirements'
Vic. Roads	Memorandum of Authority was obtained from VicRoads to conduct survey work of land and roadside areas. Traffic advice was sought.



Central Highlands Water	Sonac has applied for and has an Agreement for Trade Waste disposal. The conditions of the Agreement are detailed in the Schedules and a copy of the agreement was submitted to the EPA as Attachment 14 in the portal application. Sonac is not connected to the CHW sewer system and
	planning for sewer connection has commenced.
PrimeSafe	Sonac had submitted a proposal to PrimeSafe to reuse RO permeate for onsite 'Cleaning in place' (CIP) automated system that are for nonhuman contact and noncritical use.
	Further information has been requested to be provided in support on the proposal before approval to reuse permeate continuously.

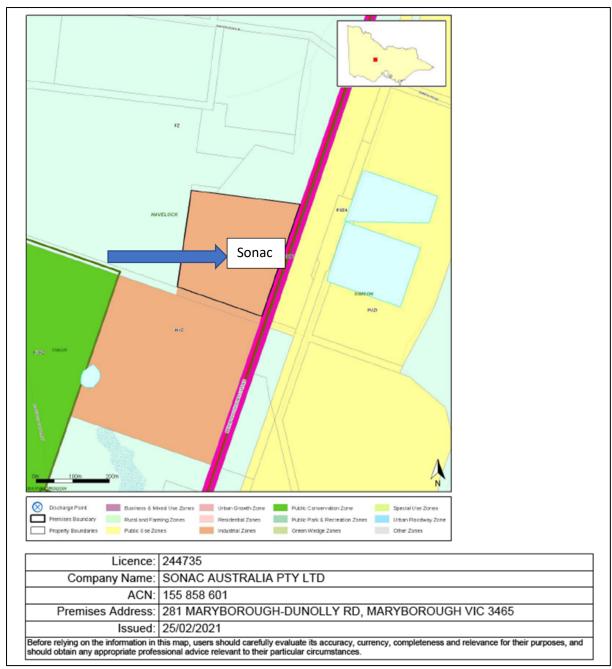
5.2 Choice of Location for an Activity

The Sonac site is located approximately 5 km north of Maryborough in Northern Victoria and is located on Industrial 1 Zone in the Central Goldfields Shire planning scheme. The manufacturing plant is on an existing site and the expansion proposal is consistent with the designated zoning, Industrial 1 Zone. Sonac has operated the site continuously since April 2012.

The key features external to the site are:

- Road access (VicRoads C277 Maryborough-Dunolly Road) and railway line to the east of the site
- Wastewater treatment lagoons (CHW) located east of the road and railway.
- Farmland to the west, south and northwest.
- Public land to the northeast.





Site Location and land zoning





Cartographic map showing the Sonac Australia site relative to Maryborough

6. Track record

Sonac has operated the site continuously since April 2012.

Three concerns have been raised in the last five years:

- EPA issued Pollutant Abatement Notice 90006638 on 20 January 2016 in relation to leakage from evaporation lagoon number 4. Remedial works and a compliance report were undertaken by Sonac. EPA revoked the notice on 8 March 2016.
- EPA issued Inspection Report Number OP-GOC-INSP-30 on 15 November 2018 in relation to an odour report. Sonac replied to EPA by letter on 30 November 2018 providing further information as was requested in the Inspection Report.
- Isolated and unconfirmed odour complaints including most recently in February 2019 from an undisclosed resident in the Simson area for which a formal investigation was done and reported to EPA.

Sonac and its directors have not been found guilty of any relevant offences in Victoria or interstate over the past ten years.

EPA's regional office is familiar with the site and the operations. One of EPA's development assessment officers toured the site in August 2019.

Practices have been modified to mitigate odour production.



7. Community Engagement Summary

Sonac has maintained a good relationship with neighbouring landowners.

The site and surrounding properties include public land controlled by the Department of Environment Land Water and Planning, land owned by Central Highlands Water (CHW) and land leased by a local grazier. All have been advised of expansion plans.

Beyond the immediate locality, Sonac has been in close contact and has a strong working relationship with the Maryborough Golf Club regarding reuse of reverse osmosis (RO) permeate. The golf club, located 3km to the south, sees great benefit re-using the low salinity water as part of its irrigation system for the golf course.

Sonac has also a strong relationship with the Central Goldfields Shire Council.

Since commencing the business in 2012, Sonac has developed good relationships in the town of Maryborough. Sonac is an active member of the "Committee for Maryborough", provides employment for local people, collaborates and contracts with numerous local businesses and contractors in and around Maryborough for a wide range of services and supports various community activities.

Community Group	Consultation details
Community at large	Media Release 1/10/21 issued to regional media outlets, Goldfields Shire, Louise Staley, ARA and PrimeSafe
	Attachment 2
Community at large	Article published in local newspaper, the Maryborough Advertiser.
	Attachment 3
Community at large	Public notice placed in Maryborough Advertiser inviting public to attend one of three consultation sessions at the Community Hub.
	Attachment 5
	Session times offered were:
	22/10/21 10am Community Hub building (no acceptances)
	22/10/21 4pm Community Hub building (was held)
	24/10/21 4pm Community Hub building (no acceptances)

For the current expansion project proposal, the company has embarked on several communicative and engagement opportunities for the local community. The following summary table provides some details of community consultation.

Surrounding properties	Australia Post Unaddressed Mail Service contracted. Invitation to consultation, delivered to neighborhood properties. Letter drop week commencing 15/11.
	Attachment 5
	Inviting recipients to a further consultation session scheduled for:
	18/11/21 4pm at Community Hub building (was held)
	21/11/21 at Golf Club (canceled no response)
Council Shire	Online advertisement detailed on the Goldfields Shire Council Advertised Planning Applications
	Attachment 6
Local residents	6/12/2021 8:30 am onsite in conference room w/ local resident
	21/12/2021 Phone presentation, conversation, and email w/ local resident
	22/12/2021 2:00 pm onsite in conference room w/local resident

The following are briefing outcomes from the consultation information sessions:

- 22/10/21 session, met with Mr (name redacted for privacy) who was very positive about our project. The positive comments were in relation to our contribution to local community and how mutual benefit may be available by linking prospective employees to the local college (school) to encourage interest in settling in Maryborough. Mr (name redacted for privacy) supported our expansion plans
- 18/11/21 session, we met two Maryborough residents, (names redacted for privacy) of Dooleys Rd. The meeting was very positive, their main interest was understanding more about Sonac. They complimented Sonac on our permeate water benefitting the golf course. They fully supported our expansion plans and specifically mentioned that have no issues regarding noise or odour.
- 6/12/2021 Session onsite in conference room with (name redacted for privacy). The meeting was very positive, the local respondent became interested in quoting for excavation work.
- 21/12/2021 Phone presentation, conversation, and email w/ local resident (name redacted for privacy) of Slaughter Yard Track. The meeting was very positive. The resident wants to 'work with us'. The resident mentioned a strong, distinct odour in their area (approx. 1 kilometre from the plant) that occurred at night, five to seven years ago. No odour issues have been noted since that time.



22/12/2021 Presentation and discussion held onsite in the Sonac board room with local resident (name redacted for privacy) of the Simson area. The meeting was convivial and productive. This resident expressed concern about what the expansion would mean for nearby residents. Process and future operations were explained at this meeting. Resident concerns were subsequently confirmed in writing to ensure our accurate understanding, responded to in detail via email and recorded in Sonac's Environmental records.

Sonac developed the consultation cycle to encourage engagement of local and neighbouring property owners and the community in general as per below. This has been conducted though dates have varied.

