



Government of **Western Australia**  
Office of the **Appeals Convenor**  
Environmental Protection Act 1986

## Appeals Convenor's Report to the Minister for Environment

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Appeal objecting to conditions of works approval:  
W6490/2021/1 Talloman Rendering Facility,  
Lot 155 Lakes Road, Hazelmere



<b>Appellant</b>	Hazelmere Progress Association
<b>Works approval holder</b>	Derby Industries Pty Ltd
<b>Authority</b>	Department of Water and Environmental Regulation (DWER)
<b>Appeal No.</b>	023 of 2022
<b>Date</b>	February 2023

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**This report**

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**Acknowledgement of Country**

The Office of the Appeals Convenor acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community.

We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders past, present and emerging.

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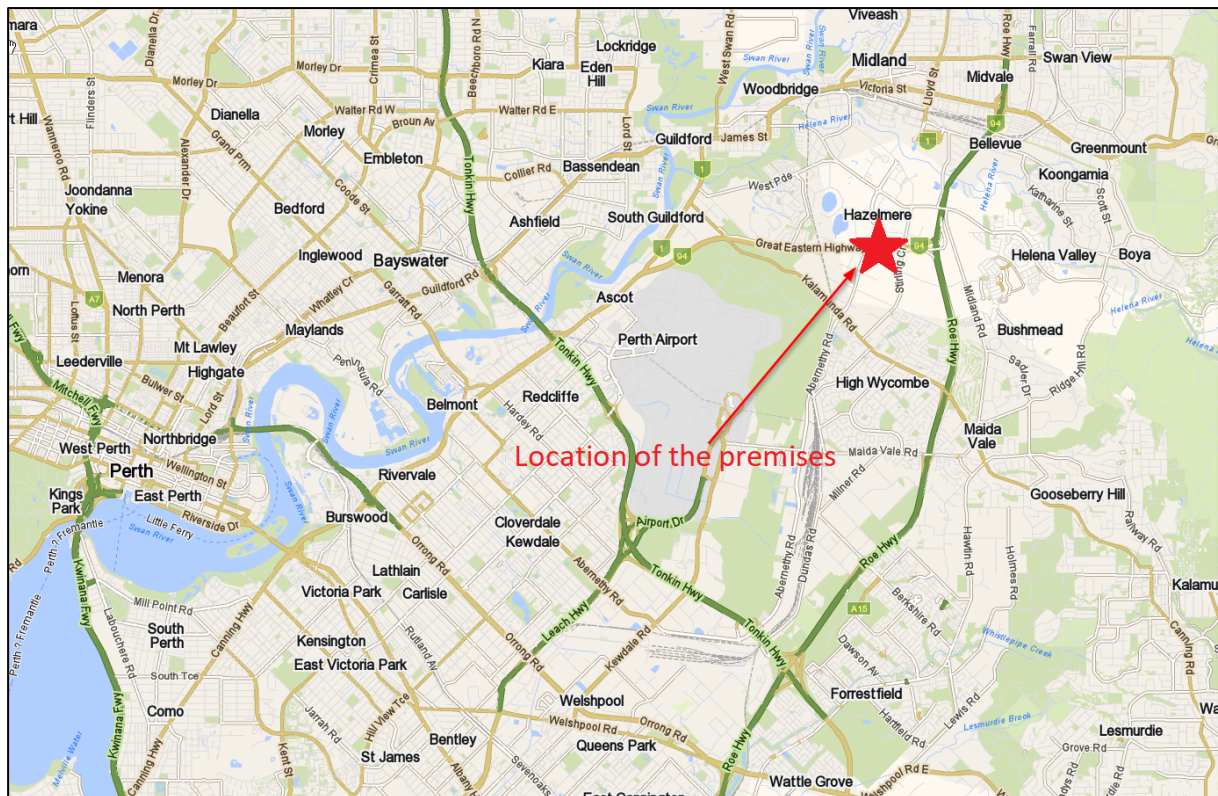
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# 1 Executive summary

## 1.1 Decision under appeal

Derby Industries Pty Ltd (the works approval holder/applicant) holds works approval W6490/2021/1 for the Talloman Rendering Facility (the premises) at Lot 115 Lakes Road, Hazelmere, in the City of Swan (Figure 1). The Department of Water and Environmental Regulation (DWER) issued the works approval in June 2022.

This appeal is against the conditions of the works approval, which authorises the construction, environmental commissioning and time limited operations of a new low temperature poultry rendering line and associated works at the premises.



(Source: *whereis.com* November 2022)

**Figure 1** Location of the premises

## 1.2 Background

The premises are prescribed as Category 16 (Rendering operations: premises on which substances from animal material are processed and extracted) under Schedule 1 of the *Environmental Protection Regulations 1987*. The premises operates under licence L4297/1983/17 issued by DWER under Part V of the *Environmental Protection Act 1986* (EP Act). Under the licence, the approved premises production or design capacity is 160,000 tonnes per annual period.

The construction phase under the works approval includes construction of a new poultry rendering shed, which will contain a raw materials receivals area, crusher, screw, pre-heater, low temperature rendering vessel, screw press/screens and conveyors for the rendered materials and meal dryer. The existing feather hydrolyser and feather rendering equipment

will be moved into the new building. A dedicated biofilter bed will be constructed to the south of the shed and air extraction and conveyance infrastructure.<sup>1</sup>

Under the works approval, the approved premises production or design capacity increases to 180,000 tonnes per annual period.

### 1.3 Grounds of appeal and appellant concerns

The appellant, the Hazelmere Progress Association, contends that DWER's assessment of the works approval application was inadequate and raised a number of issues in relation to the works approval conditions.

We summarise the appellant's main concerns in Table 1.

**Table 1** Grounds of appeal

Ground	Main concerns the appellant submitted
1 Odour	<p>DWER's risk assessment of odour emissions was inadequate and the works approval conditions do not provide adequate odour management.</p> <p>The appellant raised the following issues in relation to odour controls:</p> <ul style="list-style-type: none"><li>• risk rating for potential odour emissions should be 'high'</li><li>• inadequate controls to ensure negative air pressure is maintained within the poultry rendering building to prevent odours escaping e.g. double doors, airlocks and redundancy measures during breakdowns</li><li>• insufficient information on the efficacy of uncovered biofilter beds, and inadequate measures to evaluate and manage the poultry biofilter system</li><li>• air extracted from the poultry rendering building should be filtered and pre-treated prior to entering the biofilter system</li><li>• self monitoring and reporting of odour by the works approval holder is an ineffective control measure.</li></ul>
2 Wastewater	<p>DWER's risk assessment of wastewater treatment and emissions was inadequate and the works approval conditions do not provide adequate wastewater management.</p> <p>The appellant raised the following issues in relation to wastewater management:</p> <ul style="list-style-type: none"><li>• risk rating for potential water emissions should be 'extreme'</li><li>• contending that the wastewater treatment ponds leak</li><li>• asserting that the covers on the covered anaerobic lagoons (CALs) (see Figure 3 in Section 3) were seen inflated above the ponds and filled with large quantities of gas, raising concerns about hazardous emissions to the environment, and that this potential risk was not adequately considered or controlled through DWER's assessment process</li></ul>

<sup>1</sup> DWER, Decision Report, Application for Works Approval W6490/2021/1, 16 June 2022, page 1.