Consultation Cycle

- Media Release (Maryborough, Bendigo, Ballarat papers, Weekly Times)
- Article and Interview Maryborough Advertiser (MA)
- · Advertisements in MA inviting public to information sessions:

 - Friday 22/10 10am Community Hub
 Friday 22/10 4pm Community Hub
 - o Sunday 24/10 4pm Community Hub
- Mailbox Drop via Aust Post w/c 8/11
- · Final Public Meeting:
 - Sunday 21/11 4pm Maryborough Golf Course
- Summary of feedback to be prepared and available to EPA/Shire/Darling/Sonac

8. Climate Change Act

Section 17(1) of EPA 1970 requires the EPA to consider climate change in licensing decisions (to issue or refuse a licence), as identified in Schedule 1 of the Climate Change Act 2017.

This chapter of the DLA summary report addresses this requirement. Section 17 (2) requires the EPA to have regard to five specific issues, each of which is addressed in the table below.

EPA MUST HAVE REGARD TO:	SONAC'S RESPONSE:
1. The potential impacts of climate change	Climate change will not impact directly on
relevant to the decision or action.	the Sonac operation at Maryborough. We
	expect recycling blood will maintain its
	importance as a resource recovery venture
	in the future even with an uncertain
	climate. We don't expect local or export
	meat consumption to change substantially,
	so the source of blood for processing is not
	expected to be affected by the potential
	impacts of climate change. With hotter
	temperatures, additional refrigeration may
	be required for liquid semi products and
	cooling for the offices and motor control



	1
	rooms. We are always looking at energy
	efficiency options as part of our natural
	approach to business.
2. The potential contribution to the State's	Drying blood uses energy. Most of our
greenhouse gas emissions of the decision	energy comes from natural gas. We
or action.	endeavour to keep our electricity usage
	down. We are taking steps to limit our
	energy use and will continue to do so.
	Thickening the blood by filtering out the
	water rather than having to evaporate it
	into the atmosphere saves energy on a net
	basis. (Much more energy is required to
	evaporate 1 kg of water into vapour than to
	remove 1 L of water by nano-filtration). By
	saving energy we also recover more water
	for reuse and minimise the footprint of our
	salinity dams. A solar installation has been
	approved by management and will be
	installed mid-2022.
3. Any guidelines issued by the Minister	Not applicable.
under Section 18. To date, no such	
guidelines have been issued.	
4. Section 17 (3) sets out the relevant	We have evaluated the potential beneficial
considerations for EPA in having regard to	and detrimental impacts, the direct,
the potential impacts of climate change.	indirect, and cumulative impacts, as
These are the potential biophysical impacts,	follows:
the potential long and short term	Biophysical impacts of climate change:
economic,	The climate around Maryborough is
environmental, health and social impacts,	predicted to be more extreme - hotter,
the	more intense rainfall events but probably
potential beneficial and detrimental	lower annual rainfall – but we predict any
impacts, the	impacts on the local biosphere will have
potential direct and indirect impacts, and	little impact on Sonac's operations.
the potential cumulative impacts.	Economic impacts: While climate change
	has the potential to impact on the blood
	processing industry, we expect the impact
	on Sonac's operations at Maryborough will
	be minimal.
	 Environmental impacts: While climate
	change has the potential to impact on the
	wider environment, we expect the
	impact on Sonac's operations at
	Maryborough will be minimal.
	Health impacts: While climate change has the network of a public health was
	the potential to impact on public health, we
	expect the health impact on Sonac's



	anarations at Marybaraugh will be
	operations at Maryborough will be
	minimal. Disease and microbiological
	concerns are (and will remain) at the height
	of our corporate awareness.
	 Social impacts: While climate change has
	the potential to impact on society, we
	expect the impact on Sonac's operations at
	Maryborough attributable to the social
	impacts will be minimal.
5. Section 17 (4) sets out the relevant	The Sonac plant at Maryborough exists and
considerations for EPA in having regard to	is set up with the infrastructure to dry
the potential contribution to the State's	blood. Energy is used and carbon is emitted
greenhouse gas emissions. These are the	because of the use, but the plant is being
potential short-term and long-term	run efficiently and the practices employed
greenhouse gas emissions, the potential	are considered and will continue to strive
direct and indirect greenhouse gas	for best practice.
emissions, the potential increases and	
decreases in greenhouse gas emissions, and	The proposal for a new box dryer will
the	achieve a reduction in the energy use per
potential cumulative impacts of	tonne of raw material.
greenhouse gas emissions.	

9. Process and Technology

Details of the blood drying process and technology are shown in the process flowchart **Attachment 7**.

For the proposed expansion project, the process flowchart will basically remain the same as the current process.

The following best practice process technologies are proposed for blood drying and wastewater treatment for the expansion project.

9.1 Box Dryer

The proposed expansion project to increase animal blood processing involves the construction and installation of a new liquid to powder drying system (SANOVO Box Dryer), SGA150, and associated equipment with rated capacity of the box dryer to process animal blood at 2 tonne/hr and the construction of a fully enclosed building to house the box dryer.

The SANOVO Box Dryer is the best-known technology as determined in the company's international businesses (US, EU, and China) to produced spray dried animal blood products. <u>Spray Dryer - Powder Processing - SANOVO (sanovoprocess.com)</u>



Refer to **Attachment 8** for the manufacturer's equipment description and **Attachment 9** for the Box Dryer schematic.

Criteria for selection of the dryer is based on process capability, waste minimisation and energy efficiency.

The proposed dryer design uses low exhaust temperatures and special sandwich panelling to retain heat and minimise energy consumption. The dryer has dust monitoring equipment to detect leaking filter socks and superior design to minimise waste versus the older current system.

New SANOVO Box Dryer designed to produce considerably less waste per tonne of processing liquid due to the design pre-atomisation. The new dryer is equipped with dust monitoring equipment (to detect leaking filter socks).

Any powder waste produced that cannot be reworked, will be added to dewatered waste activated sludge and transported to anaerobic digester as K100. Volume of powder waste expected to be minimal due to reworking process.

Waste minimisation is achieved by the SANOVO Dryer by using high-pressure pumps to bring the liquid up to atomisation pressure before the liquid is sprayed into the drying chamber. Existing dryers (14-15 years old) use rotating disk atomizers. This system is less efficient, creating larger liquid droplets and more waste than what will be produced via this new system, which Sonac sister units, is near non-existent.

Refer to **Attachment 7** for the Plant Process Flowchart. The location of the Spray Dryer is shown on Section2 (site plan diagram). Construction of the new Dryer and building will not impact current production capacity or operations and will be installed in conjunction with daily production.

9.2 Wastewater Treatment Plant

The proposed expansion project for the WWTP involves the installation of a new wastewater treatment plant and construction & installation of a dewatering screw press for dewatering waste activated sludge.

The WWTP project is part of Stage 1 of the expansion project and is being managed and constructed by Waterform Pty Ltd of Bendigo, who is applying best practice for wastewater treatment.

Waterform are consulting to the company on construction, installation, commissioning, and final performance outcomes.

The WWTP expansion is designed to increase treatment capacity, capability and improve activated sludge handling. Details of the WWTP project is reported in the WWTP Report. The design capacity for the effluent treatment plant is 13kL/hr.



The following is a summary of the WWTP project:

- Replacement of current WWTP Reverse Osmosis system with new Reverse Osmosis system. Higher efficiency will minimise the increase of brine volume from increased blood receival that is discharged to evaporation ponds
- Install larger, more stable and streamlined activated sludge process for processing bloody wastes that previously had to be disposed off-site. This will significantly reduce volume of bloody waste disposal
- Installation and commissioning of a dewatering screw press for dewatering waste activated sludge. This design reduces waste disposal quantities per tonne of raw material processed

Details of the dewatering press installation:

- Novotec SQEEZ-R screw press SQR F02 Plus
- https://novotec.be/en/products/squeez-r
- +/- 120kg DM/hr bio sludge capacity
- 24 hrs/day operational availability
- AISI 304L SS construction, AISI31L rings, auger, and blades
- Outlet pre-thickening module flocculator tank (3/4" polymer inlet)
- Integral values, flow meter, nozzles, level control and E-panel as part of complete system
- Customer sludge conveyor system with dual chutes and high-level sensor
- Construction of a building to house the dewatering press and associated control equipment
- Installation of electrical, instrumentation and control work to incorporate new works and enhancement of plant monitoring
- Reuse of recycled water RO permeate into plant CIP systems
- Direct excess RO permeate to Trade Waste in accordance with a Trade Waste Agreement with Central Highlands Water

Proposed new waste activated sludge dewatering equipment will enable improved dewatering of waste activated sludge and reduce, as a percentage, the quantity of waste disposed.

9.3 WWTP Proposed Operating Arrangements

Section 6.1 in the WWTP report provides a summary of the key risks and mitigation measures during commissioning. Sonac staff are familiar with commissioning of these assets and will be involved in this process and in hand over (including requirements from vendors to provide maintenance plans, training, and spare parts).

The construction and installation of the new wastewater treatment plant and its operation will be conducted with the current WWTP facility in operation.



10. General Environmental Duty (GED)

Sonac understands the purpose, principles, obligations and expected outcomes of the GED and works actively to minimise risks of harm to human health and the environment from its activities as far as practicable.

The company is committed to its general environmental duty, and key elements of this are identified it the company's Global Environment Health and Safety policy. The policy details to all stakeholders the key operating principles for all employees. Refer **Attachment 10: Darling Ingredients Inc. Global Environment, Health & Safety Policy**.

The following is an extract of the Darling Global EHS Policy and Initiatives:

"At Darling Ingredients, we are committed to providing a safe and healthy workplace for our employees and to limiting the impact of our operations on the environment. Darling is committed to manage the regulatory and market risks related to climate change. To accomplish this, we consistently strive to improve our programs, practices, services, products, and compliance. This commitment is in the best interest of our employees, customers, suppliers, shareholders, and the communities in which we operate".

This Global Environment, Health and Safety ("EHS") policy is an integral part of our operations and performance management systems. We expect our employees, contractors, and suppliers to adopt and uphold the following principles:

- Protecting our employees from occupational injuries and creating a positive health and safety culture in the workplace
- Taking action to stop and correct any unlawful or unethical EHS conduct
- Protecting the environment and solving our environmental issues, including limiting pollution at the source, managing emissions, releases, and wastes from operations, and making efficient use of natural resources
- Working with our supply chain and business partners to align EHS standards through supply agreements and communication
- Educating ourselves and our customers on the safe and environmentally responsible use of our products
- Supporting the development of responsible standards internally and externally which enhance our EHS principles
- Complying with global EHS laws and regulations
- Actively communicating, implementing, and monitoring EHS compliance using an established Environmental Management System (EMS) and Safety Management System (SMS) that align respectively with ISO 14000 and ISO 45001
- Consulting with stakeholders on environmental, social and governance issues annually through the Shareholder Engagement Process.



Darling Strategic targets & initiatives:

General Environmental Duty (GED) obligations:	Sonac's response to the GED obligations
 (a) use and maintain plant, equipment, processes, and systems in a manner that minimises risks of harm to human 	Plant and equipment are maintained and operated in accordance with manufacturers specifications and company standard operating procedures.
health and the environment from pollution and waste;	Personnel are trained and instructed in operating plant and equipment to ensure risk to health and environment is reduced as far as practicable.
b) use and maintain systems for identification, assessment, and control of risks of harm to human	Safe systems of work are documented in policies work instructions and standard operating procedures.
health and the environment from pollution and waste that may arise in connection with the activity, and for the evaluation of	Risk assessments are conducted and where potential harm is identified control measures are taken to minimise the risk of occurrence.
the effectiveness of controls;	The documented procedures integrate safety, environment, health and quality requirements and actions necessary to operate plant and equipment.
	The company's management systems are based on plan, operate, monitor, and control plant and process. Outcomes are evaluated for performance.
(c) use and maintain adequate systems to ensure that if a risk of harm to human health or the environment from pollution or waste were to eventuate, its	Continuous monitoring and plant environmental protection systems inspections are conducted routinely and according to Plant Environmental Protection Systems Inspection schedules and plant OHS inspections.
harmful effects would be minimised;	SCADA control of process with alarms and interlocks at key processing areas
	Incident management includes reporting, investigating, taking corrective action and where necessary report to authorities' notifiable incidents.
(d) ensure that all substances are handled, stored, used, or transported in a manner that minimises risks of harm to human	All substances are transported, handled, and stored in a manner to minimise risk to human health and to the environment.
health and the environment from pollution and waste;	In case of incident, Sonac has an emergency management plan and personal trained in emergency procedures.
	Storage facilities are inspected to ensure compliance to requirements.



	Waste management systems and procedures have been developed and complied with by plant personnel.
(e) provide information, instruction, supervision, and	Production staff are inducted and trained to conduct operations according to standard operating procedures.
training to any person engaging in	operations according to standard operating procedures.
the activity to enable those	Where and when necessary, operators are provided further
persons to comply with the duty under subsection (1).	instruction and supervision to ensure plant and equipment is operated in accordance with the SOP.
	is operated in accordance with the SOP.
	Incident management includes reporting, investigating and
	where necessary reporting to authorities' notifiable
	incidents.

10.1 Energy and Resource Use and Emissions

Sonac uses natural gas and electricity for its energy requirements. Approximately 80% of energy use requirements is derived from the use of natural gas to dry product and heat for hot water generation. The electricity usage of approximately 20% is used for processing equipment, WWTP, lighting, and for office administration.

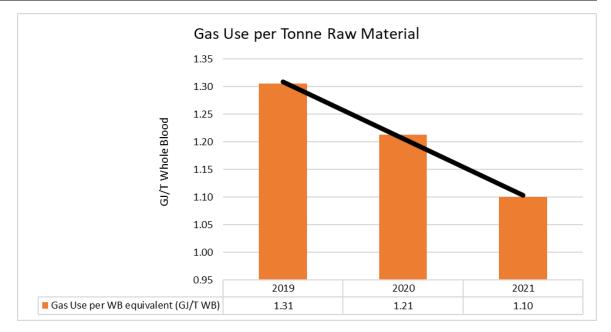
The company has reduced the primary energy consumption per tonne of processed material year on year since 2019. The reduction of consumption of primary energy is due to the implementation of several energy savings projects.

Some examples of implemented energy savings projects at the site are:

- Installation of heat recovery at the spray dryers
- Increase of thermal insulation
- Installation of the nanofiltration
- Automation of the spray dryers
- Improved maintenance program of heat recovery units

Gas use trends represented below; Annual Gas Use per Tonne Whole Blood (WB) performance.

sonac



The proposed new spray dryer process capacity is rated at 2.11 Tonne per hour and gas use at 5.8 GJ/hr and is estimated to be approximately twice the capacity of the current dryers.

Key performance indicators for resource use determined for 2020/2021:

- Gas Use per WB equivalent (GJ/Tonne WB) 1.10
 Electricity kWhr/Tonne WB 0.085
- Potable Water kL/Tonne WB 0.51

11. Environmental Reference Standards (ERS)

The Environment Reference Standard (ERS) made under section 93 of the **Environment Protection Act 2017** (the Act) sets out the environmental values of the ambient air, ambient sound, land, and water environments that are sought to be achieved or maintained in Victoria and standards to support those values.

A performance review has been conducted using the ERS and the following summary describes the company's compliance against the Environmental Values.

11.1 Ambient Air

Sonac complies with all environmental values.