## Ground

## Main concerns the appellant submitted

- inadequate consideration of groundwater monitoring data in DWER's assessment process, with no requirement to make the data publicly available.

### 1.4 Key issues and conclusions

From the appellant's concerns we have identified two issues at the heart of the appeal. We summarise our conclusions for these issues below. Section 2 of this report then details our reasoning and Section 3 provides supporting information.

#### Odour management

The appellant submitted that the addition of the new poultry rendering facility will not be effective in controlling odour emissions. The appellant is concerned the Talloman rendering facility, which has been in operation since the 1950s, has a history of odour emissions impacting nearby residents, particularly during breakdowns and at peak processing times.

Based on our review of the available information, we note that the new poultry plant:

- will be equipped with fast closing doors and extraction to maintain negative pressure and capture internal air for treatment through a new biofilter
- employs a low temperature poultry rendering process, which generates significantly less odour and improved quality wastewater than the existing high temperature rendering process used at the premises
- has sufficient capacity to allow for continued processing during planned maintenance or unplanned outages and breakdowns
- has a number of redundancy measures to mitigate unforeseen odour events and to provide back-up measures should odour control infrastructure fail.

DWER undertook a risk assessment of potential odour emissions from operation of the poultry rendering facility impacting the health and amenity of nearby sensitive receptors, where a risk rating of medium was determined.

DWER applied a number of conditions to the works approval to control odour and mitigate potential impacts. The conditions specify infrastructure and equipment to be installed during the construction of the poultry rendering facility, and requirements for environmental commissioning, monitoring during time limited operations, keeping records and compliance reporting.

Relevant conditions include:

- Conditions 2 and 3 (Compliance reporting) require the works approval holder to engage a suitably qualified independent civil engineer to certify that infrastructure and equipment is constructed in accordance with the specified requirements, and to submit an Environmental Compliance Report to DWER on that compliance.
- Condition 7 requires the works approval holder to monitor a range of physical air parameters, including odour, at specified locations within the poultry rendering facility during time limited operations.
- Conditions 8, 9 and 10 (Compliance reporting) require the works approval holder to (among other things) record the results and report to the CEO on all monitoring activity required by condition 7.
- Conditions 9 and 10 require the works approval holder to evaluate the performance of the biofilters during environmental commissioning and time limited operations to ensure the biofilters are performing as anticipated.

In view of the above, we consider that the conditions attached to the works approval are sufficient to control and monitor odour during construction, commissioning and time limited operations of the new purpose-built poultry rendering facility.

We understand that the works approval holder will require an amendment to licence L4297/1983/17, to authorise emissions associated with the continued operation of the premises. DWER's assessment conducted as part of an application to amend the licence may make further determinations about appropriate licence conditions to control emissions from the premises.

Noting the above, this ground of appeal should be dismissed.

## **Wastewater management**

In summary, the appellant submitted that the existing wastewater treatment plant (WWTP) leaks and discharges to the environment, and that the addition of the new poultry rendering facility will exacerbate the issue.

Based on our review of the available information, we note:

- treated wastewater is either discharged to evaporation ponds or reused on the premises, or discharged to a Water Corporation sewer
- DWER advised there are currently no unauthorised discharges to the environment from the premises, and that historical discharges from the site have been investigated under the *Contaminated Sites Act 2003*
- condition 1 requires that all wastewater from the poultry rendering facility will be conveyed to the premises' existing WWTP, which has sufficient capacity to treat the additional volume of poultry effluent
- no changes are proposed to the existing WWTP under the works approval
- licence L4297/1983/17 (as amended on 27 September 2018) includes conditions which set out relevant operating, maintenance, inspection, monitoring, record keeping, reporting and notification requirements in relation to the existing WWTP.

Water emissions during environmental commissioning and time limited operations of the poultry rendering facility were assessed as low risk.

We note that DWER's risk assessment for water emissions found that existing regulatory controls in place under licence L4297/1983/17 are appropriate and adequate to prevent and control the risk of wastewater spills and stormwater contamination during the construction, environmental commissioning and time limited operations phases authorised under the works approval.

Noting the above, we find the regulatory controls relating to the management and monitoring of wastewater are generally appropriate and directed toward ensuring no unauthorised discharges to the environment occur.

This ground of appeal should be dismissed.

## **1.5 Recommendation to the Minister**

We recommend that the appeal be dismissed.

## 2 Reasons for recommendation

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### 2.1 Odour management

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Our conclusion is that the works approval conditions for the management of odour emissions during the construction, environmental commissioning and time limited operations phases are adequate, based on the available evidence. We explain our reasoning below.

#### **Appellant's concerns**

The appellant contended that DWER's risk assessment of odour was inadequate, and that the risk rating for potential odour emissions should be 'high'.

The appellant raised the following specific concerns in relation to odour management:

- There is no mention of any redundancy for failing doors to the building. Failure of the negative pressure containment with the existing building as has been experienced many times. The potential for similar issues is very likely. (engineered controls are required double doors /airlocks).
- The biofiltration system is uncovered. There is no information on any trials and evaluation work on the effectiveness of the exposed Biofiltration pits. There is no detail on managing the biofiltration system.
- Air extracted from the building and point sources is conveyed directly to the biofiltration pits. It is not pre-treated prior to entering the biofiltration system. We would like to see filtration fitted to extracted air streams prior to leaving the building.
- Self-monitoring is not an effective control. Residents advise that odour complaints have frequently been responded to by Tallomans with denials or surprise they have any issues at all.<sup>2</sup>

These issues will be considered in turn.

#### **Risk assessment of odour**

DWER's Decision Report included a risk assessment of potential odour emissions from operation of the poultry rendering facility impacting the health and amenity of nearby sensitive receptors including residences. As the appellant noted, potential odour emissions from the poultry rendering facility were assessed as medium risk<sup>3</sup>. The appellant was of the view that the risk of odour should have been assessed as high.

The risk assessment identified the following potential sources of odour:

- increased volume of potentially odorous material received at the facility for processing
- additional point and fugitive sources of odour including the new poultry building, washdown bay, biofilter and loading to WWTP
- increased volume of non-condensable, odorous gases generated at the premises.<sup>4</sup>

As part of our investigation we reviewed the works approval holder's proposed management measures for odour control, which include:

- all raw material received on site to be delivered directly from an abattoir, on the same day they are generated
- all material received on site to be entered into the rendering vessel within 15 hours of receipt

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<sup>2</sup> Appeal 023/22, received 7 July 2022, page 1.

<sup>3</sup> DWER, Decision Report, Application for Works Approval W6490/2021/1, 16 June 2022, page 9.

<sup>4</sup> DWER, Decision Report, Application for Works Approval W6490/2021/1, 16 June 2022, page 3.



- all material to be received on site to be covered, tipped and processed within enclosed vehicles, buildings, tanks and vessels
- trucks will undertake tipping and washdown activities within fully enclosed building areas under negative pressure
- low temperature rendering process generates significantly less odorous non-condensable gases
- point source air extraction at odour generating infrastructure
- building ventilated under fan and capable of being fully sealed and under negative pressure and extracted for treatment via biofilter
- non-condensable gases generated through the rendering process emissions from point and fugitive sources are treated through the biofilters prior to discharge to the environment
- biofilter management and monitoring in accordance with the Biofilter Management Plan
- additional unused capacity built into the plant to allow for continued processing during planned maintenance or unplanned outages/breakdowns
- improved wastewater quality from low temperature rendering producing less odorous wastewater.<sup>5</sup>

DWER's Guidance Statement: Risk Assessments – Part V, Division 3, *Environmental Protection Act 1986* (Risk Assessment Guideline) outlines how DWER will assess the risks of emissions from prescribed premises. The Guideline states that DWER will assess risk and apply regulatory controls in proportion to the level of risk (using consequence and likelihood criteria) that an activity poses to public health and the environment.

In this instance, for odour emissions generated from operation of the poultry rendering facility (including during time limited operations) and with the above proposed control measures applied, DWER considered the consequence to be 'minor' and the likelihood as 'unlikely'. Using the Risk Rating Matrix provided in the Guideline, a consequence of 'minor' and likelihood of 'unlikely' equates to medium risk.

## Regulatory controls

We note the acceptability and treatment of the potential risks associated with odour emissions from the new poultry plant was determined in accordance with DWER's Risk Assessment Guideline. The Guideline states that a 'medium' rating risk is acceptable and tolerable and is likely to be subject to some regulatory controls.

The commissioning phase brings a facility into operating condition for the first time in order to measure the parameters which are to be monitored during operation. It allows a works approval holder to test, trial or operate a facility for a limited time.

We understand that the purpose of the time limited operations phase is to allow a facility to operate after commissioning, subject to conditions, while DWER processes a licence application.<sup>6</sup>

We note the works approval contains conditions that specify infrastructure and equipment to be installed during the construction phase, namely:

- new enclosed poultry rendering shed building
- new low temperature poultry press dewatering rendering plant
- relocation of feather hydrolysis plant to new shed
- new poultry biofilter.

<sup>5</sup> DWER, Decision Report, Application for Works Approval W6490/2021/1, 16 June 2022, pages 3 to 4.

<sup>6</sup> DWER, Industry regulation guide to licensing, June 2019, page 13.

The works approval conditions also specify requirements for environmental commissioning, monitoring during time limited operations, keeping records and compliance reporting.

We now consider whether appropriate conditions have been applied to control the issues raised by the appellant with respect to odour. Specifically in relation to:

- maintaining negative air pressure within the poultry rendering building
- ensuring the poultry biofiltration system operates effectively
- monitoring and reporting of odour emissions.

### **Conditions have been applied to ensure negative air pressure is maintained within the poultry rendering building**

Raw materials will be delivered to the premises in dedicated trucks and trailers and unloaded at the integrated raw material receival and truck wash area, located inside the new poultry plant building (refer to Figure 2). The building will be equipped with fast closing doors and extraction to maintain negative pressure and capture internal air to reduce the risk of fugitive emissions.<sup>7</sup>

In response to the appeal, the works approval holder advised that:

The building will have nine access points including personnel doors and roller door / fast door access for trucks and mobile plant. The primary entrance will include a secondary entry door, however personnel doors that are also used as emergency exits will not include provisions for an airlock or secondary door.

Given the available footprint for building construction it is not practicable to have secondary doors or airlocks on larger doors for trucks and mobile plant. The new building includes an integrated raw material receival area which allows for the doors to be closed once a vehicle has entered the area, prior to tipping into the receival pits. This is an improvement on the current plant design.<sup>8</sup>

We note DWER set conditions in the works approval which include the management measures proposed by the works approval holder.

In its response, DWER advised that:

- The rendering shed is sealed to the atmosphere and maintained under negative pressure to prevent odours escaping should the fast-locking doors to the external environment fail.
- Should the ventilation system and the doors fail at the same time, there are three continuous negative pressure gauges that detect loss of negative pressure within the building, notifying site operators who can manually close doors prior to odour emissions escaping the building.
- The shed is designed so that the rendering plant is contained within a separate sealed portion of the shed to the raw materials delivery area, ensuring that the rendering odours are not lost through the delivery doors.<sup>9</sup>

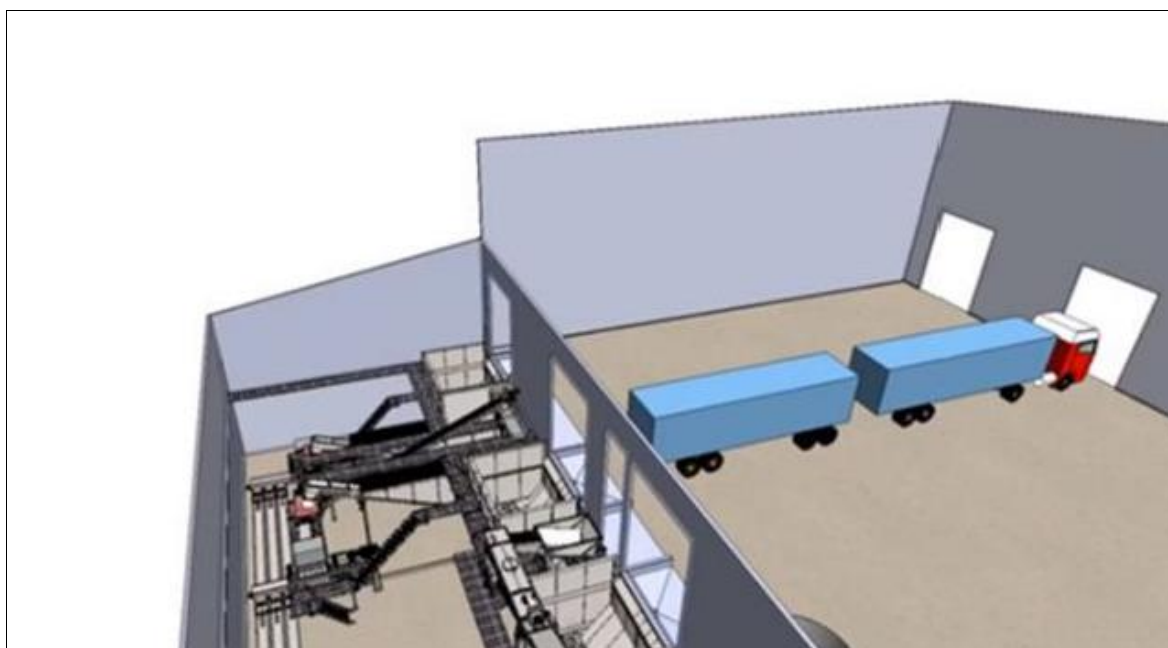
These controls are applied through condition 1 (Infrastructure and equipment) of the works approval in design, construction and installation requirements specified in Table 1, as shown below.