Environmental value	Description of environmental value	Compliance/ Performance
Life, health, and well-being of humans	Air quality that sustains life, health, and well-being of humans	Yes
Life, health, and well-being of other forms of life, including the protection of ecosystems and biodiversity	Air quality that sustains life, health, and well-being of other forms of life, including the protection of ecosystems and biodiversity	Yes



Local amenity and aesthetic enjoyment	Air quality that supports lifestyle, recreation, and leisure	Yes
Visibility	Air quality with low levels of particulate matter and very good visible range	Yes
The useful life and aesthetic appearance of buildings, structures, property, and materials	Air quality that does not cause physical and structural damage to buildings, structures, property, and materials	Yes
Climate systems that are consistent with human development, the life, health and well-being of humans, and the protection of ecosystems and biodiversity	Air quality that is not undermined, or at risk, by a warming and drying climate together with increasing population and economic	Yes

The sources of air emissions from the Sonac facility are:

- Dryer exhaust filters (bag filters) which collect the dried product from the spray dryers
- Product receiver filters which transfers the dried product into packaging bags
- Fugitive odour emissions during tanker unloading
- Fugitive odour emissions from the manufacturing process
- Fugitive odour emissions from the wastewater treatment plant.

Odour from raw material is reduced as the animal blood is collected fresh, preserved, and processed within a closed system.

To ensure air quality performance, Sonac participates in a benchmarking process along with other Darling Ingredients sites. This assists the business to keep up to date with processing and management practices, unique to blood processing facilities, which represents international best practice. Spray dryer baghouse exhaust is filtered to prevent discharge of airborne particles using filter bags. The filter bags are regularly maintained to ensure air flow exhaust performance.

The Sonac site does not have a history of confirmed odour complaints and is located 700 m from any sensitive receptors.

The ERS specifies 'Indicators and objectives for the ambient air environment' and Sonac complies with all indicators.

Refer to Attachment 11 for Air Emissions Management

Dust emissions from traffic movements should be reduced due to new paved road access and more efficient traffic movement.

Potential dust emissions from the spray dryers are managed by maintaining the dust filter bags in the bag house.

ERS Indicators and Objectives for Ambient air.

Indicators	Objectives	Averaging period	Maximum exceedances	Compliance/ Performance
Particles as PM10	50 μg/m3	1 day	None	Yes
(maximum concentration)	20 μg/m3	1 year	None	Yes
Particles as PM2.5 (maximum	25 μg/m3	1 day	None	Yes
concentration)	8 μg/m3	1 year	None	Yes
Visibility reducing particles (minimum visual distance)	20 km	1 hour	3 days a year	Yes
Odour	An air environment that is free from offensive odours from commercial, industrial, trade and domestic activities	N/A	N/A	Yes

ERS Indicators and Objectives that are not applicable to Sonac due the nature of the processing on site:

- Carbon monoxide, nitrogen dioxide photochemical oxidants (ozone), sulphur dioxide, lead

11.2 Ambient Sound

The Sonac site is in a sparsely populated area with native treed land and open farmlands nearby. The designated zoning is Industrial 1 Zone IN1Z.

The manufacturing facility is fully enclosed and located more than 700 m from any sensitive receptors. No noise related complaints or concerns have been received since Sonac took control of the plant in 2012.

The potential sources of noise emissions from the Sonac facility are:

- Traffic noise caused by trucks moving to and from the site
- Operation of equipment including pumps, centrifuges and cyclones, blowers, bag filter dedusters and other vibration equipment, membrane filtration units, refrigeration compressors, motors, pressure relief valves, air vents, fans, and gas burners.

Traffic can be a source of noise, but Sonac is unaware of any traffic or noise related concerns. The raw material transport primarily occurs at night, with daytime trucks moving finished product and treated effluent off site.

The proposed expansion project is expected to create additional noise from the site from construction and earth moving vehicles, and from construction of buildings and equipment. Activity that may cause noise such as construction will be limited to strict operating times.

Processing equipment can be a source of noise. Equipment on the site is related to either the wet or dry manufacturing process, or wastewater treatment. A description of the noise attenuation measures that are in place are provided in **Attachment 12**.

The ERS for ambient sound environment applicable to Sonac

Land use category	General description	Planning Zones
Category I	An urban form with distinctive features or characteristics of taller buildings, high commercial and residential intensity, and high site coverage.	Industrial Zone 1 (IN1Z)

Indicators and objectives for the ambient sound environment

Land use category	Indicators	Objectives
Category I	Outdoor LAeq.8h from 10 pm to 6 am	55 dB(A)
	Outdoor LAeq, 16h from 6 am to 10 pm	60 dB (A)

A site noise survey has been conducted and has determined that noise readings are below the indicators and objective as defined in the ERS. Further site surveys will be conducted as part of the Sonac environmental management system. Refer to **Attachment 13**.

The noise measurements were assessed at a location in a noise sensitive area where the maximum effective noise level occurs or, for proposed premises, is predicted to occur (Noise limit and assessment protocol (publication 1826) has been referenced). 'The background level must, where possible, be measured outdoors at the assessment location in the noise sensitive area.'

11.3 Land and Ground Water

In 2011 the company had an 'Environmental Liability & Compliance Assessment' that assessed the purpose-built Maryborough site constructed in 2008.

Prior to 2006, the land was owned by the Central Goldfields Shire Council and a few private proprietors, and the land is assumed to have been used as a native reserve. Prior to 1940 the site was owned by the Crown and was native eucalyptus forest.

The assessment identified the practice of storing briquette waste onsite in an unpaved, uncovered area and remediation works were conducted to remove the risk of soil and potential groundwater contamination. There was also a bore to extract water for onsite use. This bore is no longer in operation and has been decommissioned.

In 2014 Sonac constructed four brine lagoons to the necessary standard for the WWTP. Brine is disposed to the brine lagoons where water evaporates to atmosphere leaving a concentrated salt solution.

The volume of brine generated from the wastewater treatment process is minimised through reverse osmosis capacity, aimed at reducing the hydraulic load on the brine evaporation lagoons.



The four brine lagoons (ranging in volume from 6.2 ML to 7.3 ML), operate in parallel. Brine is discharged from the RO plant into one lagoon at a time. Water levels and water quality are closely monitored and recorded weekly.

The permeability of the lagoons was tested at the time of their construction. Recent results from permeability testing undertaken indicating permeabilities slower than 10-9 m/s from the base of Lagoon 4.

When it becomes necessary to remove salt from the brine evaporation lagoon system, this will be achieved by either of two methods or possibly a third method:

- Pump concentrated saline wastewater and transport off site using an EPA approved transporter and dispose to an EPA licensed facility.
- Allow the lagoon to dry completely and remove the salt crust from the bed of the lagoon by mechanical means. The dry waste material would be transported off site by an EPA approved transporter and disposed to an EPA licensed facility.
- Brine water pumped back to the WWTP; salts removed, and distillate water recovered using brine capture technology that is currently under study.

The proposed WWTP upgrade/expansion project will provide additional reverse osmosis capacity and will reduce the hydraulic loading on the brine lagoons.

The following ERS values have been assessed and the land meets the intended and proposed use based on assessment of past and current use and meeting the defined indicators and objectives.

Environmental value	Description of environmental value
Land dependent ecosystems and species	Land quality that is suitable to protect soil health and the integrity and biodiversity of natural ecosystems, modified ecosystems, and highly modified ecosystems
Human health	Land quality that is suitable for the specific land use and safe for the human use of that land
Buildings and structures	Land quality that is not corrosive to buildings, structures, property, and materials

Environmental value	Indicators	Objectives
Land dependent ecosystems and species	Inorganic and organic contaminants set out in Appendix A of Schedule B2 of the NEPM (ASC) and any other contaminants present at the site as determined by the current use or site history assessed in accordance with the NEPM (ASC)	The objective for each indicator is the ecological investigation or screening level in the NEPM (ASC), unless – (a) there is no such investigation or screening level; or (b) due to site specific characteristics the more appropriate objective is: (i) the level derived using the risk assessment methodology described in the NEPM (ASC); or (ii) the background level determined in accordance with section 36 of the Act, in



		which case the objective for the indicator is (i) or (ii), as applicable.
Human health	Inorganic and organic contaminants set out in Appendix A of Schedule B2 of the NEPM (ASC), and any other contaminants present at the site as determined by the current use or site history assessed in accordance with the NEPM (ASC)	The objective for each indicator is the health investigation or screening level in the NEPM (ASC), unless – (a) there is no such investigation or screening level; or (b) due to site specific characteristics the more appropriate objective is: (i) the level derived using the risk assessment methodology described in the NEPM (ASC); or (ii) the background level determined in accordance with section 36 of the Act, in which case the objective for the indicator is (i) or (ii), as applicable.
Buildings and structures	pH, sulphate, chloride, redox potential, salinity or any chemical substance or waste that may have a detrimental impact on the structural integrity of buildings or other structures	Land that is not corrosive to or otherwise adversely affecting the integrity of structures or building materials

Wastewater production and use on land

The site generates approximately 20 ML/year of excess RO permeate, Class B recycled wastewater. This is a net figure after maximising the internal reuse of permeate for washdown purposes. The permeate has a low salinity and nutrient content. Electrical conductivity is typically around 250 μ S/cm.

The RO Permeate is fit for the purpose of irrigation. There are two reuse options for RO Permeate in place and operational: the local **golf course** and **onsite**.

The proposed expansion project intends to direct RO permeate to Trade Waste and use for non-critical purposes on site therefore reducing potable water use.

As backup emergency measures, permeate trucked to the golf course or used onsite via the existing drip irrigation network, within the vegetated buffer surrounding the processing plant, remain options.

11.4 Water

Environmental values for Water do not apply. The site is connected to the town water supplier for potable water.



11.5 Groundwater

In 2016, a Land and Groundwater Impact Assessment determined the brine lagoons represent the main risk to land and groundwater. The risk assessment matrix contained in the 2016 Compliance Report indicates the Groundwater:

- is greater than 50 m deep
- salinity is greater than 10,000 mg/L
- usage is not likely, &
- regional groundwater flows in a northerly direction.

The Sonac Environmental Management Plan addresses issues including groundwater management and monitoring, brine lagoon operations and salt disposal. Sonac plans for four bores to be drilled to form the basis of an ongoing risk-based groundwater monitoring program in accordance with best practice guidance provided in EPA Publication 668 (Hydrogeological assessment groundwater quality guidelines) and 669 (Groundwater sampling guidelines).

11.6 Surface waters

Not applicable. The site does not discharge to surface waters.

12. Risk Minimisation

Sonac is obligated to have conducted a risk management assessment to control hazards and risks and minimise risks using EPA Publication 1695.1 'Assessing and Controlling risk: A guide for business'.

Risk has been assessed minimisation measures determined to reduce risk as far as practicable:

Summary of the activity's emissions to air	Dryer exhaust filters (bag filters) which collect the dried product from the spray dryers, product receiver filters which transfers the dried product into packaging bags, fugitive odour emissions during tanker unloading, fugitive odour emissions from the manufacturing process, fugitive odour emissions from the wastewater treatment plant.
	Operate plant and processes according to Standard Operating Procedures, SCADA & Process Logic Control. Inspection and cleaning of filter socks as specified in Sonac's Dryer Exhaust Filter (dedusters) Maintenance program. Conduct Weekly Odour, Noise and Dust Check. Preserve and refrigerate raw material blood at the supplier to maintain freshness. Control odour emissions at the tanker unloading point by using closed pipelines. Fugitive odour emissions from building and equipment are controlled by enclosed processing equipment within the manufacturing building.

Summary of the activity's noise emissions	The potential sources of noise emissions from the Sonac facility are: Traffic noise caused by trucks moving to and from the site, operation of equipment including pumps, cyclones, blowers, bag filter dedusters and other vibration equipment, membrane filtration units, refrigeration compressors, motors, pressure relief valves, air vents, fans, and gas burners. (Most all the above are operated indoors) The proposed expansion project construction vehicles and equipment
	involved in earth works and construction may cause elevated noise levels.
Summary of the systems and processes to prevent or minimise impacts from noise emissions	Maintain or utilise noise attenuation measures such as noise attenuation rooms, sheds & boxes, equipment for the wet processing housed inside the factory, use equipment housing, and implement 'truck quiet passage' policy.
	Construction works to be conducted during permitted times.
Summary of the activity's emissions to surface waters	Not applicable. The site does not discharge to surface waters.
Summary of the systems and processes to prevent or minimise impacts to	Monitor recycled water production, storage, volume, irrigation usage and inflow volume of recycled water. Conduct routine inspection on pumps and irrigation infrastructure.
surface water	The expansion project has enabled the opportunity to negotiate a Trade Waste Agreement with Central Highlands Water for the disposal of recycled water as trade waste into the sewerage network and therefore discontinue on-site irrigation.
	Irrigation to be used only as contingency to minimise impact to surface water. On-site uses of recycled water in non-critical cleaning in plant systems will reduce potable water use and optimise recycled water use.
Summary of the activity's emissions to land and groundwater	Contingency only. Recycled water, Class B for irrigation.
	Occurrence of stormwater runoff from heavy rain.



Summary of the systems and processes to prevent or minimise impacts to land and groundwater	Systems and processes to prevent or minimise impacts to surface water are monitor recycled water production, storage, volume, irrigation usage and inflow volume of recycled water. Conduct routine inspection on pumps and irrigation infrastructure. Ground water monitoring bores to be drilled for monitoring. The expansion project has enabled the opportunity to negotiate a Trade Waste Agreement with Central Highlands Water for the disposal of recycled water as trade waste into the sewerage network. Opportunity has also been determined through on-site uses of recycled water in non-critical cleaning systems. Water sensitive urban design practices have been incorporated into the stormwater design for the site, including the provision of swale drains and a sedimentation basin. Stormwater Management Plan developed for on-site surface and stormwater detention and quality requirements and intended to achieve Best Practice Environmental Guideline.
Summary of the activity's	Odour may be generated from processing activities, condition of
emissions of odour	delivered raw material animal blood and from wastewater treatment plant. Odour from site may be identified and reported past site boundary. No complaints received the last 3 years.
Summary of the systems	Raw material blood is preserved and chilled to maintain product
and processes to prevent	integrity. Blood is transported in closed tankers and unloading is
or minimise impacts from	supervised. Raw material handling is a closed system. Operate plant
odour	and processes according to Standard Operating Procedures, SCADA &
	Process Logic Control. Operate wastewater treatment plant within
	specifications. Investigate any odour complaint received and respond
	to any feedback.
Does your activity include	Sonac manages industrial waste by implementing its waste
	management plan to control wastes generated on site. The
industrial waste, priority	wastewater treatment plant (WWTP) produces biosolids, priority waste
waste and/or reportable	K100, that is dispatched for digestion/composting at EPA approved
priority waste	facility. Other industrial wastes include recycled wastewater Class B,
	spent membranes and brine from WWTP.