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<sup>7</sup> Derby Industries Pty Ltd, Works approval application supporting document, 3 December 2020, page 14.

<sup>8</sup> Derby Industries Pty Ltd, Response to the appeal, received 14 July 2022, page 2.

<sup>9</sup> DWER, Response to the appeal, 16 August 2022, page 2.



(Source: Derby Industries Pty Ltd, Works approval application supporting document, 3 December 2020)

**Figure 2** Integrated raw material receival area located inside the new poultry rendering building

**Table 1: Design, construction and installation requirements**

	Infrastructure	Design, construction and installation requirements
1.	New enclosed poultry rendering shed building (Dimensions 60m x 25m x 6m)	<p>...</p> <p>The raw materials receival area shall be fitted with three fast closing air lock doors;</p> <p>The entire building shall be fitted with sufficient air extraction units to enable negative pressure to be maintained within the building when operational (with an extraction capacity of approximately 70,000m<sup>3</sup>/hour)</p> <p>...</p> <p>The raw materials receivals area and the poultry processing areas shall be fitted with three continuous negative pressure monitoring gauges on the eastern side of the building as shown in Figure 3 in Schedule 1</p> <p>...</p>

(Source: DWER, Works approval W6490/2021/1, 16/6/22)

We note that conditions 2 and 3 (Compliance reporting) require the works approval holder to (among other things):

- undertake an audit of their compliance with the requirements of condition 1
- engage a suitably qualified independent civil engineer to certify that the infrastructure listed in condition 1 is constructed in accordance with the specified requirements
- prepare and submit to the CEO an Environmental Compliance Report on that compliance.

Under condition 4 (Environmental commissioning requirements), the works approval holder can only commence environmental commissioning of an item of infrastructure listed in condition 1 once the Environmental Compliance Report has been submitted for that item of infrastructure.

Noting the above, we accept DWER's position that the controls applied through the conditions provide appropriate redundancy measures should odour control infrastructure within the new poultry plant fail.

### **Conditions have been applied to ensure the poultry biofiltration system operates effectively**

We understand that the biofilters are the principle odorous air treatment system, which are live treatment systems containing microbes that live on bark and woodchip media and digest odour containing gaseous particles.<sup>10</sup>

The works approval application describes the design and operation of the new poultry biofilter:

The proposed biofilter will be a standard open design consisting of three separate biofilter beds, air plenum, medium support, biofilter medium and irrigation system. The main biofilters structure will be constructed concrete or comparable material. The medium support will consist of concrete rails and plates and the medium will be pine bark/mulch at a depth of approximately 1800mm. The base of the biofilter will be graded towards the back of the bed, and the air plenum will include drainage at the front and rear of the biofilter to allow any excess water to drain.

A network of ducting and fans will extract air from plant and equipment in the factory, which will be saturated by misting sprays prior to entering a biofilter header. The header will allow for significant pressure drop and mixing of the inlet air to allow even distribution between the two biofilter beds. Bed inlets will have a facility for beds to operate independently of each other to allow for routine maintenance.

The total surface area of the biofilter beds will be approximately 600m<sup>2</sup> with a (medium) volume of 1080m<sup>3</sup>. This will allow for an average residence time of ~45 seconds with all beds operating, and ~30 seconds with two beds operating. By maintaining residence times in line with the existing biofilter beds, the process will achieve odour destruction rates of >98%.<sup>11</sup>

We note Table 1 of condition 1 specifies the following requirements for the new poultry biofilter during the construction phase.

**Table 1: Design, construction and installation requirements**

	<b>Infrastructure</b>	<b>Design, construction and installation requirements</b>
4.	New poultry Biofilter	<p>The new biofilter shall consist of 3 x concrete biofilter beds with a graded floor</p> <p>Each biofilter bed shall consist of air plenum, medium support, biofilter and irrigation system</p> <p>Each biofilter bed shall contain media support rails and plates allowing for 1800mm of pine bark or similar media</p> <p>The new biofilter head shall be constructed to allow for mixing of air from various air extraction sources and to allow even air flow distribution and balancing of pressure across biofiltration beds.</p> <p>The air inlet to each biofilter beds shall be constructed to allow for independent operation and isolation of each biofilter bed</p>

<sup>10</sup> DWER, Response to the appeal, 16 August 2022, page 3

<sup>11</sup> Derby Industries Pty Ltd, Works approval application supporting document, 3 December 2020, page 24.

	Infrastructure	Design, construction and installation requirements
		<p>The air plenum of each biofilter bed shall be constructed to allow for excess water drainage at either side of biofilter bed and recirculated or directed to WWTP</p> <p>Each biofilter bed shall be fitted with Continuous Emissions Monitoring System (CEMS) that measures biofilter bed moisture, inlet pressure, inlet air relative humidity, temperature</p> <p>Each biofilter bed shall be constructed to allow a surface area of 600m<sup>2</sup> and to contain approximately 1080m<sup>3</sup> of media</p> <p>Each biofilter bed shall be constructed and operated to allow a minimum air residence time of 45 seconds if biofilter operating in isolation, or 30 seconds if 2 or more biofilters operating at any one time</p>

(Source: DWER, Works approval W6490/2021/1, 16/6/22)

The new poultry rendering plant only requires two biofilter beds to treat odour when operating at full capacity; however, three biofiltration beds will be constructed to allow for one filtration bed being offline at all times without affecting the overall treatment capacity.

Conditions 2, 3 and 4 (discussed in the previous section of this report) also apply to compliance reporting and environmental commissioning requirements for the new poultry biofilter.