Details of the types,	1. Type: Biosolids - K100 (priority waste) from wastewater treatment
quantity, and treatment of	plant, quantity: estimated 20-30T per week. Treatment: offsite
waste	composting/digestion.
	2. Type: Class B recycled wastewater from RO plant, Quantity: 40,000 – 52,000 kL (in 3-4 years), Treatment: on site irrigation – intention is to not irrigate except as contingency, on-site reuse approx. 15,000 – 35,000kL, reuse for off-site irrigation- contingency only. 0kL. Intention is to send all surplus permeate to CHW as per Trade Waste Agreement
	3. Type: RO reject brine in evaporation ponds, quantity 150m3/week in 3-4 years: Disposal: Evaporation; ultimately condensed salts to be sent to landfill if no brine capture technology is implemented in future. Volume unknown.
	4. Type: Industrial waste - spent membranes from RO wastewater treatment plant, Quantity: 0.182T/month Disposal: dispatched to landfill. (Working on new Dupont technology to reduce disposal to 0.023T/month)
Is the proposed activity included in a relevant schedule of a Regional Waste and Resource Recovery Implementation Plan?	The proposed activity, Sonac Expansion Project is not in a RWRRIP schedule.
Summary of the activity's potential human health impacts	Potential human health impacts may occur from: Exposure to micro- organisms from infected animal blood (Q fever). Un-inducted personnel working on the project maybe exposed. Earth works may cause dust to be generated from equipment and vehicles. Dust maybe a health and environment hazard. Construction vehicles and equipment involved in earth works and construction may cause elevated noise levels. Exposure to recycled wastewater may cause microbiological hazard. New Box Dryer may pose an explosion or fire risk from gas leak or dust ignition.



Summary of the systems and processes to prevent or minimise impacts to	Sonac Employees are vaccinated against Q Fever. Induction program informs visitors of risk to Q Fever. Unvaccinated visitors to designated areas to wear P2 masks or be restricted access to site.
human health	Measures to be taken to manage dust generation during construction works. Construction works to be conducted during permitted times.
	Recycled wastewater tested and quality compliant for use of recycled wastewater.
	Use of recycled wastewater for CIP contained in close pipework to eliminate risk of exposure. Conduct routine quality monitoring.
	Box Dryer prefabricated and delivered. Installation and prestart checklist to be developed for new Box Dryer. Operated by PLC control to ensure temperature of dryer is constantly managed. The drying chamber is designed and protected to minimise the risk of harm in the unlikely event of an explosion with explosion protection (ATEX) and Q- boxes installed guarantee safe explosion and venting.



Attachment 1: Company Legal Entity

	Australian Compa
ASIC	SONAC AUSTRALIA PTY. LT
Australian Securities & Investments Commission	ACN 155 858 6
Extracted from ASIC's database at AEST	09:22:56 on 26/11/2021
Company Summary	SONAC AUSTRALIA PTY. LTD.
	155 858 601
	52 155 858 601
Registration Date:	
Next Review Date:	
Status:	Registered
Type:	Australian Proprietary Company, Limited By Shares
Locality of Registered Office:	MARYBOROUGH VIC 3465
D	
	Australian Securities & Investments Commission
Regulator: Further information relating to this organi	



Attachment 2: Community Engagement – Media Release



sonac

Attachment 3: Community Engagement newspaper article

Sonac reveals plans for \$15 million expansion at Maryborough site

BUSINESS

RILEY UPTON Sonac Australia has revealed plans to invest \$15 million to expand production capabilities at its Maryborough facility.

The expansion of the site on the Maryborough-Dundly Road is hoped to begin early next year and will see an increase in raw material processing and upgraded waste treatment technology.

The facility is currently running at capacity and as part of the upgrade, a new spray drying technology and state-of-the-art wastewater treatment plant will be installed, with Sonac applying for a Federal Government grant to fast track the development.

Managing director Simon Cox said the upgrade will secure Sonac's place in Maryborough.

"With continued growth in both pet food and aquaculture industries, we have seen demand for our products strengthen," he said.

"Our current facility is at full capacity and to meet our customers' needs, we are delighted to announce these exciting plans and cement our future in Maryborough."

Sonac processes animal blood collected from abattoirs across aouth-eastern Australia, manufacturing autritional protein powders for pet food, animal production and aquaculture industries.

While processing blood isn't the most attractive idea, Mr Cox said Sonac's success is something for the community to be proud of.

"At the end of the day we're getting rid of a waste that nobody else can handle and we're turning it into a product people can use," he said.

"I think we should be proud of that and Maryborough should really be proud of that, it's a unique technology and we're doing something that nobody else in Australia does."

As part of the expansion, Sonacis seeking a second site entrance with a turning lane to ensure traffic is managed safely on the Maryborough-Dunolly road.

Mr Cox said beyond expanding the business' capabilities, these upgrades will also create a more sustainable business.

"As well as allowing for business expansion, the new dryer will improve our energy efficiency and the new wastewater treatment plant will significantly reduce our environmental footprint, sustainably processing animal byproducts into valuable commodities and returning over 15 million litres of class B water to the community," he said.

Sonac employs more than 30 staff, the majority of whom are local and Mr Cox said this investment will support local industry and the community.

"We aim to be the employer of choice, this means operating safely and sustain ably for the benefit of all stakeholders, particularly staff and the local community," he said.

Sonac will be hosting information sessions for community consultation as part of the upgrade in the near future which Mr Cox said is both required and a good way to let the community know what's happening.

"With the expansion of the waste water treatment plant in particular, we need to consult **and** make sure the community is aware of what's going on and if they have any concerns," he said.

"The idea at this stage is to book a hall or meeting room, invite locals down and anyone will be able to ask what we do, what we're hoping to do and what this investment means for the environment, business and community.

"This fits in nicely with us wanting people to understand what Sonac do and improve our image."



Attachment 4

Community Engagement- Newpaper open letter in the local paper following invitation to local member to visit Sonac manufacturing site.

23 NOV, 2021

Quiet achievers

Maryborough Advertiser, Maryborough

Quiet achievers

On Monday, I had the privilege of visiting one of Maryborough's quiet achievers.

Sonac simply gets on with doing remarkable work.

It is part of the Darling Ingredients global enterprise that uses 10 percent of the world's animal byproducts, giving it purpose and value. It would otherwise be discarded.

In a world that has an

increasingly steely eye on recycling and re-purposing old into new, Sonac sits high on the can-do throne.

It's a hard worker on the waste reduction frontier.

Sonac processes blood proteins. It's scientific — and by extracting plasma and haemoglobin powder it produces the building blocks for the petfood industry, collagen for the beauty industry and even food for Australia's aquaculture farms.

Who would have thought Maryborough was home to such expertise?

It's genuinely impressive.

So too, are its plans for expansion, with millions of dollars poised for investment in the facility and by extension, in Maryborough. Already it employs 30 people.

But like most regional businesses, Sonac has borne the COVID-19 struggles: it has juggled like crazy to maintain momentum. Restrictions have made life hard.

It now also faces the challenges of massive hikes in sea freight costs and internet infrastructure.

That said, the quiet achiever will get on with it.

I congratulate Sonac's Australian

managing director, Simon Cox, who has clearly led his team with diligence and energy.

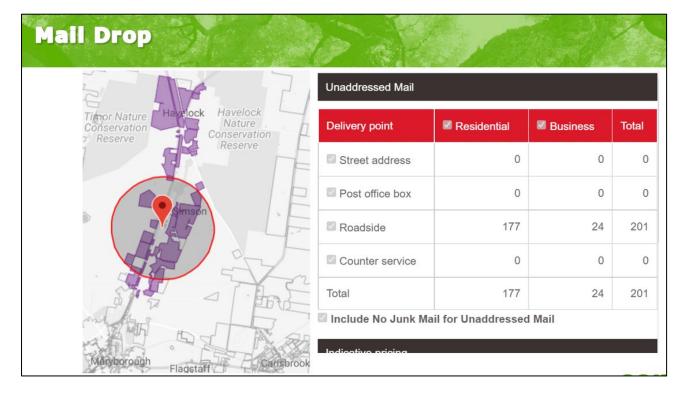
There are times when we should stop and applaud. This is one of them.