Condition 5 requires that:

Prior to commencement of environmental commissioning of the poultry rendering plant the works approval holder shall submit an updated Biofilter Management Plan for the premises which includes the poultry biofilter listed in condition 1 of this works approval.

We note that condition 7 requires the works approval holder to undertake processing monitoring during time limited operations. In summary, a range of physical air parameters are to be monitored at specified locations within the poultry rendering facility at regular intervals in accordance with specified methodology.

In relation to monitoring of odour, Table 2 (Process monitoring during time limited operations) under condition 7 specifies odour concentration monitoring at the following locations: Fan P1 after the poultry evaporation plant; any one of poultry biofilter inlets BI-P1, BI-P2 or BI-P3; and at poultry biofilter outlets BSO-P1, BSO-P2 and BSO-P3 (see Figure 4 in Section 3).

DWER advised that conditions 9 and 10 (Compliance reporting) require the works approval holder to evaluate the performance of the biofilters during environmental commissioning and time limited operations to ensure the biofilters are performing as anticipated, and to allow for changes and adjustments prior to any future operating licence being issued.

We note that the management measures proposed by the works approval holder to evaluate performance of the biofilters during time limited operations include:

- Daily visual inspections of biofilters, inlet ducts, irrigation and extraction fans
- Daily inspection and cleaning of humification spray nozzles
- Annual correlation of air extraction equipment to biofilter
- Monthly flare tests to verify building air extraction
- Field odour assessments
- Regular maintenance and refurbishment of biofilter beds
- Corrective action triggers for inlet air humidity if it is recorded below 70% and for inlet air temperature if it is above 40 degrees Celsius and for biofilter bed pressure if it drops below 35 millibar



- If the new biofilter is not working, the Works Approval Holder can use a different rendering line or they will not operate the rendering plant.<sup>12</sup>

In relation to the appellant's concerns that air extracted from the poultry rendering building should be pre-treated before it enters the poultry biofilter system, DWER advised:

The inflow air is not subject to any significant pre-treatment prior to entering the biofilter other than humification through misting sprays at the air extraction points to ensure that the air inflow does not dry the microbes, and the media meets the optimal humidification target (70 per cent or greater) for the microbes to undertake digestion. The air is also subject to mixing and balancing at the inlet point between biofilter beds to ensure even distribution of contaminated air to the biofilter beds. Pressure across the bed is also monitored as it provides an indication of retention time for odorous air within the biofilter media, and temperature monitoring ensures that the microbes are maintained within the prime activity temperature range.<sup>13</sup>

Noting the above information, we find the conditions are generally appropriate and commensurate with achieving DWER's objective of ensuring the poultry biofiltration system operates effectively.

In reaching this conclusion, we note that conditions require that the new poultry biofiltration system must have:

- inbuilt redundancy, whereby one filtration bed can be offline without affecting the capacity to treat and control odour emissions
- monitoring and reporting requirements to evaluate the performance of the biofilters to allow for changes and adjustments prior to any future operating licence being issued.

### **Conditions have been applied for monitoring and reporting of odour emissions**

The appellant submitted that self monitoring of odour emissions from the premises is not an effective or adequate control. The appellant contended that nearby residents are being regularly impacted by odour emissions from the premises. The appellant also submitted that when residents lodge odour complaints, their concerns are not adequately addressed.

In response to this issue, the applicant advised:

Talloman investigate all complaints received from the Department or through the Talloman Odour Hotline. The majority of complaints are addressed and corrective actions completed, however there are on occasion complaints that cannot be substantiated.<sup>14</sup>

During investigation of the appeal, a joint meeting and site visit was undertaken with representatives of the appellant, the works approval holder and the Office of the Appeals Convenor. At the meeting, the works approval holder expressed a willingness to work cooperatively with the appellant and the community to address any concerns in respect to odour and other emissions from the premises.

As noted above, DWER set conditions in the works approval which require the works approval holder to undertake monitoring during time limited operations, and to keep records and submit compliance reporting to DWER for the construction, environmental commissioning and time limited operations phases.

In addition, condition 11 requires the works approval holder to keep records of complaint/s received about any alleged emissions from the premises, including of any actions taken to

<sup>12</sup> DWER, Response to the appeal, 16 August 2022, page 3.

<sup>13</sup> DWER, Response to the appeal, 16 August 2022, page 3.

<sup>14</sup> Derby Industries Pty Ltd, Response to the appeal, received 14 July 2022, page 2.

investigate or respond to a complaint. In this regard, we encourage the appellant and the community to formally submit any complaints to DWER for investigation.

As noted in Section 1, the works approval holder will require an amendment to licence L4297/1983/17, to authorise emissions associated with the continued operation of the premises. DWER's assessment conducted as part of an application to amend the licence will include consideration of any complaints received. If the assessment finds that odour controls are inadequate, DWER can implement further regulatory controls, which may include infrastructure, equipment and process management upgrades and improvements.

In response to this ground of appeal, DWER advised:

The Department does not consider self-reporting (or self-regulation) a control mechanism for mitigating odour. Self-reporting is a legal obligation upon the occupier of a premises to notify the Chief Executive Officer upon a discharge to the environment that may result in environmental harm or pollution. The occupier is required to notify (self-report) any such incidents, including odour events which may impact on residents, in accordance with section 72 of the EP Act.

The Department considers self-regulation as complementary to Departmental regulation and more effective when undertaken concurrently. It encourages operators to develop systems to monitor and identify issues requiring management before impacts on the community are experienced. Should these self-regulation measures fail, then regulatory controls under the Works Approval and Licence conditions are applied and enforced.

The Works Approval under appeal is for the construction and commissioning of the new poultry rendering line and associated biofilter. The concerns raised by the appeal predominantly relate to the ongoing operation of the existing poultry rendering line and associated biofilter, and to the final operating conditions that will be applied and determined when the Licence is amended to allow ongoing operation of the new infrastructure following a review of the performance of the infrastructure from the Time Limited Operations construction compliance and performance monitoring data.<sup>15</sup>

We note that any failure by the works approval holder to abide by the works approval conditions is a matter for DWER to consider in accordance with the requirements of the EP Act. It is understood that if DWER suspects or determines the holder of a works approval or licence has not met the conditions of their works approval or licence, then DWER will take actions in line with its Compliance and Enforcement Policy (May 2021). This may include the suspension of approvals and giving of notices to cease or suspend operation.

Based on the above information, we find that the regulatory controls relating to the monitoring and reporting of odour emissions are generally appropriate and commensurate with achieving DWER's objective of ensuring that all relevant conditions of the works approval have been complied with.