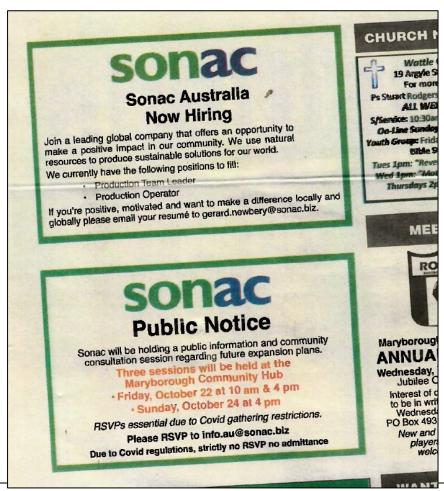
 Beverly McArthur, Member for Western Victoria Region



Attachment 5

Community Engagement - Invitations to a public information / consultation meeting via mail drop and local newspaper advertisement.







Attachment 6 Central Goldfields Advertised Planning Applications





Attachment 7 Sonac Process Flowchart (redacted)



Attachment 8: SANOVO Spray Dryer

SANOVO SGA Range GENTLE AIR SPRAY DRYING SYSTEMS



=General

The SANOVO Gentle-Air spray drying systems for egg liquid products or other similar liquid food ingredients are available in various sizes and can be equipped with numerous types of customer-engineered equipment.

The spray dryers are of the horizontal type and are generally smaller than other dryers with the same capacity and can often be installed in an existing building.

Description

The high-pressure pump in liquid feed system brings the liquid up to atomisation pressure before the liquid is sprayed horizontal by a number of nozzles into the drying chamber.

A patented plenum distributes the drying air into the drying chamber where the water evaporated from the liquid droplets transforming into powder.

An integrated baghouse separates the powder from the exhaust air, and a built-in scraping system removes the powder from the drying chamber.

The powder is transferred to the packaging system by means of a screw conveyor or alternatively by pneumatic or vacuum conveyance systems.

The powder is packed in customized packing systems including silo(s), conveyor(s), a sifter, a semi or fully automatic filling system and an electronic scale.

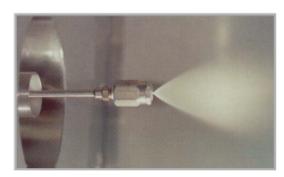
Prior to entering the drying chamber the drying air is filtered to the highest classification, pre-heated by an in-direct heat recovery system before reaching the drying temperature by use of various direct and indirect air-heating systems.

The SANOVO Gentle-Air Spray Dryer includes a PLC operated control panel, and optionally with a SCADA supervisory system.



01 (1. Sep. 04)

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=Special features

- Low drying temperature maximises the preservation of the product properties
- Gentle-Air Drying conditions increase bulk density of powder
- Horizontal spray drying reduces the required building height and overall investment
- Integrated baghouse gives an optimal separation and recovery of products
- Low exhaust temperature minimises the energy consumption
- Drying chamber of sandwich panel with injected polyurethane foam for minimal heat loss
- Easy operation and maintenance
- High efficient SANOX air-heater (optional)



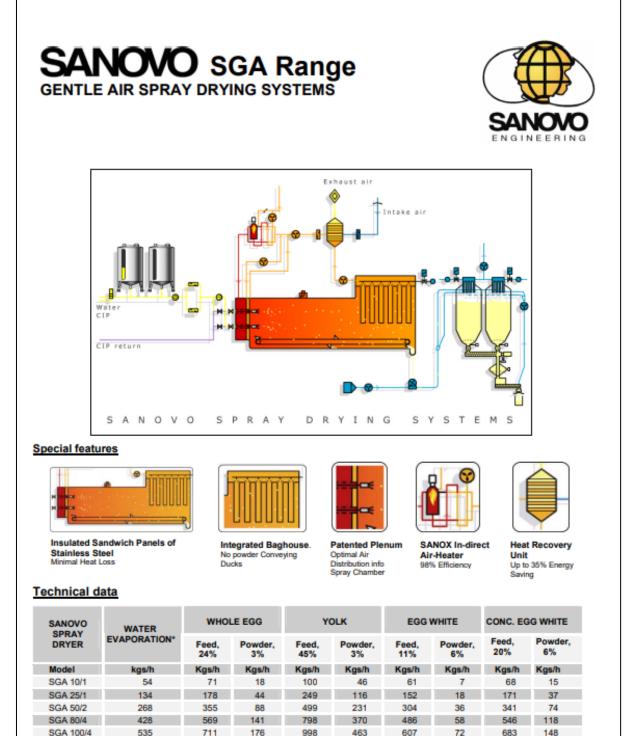
=Options

- Various direct and indirect drying air-heating systems: direct natural gas air-heater, steam bank, thermal oil, and indirect oil or natural gas air-heater.
- Built-in heat recovery unit saving up 35% of the energy consumption
- Powder transfer systems: screw conveyor, pneumatic or vacuum conveyance systems.
- Sonic horn, metal detector, rotating magnet.

Solutions for Food and Egg Processing



Attachment 8: SANOVO Spray Dryer



SGA 120/6 SGA 150/6 SGA 180/9

* at max 200 meters above sea level, 10°C and 70% relative humidity and an inlet drying temperature of 160°C

1389 1822

2133 528

01 (1. Sep. 04)

SGA 225/9

SGA 300/12

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Solutions for Food and Egg Processing

2048 443



Attachment 9: SANOVO Spray Dryer Schematic (redacted)



Attachment 10: Darling Ingredients Inc. Global Environment, Health & Safety Policy

Darling Ingredients Inc.
Global Environment, Health & Safety Policy
At Darling Ingredients, we are committed to providing a safe and healthy workplace for our employees and to limiting the impact of our operations on the environment. Darling is committed to manage the regulatory and market risks related to climate change. To accomplish this, we consistently strive to improve our programs, practices, services, products and compliance. This commitment is in the best interest of our employees, customers, suppliers, shareholders, and the communities in which we operate.
This Global Environment, Health and Safety ("EHS") policy is an integral part of our operations and
performance management systems. We expect our employees, contractors and suppliers to adopt and uphold the following principles:
 Protecting our employees from occupational injuries and creating a positive health and safety
culture in the workplace
 Taking action to stop and correct any unlawful or unethical EHS conduct Protecting the environment and solving our environmental issues, including limiting pollution
at the source, managing emissions, releases, and wastes from operations, and making efficient use of natural resources
 Working with our supply chain and business partners to align EHS standards through supply agreements and communication
 Educating ourselves and our customers on the safe and environmentally responsible use of
 Supporting the development of responsible standards internally and externally which
 enhance our EHS principles Complying with global EHS laws and regulations
 Actively communicating, implementing and monitoring EHS compliance using an established Environmental Management System (EMS) and Safety Management System (SMS) that align respectively with ISO 14000 and ISO 45001
 Consulting with stakeholders on environmental, social and governance issues annually through the Shareholder Engagement Process
These listed principles are in addition to our obligation to comply with all other Company policies and standards, and all other laws and regulations that apply to our operations globally. We are committed to updating our Environmental, Social and Governance (ESG) Report on an annual basis and making it available on the Company website.
Executive management and the Board of Directors at Darling Ingredients are dedicated to reducing occupational injuries and the environmental impact of our operations. Our Global EHS policy and standards are reviewed by senior management on a regular basis to ensure they are suitable and sustainable for our business. The Environmental Affairs as well as the Safety department's discipline within the Company actively identifies and oversees environmental and safety regulatory requirements. The Company's Board of Directors has quarterly updates on environmental and safety events.
am Cary.
William R. McMurtry Jim Long Richard van Lijssel VP Environmental Affairs, North America EVP, Chief Administrative Officer Director Technology, International Date: 10/27/21 Date: 10/27/21 Date: 10/27/21
Revised Date: 10/27/2021
WE CREATE SOLUTIONS THAT SUSTAIN LIFE HEALTH + NUTRIENTS + BIOENERGY + SERVICES