## **2.2 Wastewater management**

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Our conclusion is that the works approval conditions for the management of wastewater and potential water emissions during the construction, environmental commissioning and time limited operations phases are adequate, based on the available evidence. We explain our reasoning below.

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<sup>15</sup> DWER, Response to the appeal, 16 August 2022, pages 3 to 4.

## Appellant's concerns

The appellant contended that DWER's risk assessment of water emissions was inadequate, and that the risk rating for potential water emissions should be 'extreme'.

The appellant raised the following specific concerns in relation to wastewater management:

- It is common knowledge that the wastewater ponds leak! The adjacent drain along Great Eastern Highway is perpetually lush green. This drain ultimately discharges into the Hazelmere Lakes.
- Residents have also witnessed the anaerobic lagoons (covered ponds) have been seen to fill with very significant quantities of gas (assume methane) on many occasions. Residents will describe the cover as being 5 - 6 meters in height covering the pond. Containing a very significant volume of gas. Where and when this gas is released is unknown. There is no mention or any control for this hazard or emission.
- The residents were surprised to hear that there is no ground water data available for the site given the environmental sensitivity for this new development.
- Residents are very aware that NPE (local Water Management Consultants / Scientists) have been doing water monitoring for Tallomans. Why are these results not available?<sup>16</sup>

These issues will be considered in turn.

## Wastewater treatment

In the Decision Report for the existing licence L4297/1983/1, DWER provided the following overview of the WWTP at the premises:

All processes on-site produce approximately 500,000L of condensate wastewater a day directed to dissolved air flotation (DAF) tank prior to processing through the wastewater treatment plant (WWTP). Washdown water from the rendering area and the truck washdown area are directed to a level controlled sump where it's pumped up to a storage tank, through a separation tank to decant floating fat and through the DAF and WWTP. Separated solids are fed back to the drier. The WWTP consists of a primary anoxic treatment system where wastewater is passed into one of two covered anaerobic lagoons (CAL) for up to 14 days. The water then passes through, a biological nutrient removal (BNR) treatment plant and then to one of two evaporation ponds. There is one final evaporation pond where treated wastewater is either evaporated, recycled or discharged to the Water Corporation Sewer Network.<sup>18</sup>

Figures 3 and 5 in Section 3 show the layout of the premises and a flow chart of the wastewater treatment process respectively.

We understand that the low temperature poultry rendering process produces less wastewater and lower strength effluent than the existing high temperature rendering process used at the premises.<sup>19</sup>

## Risk assessment of water emissions

In response to this ground of appeal, DWER advised that it did not assess the wastewater ponds at the premises during its assessment of the works approval application.

The Decision Report shows that DWER did assess potential water emissions from wastewater spills and contaminated stormwater from the poultry rendering facility.

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<sup>16</sup> Appeal 023/22, received 7 July 2022, page 2.

<sup>18</sup> DWER, Decision Report, Licence L4247/1983/17 Derby Industries Pty Ltd, 25 September 2015, page 4.

<sup>19</sup> DWER, Decision Report, Application for Works Approval W6490/2021/1, 16 June 2022, page 4.

In its assessment, DWER considered the following risks and potential impacts:

- failure of containment infrastructure resulting in leaks and spills
- seepage to ground and contamination of groundwater
- contaminant overloading of the WWTP causing overflow
- overland flow of contaminated stormwater discharging to groundwater.

These potential risks and impacts were assessed as low risk to the environment<sup>20</sup>. As noted above, the appellant was of the view that the risk of wastewater spills should have been assessed as extreme.

## **Regulatory controls**

The Decision Report states that the above risks and impacts from potential water emissions are controlled by the following management measures and works approval and licence controls.

We note that Condition 1 of the works approval requires that all wastewater from the poultry rendering plant and water drainage from the new poultry biofilter are diverted to the WWTP.

DWER's risk assessment considered the applicant's management measures for the WWTP, which include:

- an existing wastewater monitoring system (SCADA) is used to monitor real time water quality such as dissolved oxygen, temperature, other water quality parameters, tank fill levels and pumps
- personnel undertake daily inspections and spill management procedures are established for the premises.

We note that DWER set conditions in licence L4297/1983/17 (as amended on 27 September 2018), which include the above management measures. The licence also includes conditions which set out relevant operating, maintenance, inspection, monitoring, record keeping, reporting and notification requirements.

In summary, relevant conditions under licence L4297/1983/17, include:

- condition 1.3.2 sets out containment infrastructure specifications for the wastewater ponds (CALs and evaporation ponds), which must be lined to achieve permeability of less than  $1 \times 10^{-9}$  m/s
- condition 1.3.4 requires that all wastewater ponds maintain a minimum freeboard of 600 mm and stormwater is diverted away from the ponds; all wastewater is treated in the WWTP; and treated wastewater is either discharged to the evaporation ponds, reused in the plant or discharged to the Water Corporation sewer
- condition 3.3 requires quarterly monitoring of ambient groundwater quality at specified locations within and near the premises boundary
- condition 5.2 requires (among other things) six monthly reporting of groundwater monitoring results and annual audit compliance reporting to DWER.

Based on the above, we accept DWER's position that the existing regulatory controls in place under licence L4297/1983/17 are appropriate and adequate to prevent and control the risk of wastewater spills and stormwater contamination during the construction, environmental commissioning and time limited operations phases.

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<sup>20</sup> DWER, Decision Report, Application for Works Approval W6490/2021/1, 16 June 2022, page 9.

## Other issues related to water management

### Covered anaerobic lagoons

In relation to the appellant's concerns that the covers on the CALs have been seen inflated above the ponds and filled with large quantities of gas, DWER advised:

The CALs are designed to be covered as the first stage of treatment is anoxic, and as the bacteria within the lagoon digest organic matter they release odorous gases which are trapped, allowing the gases to be treated in the dedicated biofilter adjacent to the CALs prior to discharge to the environment. The new low temperature rendering process reduces the effluent strength resulting in significantly less anaerobic digestion of organic matter.<sup>21</sup>

In response to this issue, the applicant advised:

Large volumes of gas have not been observed from the covered lagoons for a number of years, and covers will only allow for ~2m maximum elevation. All gasses produced from anaerobic digestion are extracted and flared. The current pre-treatment significantly reduces COD [chemical oxygen demand] levels in wastewater which has reduced the amount of gas produced in the covered lagoons. This process has been in place since 2017. Residents may have observed the cover lifting from an old pond during remediation works.<sup>22</sup>

We note the advice from DWER and the applicant on this matter.

### Groundwater monitoring

In relation to the appellant's concerns about potential leakage from the wastewater ponds, DWER advised:

Groundwater monitoring to verify the effectiveness of the liner is required by the operational Licence. The site does not irrigate any wastewater to land, with this practice having ceased in approximately 2007, and since then the site has discharged treated wastewater to the Water Corporation sewer.

It is noted that groundwater flows from east to west towards Hazelmere Lakes, not from the north to the east, and the green drainage line along great eastern highway is south of the rendering buildings. The green area is considered most likely to be from historical activities at the site before the Great Eastern Highway bypass was constructed, as Talloman owned land on both sides of the bypass. Noting that the site was established in the 1950s, some decades before the EP Act, the activities at that time were not subject to regulation under this legislation. There are no current or licensed discharges to this area, and the historical discharges and impacts to groundwater have been assessed through investigations undertaken to comply with the requirements of the *Contaminated Sites Act 2003* (CS Act).

The site is classified under the CS Act, in part due to the identification of metal and nutrient contamination in groundwater. Under the CS Act, a large portion of the site is classified as 'possibly contaminated – investigation required'. This classification will require further investigation of both soil and groundwater contamination.<sup>23</sup>

In its response, the applicant advised:

... Groundwater flow across the site is typically from the east, towards the Hazelmere Lakes. While historical irrigation did lead to an increased nutrient loading in groundwater,

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<sup>21</sup> DWER, Response to the appeal, 16 August 2022, page 5.

<sup>22</sup> Derby Industries Pty Ltd, Response to the appeal, received 14 July 2022, page 3.

<sup>23</sup> DWER, Response to the appeal, 16 August 2022, page 4.



this practice ceased in 2008. Recent results from monitoring bores have shown reduced nutrient levels and do not indicate any leaks from the wastewater ponds. These are reported bi-annually to DWER.<sup>24</sup>

In response to the appellant's concerns that groundwater monitoring data from the premises is not publicly available, DWER advised:

Typically, conditions requiring the licence holder to publish or release information is not a type of condition considered under section 62A of the EP Act.

The Department would encourage the applicant to engage with its stakeholders and local community. Strong engagement strategies allow the licence holder to provide community with the context around monitoring results and provide a pro-active approach to any remedial activities. Otherwise, groundwater monitoring required under the Licence is available through a Freedom of Information request, and is normally reported in the licence holder's annual environmental report.

Additionally, with being classified under the CS Act, information related to the findings of groundwater investigations at the premises is available through a Detailed Summary of Records request to the Contaminated Sites Branch of the Department.<sup>25</sup>

We note the above advice.

Based on the available information and evidence, we find that additional conditions are not required through the works approval in relation to wastewater treatment for the new poultry rendering facility.

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<sup>24</sup> Derby Industries Pty Ltd, Response to the appeal, received 14 July 2022, page 3.

<sup>25</sup> DWER, Response to the appeal, 16 August 2022, page 5.