Attachment 11: Air Emissions Management

EMISSION Source	BEST PRACTICE MANAGEMENT	SYSTEM PERFORMANCE
Spray dryer	Following drying of the product in the spray dry tower, particulate-laden air passes through a cyclone for particle separation. The air is further treated in a bag filter to remove 99.9% of particles. After passing through the bag filter, treated air passes through a heat recovery system to remove excess heat from the air stream. (This also reduces the heating requirement for the fresh air inlet.) Fugitive odour emissions are possible from the spray dryer exhaust. These are managed with buffers to sensitive receptors.	 Testing of the spray dryer (line 1 baghouse exhaust, see Attachment 10): Volumetric flow rate = 240 m3/min Mass flow rate = 14,000 kg/hour Total particulate matter <0.3 g/min Therefore, based on continuous operation of the three spray dryer lines, particulate emissions will be <1.3 kg/day This is also below the threshold (10 kg/day) for works approval, as required in r10(1)(a) of the EP(Scheduled Premises) Regulations 2017 This is below the emissions limits in Schedule D of SEPP (Air quality management) 2001 It is not possible to measure the air quality prior to the filter socks due to the physical layout of the ducts without major engineering works
Tanker unloading	Fugitive odour emissions at the tanker unloading point are controlled by using closed pipelines. All blood material is stored in refrigerated, enclosed tanks to maintain freshness and prevent contamination.	Minimal emissions evident.
Manufacturing process	Fugitive odour emissions are controlled with the use of enclosed processing equipment, which is housed inside the manufacturing shed.	Minimal emissions to outside environment.
Wastewater treatment process	 Fugitive odour emissions are possible from points within the WWTP which are open to the atmosphere. The likelihood of offensive odours being produced at these points is minimised by: Inspection points on the wastewater storage tank are kept covered when not in use Wastewater in the storage tank is continuously recirculated, which reduces the likelihood of the waste becoming anaerobic Solid waste pits and bins are kept covered when not unloading Organic loading on the biological treatment system (sequencing batch reactors, SBR) is monitored to ensure that the biological process is capable of treating the influent wastewater without producing odours Waste activated sludge is thickened in an enclosed centrifuge, housed within a dedicated shed. 	WWTP performance data is collected and monitored daily by a full-time dedicated operator. The data is reviewed internally by local management and by a dedicated Wastewater Engineer in Head Office. Data is plotted with records going back years, covering trends in influent and effluent volumes, COD, BOD, pH and other relevant parameters. Contents of solid waste pits and thickened sludge tank are disposed twice per week. This has optimised odour control.
Brine evaporation ponds	The brine lagoons receive very low organic loading. Fugitive odour emissions are possible from the brine storage lagoons however these are managed with buffers to sensitive receptors.	-



Attachment 12: Noise Attenuation Measures

PROCESS AREA	EQUIPMENT	ATTENUATION MEASURE
Wet manufacturing process (blood room)	 Motors Centrifuges Pumps Refrigeration compressors Nanofiltration units 	All equipment for the wet process is inside our factory, with the exception of tanker unloading where tankers drive alongside the factory and a hose is connected to pump (inside) drains the tanker and a washout occurs in a bunded area.
Dry manufacturing process (drying room)	 Motors Cyclone Blowers Bag filter deduster Pumps Gas burner Suction fans Pressure relief valves Air vents 	All equipment for the drying process is inside our factory.
Wastewater treatment process	 Motors Blower Pumps Pressure relief valves Membrane filters Centrifuge 	Motors: all exposed pump motors operate very quietly, no attenuation measures in place. Blowers: all blowers are housed inside noise attenuation cabinets. Membrane filters and pumps: all membrane filters and pumps are housed inside noise attenuation rooms. Centrifuge: the Centrifuge is housed inside a noise attenuation shed.



Attachment 13: Site Noise Survey

Sonac conducted a site environmental noise survey to assess the current level of noise against relevant EPA guidance, Environment Protection Regulations 2021, and EPA Publication 1862.4: Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues (Noise Limit and Assessment Protocol).

The day-time survey (14:00 – 16:30 pm) involved taking audiometer readings from key locations around the site and are detailed in Table 1 and Figure 1 and at location nearest to sensitive receptors on Slaughter Yard Track (corner of Fenton's), Figure 2.

The night-time survey (10:00 – 10:30 pm) involved taking audiometer readings from key locations around the site and are detailed in Table 2 and Figure 1 and at location nearest to sensitive receptors on Slaughter Yard Track (corner of Fenton's), Figure 2.

Location of Noise Reading		Ambient dB(A)	Peak dB(A)	Comments
1.	Middle of north end boundary	59	61	Windy conditions southerly
2.	Middle of west side boundary	63	75	22kph
3.	Middle of south side boundary	67	72	
4.	Front of property	57	80	Peak occurs when car goes past
5.	Nearest sensitive receptor – Keillor Ln & Slaughter Yard Track	55	82	Windy conditions southerly 21kph

Table 1: Day-time noise survey (14:00 – 16:30 pm)

Table 2: Night-time noise survey (10:00 – 10:30 pm)

Location of Noise Reading		Ambient dB(A)	Peak dB(A)	Comments
6.	Middle of north end boundary	Not measured (unsafe)	-	Wind southerly 25-30kph between traffic
7.	Middle of west side boundary	Not measured (unsafe)	-	Peak occurs when car goes past
8.	Middle of south side boundary	53	74	
9.	Front of property	56	74	
		56	88	Peak measurement when train passed
10	Nearest sensitive receptor – Keillor Ln & Slaughter Yard Track	53	70	Southerly wind 25-30kph between traffic

Table 3: Indicators and objectives for the ambient sound environment

Land use category	Indicators	Objectives
Category I	Outdoor LAeq,8h from 10 pm to 6 am	55 dB(A)
	Outdoor $L_{Aeq, 16h}$ from 6 am to 10	60 dB(A)
	pm	



Attachment 13: Site Noise Survey

Survey Observations and Comments

1. Vehicular traffic on the Maryborough-Dunolly Rd main road located east of the site was identified as the most significant contributor to peak noise measurements.

2. The train passing on trainline located east of the site cause a very high peak reading.

3. Night time measurements were not taken in locations (1) & (2) due to concerns for safety of the person taking measurements.

4. Environmental conditions of strong winds were a contributor to the noise measurements.



Figure 1: Aerial image of site and location of noise measurements



Attachment 13: Site Noise Survey



Figure 2: Aerial image of site and location of noise measurements at sensitive receptors

Conclusion

The noise survey was conducted by Sonac to ascertain the level of ambient noise around the site and at the nearest sensitive receptor and determine the background noise in the area.

Using the Category 1 Land use indicator and objectives as detailed in Table 3, the ambient noise measurements were found to be at a level that meet the objectives and indicators as detailed in the guidance and protocol.

The survey had identified that the noise generated by road and rail traffic had a strong impact with elevated peak readings exceeding the indicators and objectives.

Both weather conditions of high wind and frequency of traffic on the Maryborough-Dunolly Rd significantly increased ambient noise readings.

The survey had also noted that there was no pulsing, rhythmic, vibrational, or hammering noises identified.

Sonac has procedures in place to manage any noise complaints which may be raised by nearby sensitive receivers. If a noise complaint is received, this is registered and in the first instance a representative from Sonac will investigate and respond.