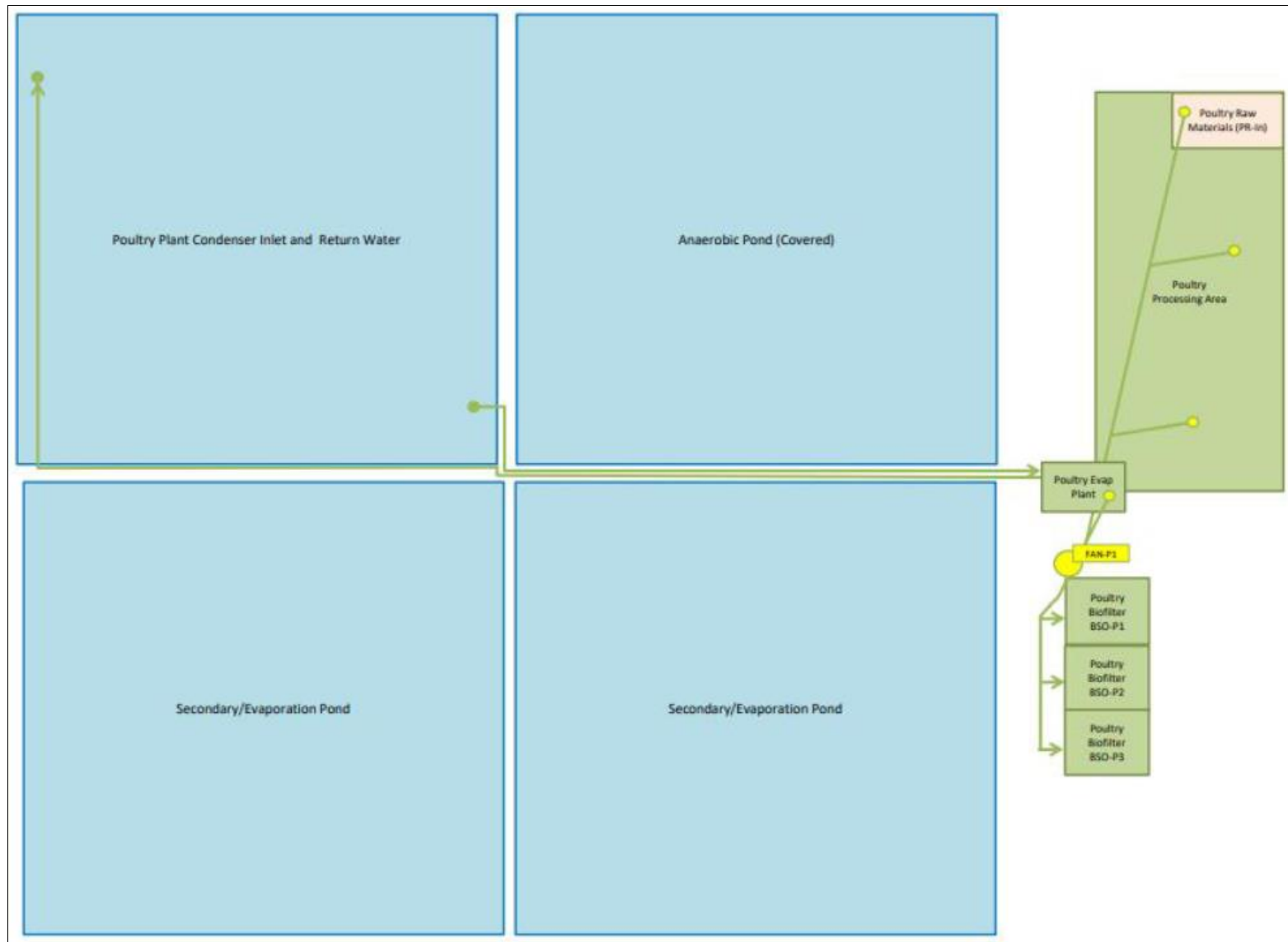
## 3 Supporting information

### 3.1 Maps



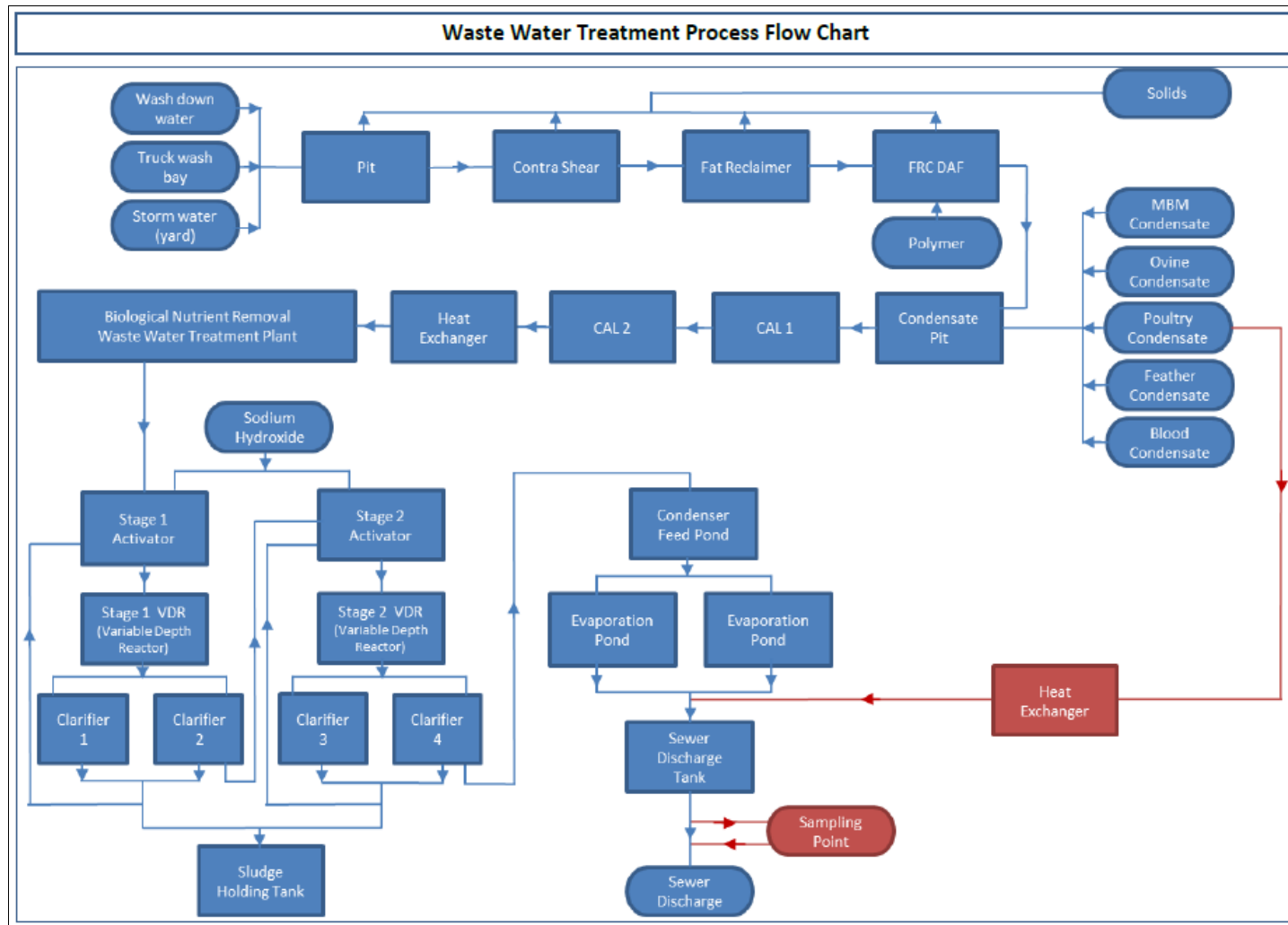
(Source: DWER, Works Approval W6490/2021/1, 16 June 2022)

**Figure 3** Premises map (boundary shown in orange)



(Source: adapted from DWER, Works Approval W6490/2021/1, 16 June 2022)

**Figure 4** Poultry rendering facility and wastewater treatment layout



(Source: Derby Industries Pty Ltd, Works approval application supporting document, 3 December 2020, page 22)

**Figure 5** Wastewater treatment process flow chart

## Appendix 1 Appeal process

### The Minister assesses the merits of a decision

The environmental appeals process is a merits-based process. Appeal rights in relation to a works approval are normally against the specifications of a works approval and whether the conditions of the works approval are adequate or appropriate to control the environmental impacts of the design and construction of the plant. Issues of whether the plant operates so as to manage or abate pollution and to ensure that it operates in an environmentally acceptable manner are normally considerations of the licensing process rather than a works approval. Consistency with previous Ministerial appeal determinations is also relevant, subject to new information or evidence being presented that was not previously considered.

An appeal against the requirements of a works approval cannot overturn the original decision to grant a works approval. But if the appeal is upheld, the works approval conditions might change.

### We report to the Minister, as does the decision-making authority

To decide an appeal's outcome, the Minister for Environment must have a report from both:

- the Appeals Convenor [see section 109(3) of the EP Act], and
- the authority that originally made the decision under appeal [see section 106(1)].

This document is the Appeals Convenor's report to the Minister. The Appeals Convenor's investigation of the appeal included:

- a review of the appeal, DWER's Decision Report, and the works approval holder's application information
- a review of the response to the appeal provided by the works approval holder
- a review of the section 106 report from DWER
- a video meeting with the works approval holder's representative on 29 August 2022
- a video meeting with representatives of the appellant on 14 October 2022
- a joint meeting and site visit with representatives of the appellant and the works approval holder on 18 October 2022
- reviewing other information, policy and guidance as needed.

**Table 2** Documents we reviewed in the appeals investigation

Document	Date
Derby Industries Pty Ltd, Works approval application (W6490/2021/1) supporting document	December 2020
Derby Industries Pty Ltd, Response to the appeal	received 14 July 2022
DWER, Amendment Notice 1, Licence L4247/1983/17 Derby Industries Pty Ltd	30 November 2017
DWER, Amendment Notice 2, Licence L4247/1983/17 Derby Industries Pty Ltd	27 September 2018
DWER, Decision Report, Application for Works Approval W6490/2021/1	16 June 2022



Document	Date
DWER, Decision Report, Licence L4247/1983/17 Derby Industries Pty Ltd	25 September 2015
DWER, Guideline: Risk assessments, Part V, Division 3, <i>Environmental Protection Act 1986</i>	February 2017
DWER, Industry regulation guide to licensing	June 2019
DWER, Section 106 report on the appeal	16 August 2022