Decision Report

Application for Works Approval

Part V Division 3 of the *Environmental Protection Act 1986*

Works Approval Number	W6318/2019/1
Applicant	Fletcher International Exports Pty Ltd
ACN	003 213 652
File Number	DER2019/000598
Premises	Ronneby Park Street address 670 Youngs Road BEAUFORT RIVER, WA 6394 Legal description - Part of Lot 1 on Deposited Plan 21594, Part of Lot 4 on Plan 21594
Date of Report	13/11/2020
Decision	Works approval granted

Chris Malley
MANAGER, PROCESS INDUSTRIES
An officer delegated by the CEO under section 20 of the EP Act

Table of Contents

1. Decision summary

This Decision Report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Works Approval W6318/2019/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Decision Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://www.der.wa.gov.au.

2.2 Application summary and overview of Premises

On 1 November 2019 the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to a 90,000 head capacity intensive sheep feedlot at the Premises including the screening and crushing of gravel for use in the construction works. The sheep feedlot will have an assessed capacity of 180,000 sheep per year. The Premises is located 32 km north of Kojonup and approximately 175 km north of Albany.

The Premises relates to the categories and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in Works Approval W6318. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guidance Statement: Risk Assessments* (DER 2017) are outlined in Works Approval W6318. The extraction of gravel is not assessed as part of the application as it is not a prescribed activity under the EP Regulations however the proposed 40,000 tonnes per year crushing and screening of the gravel is a prescribed activity so has been assessed.

The key aspects for the proposed sheep feedlot include:

- 130 sheep pens;
- 2 x biosolids stockpile areas for respective carcass composting and manure storage
- a sedimentation pond and an evaporation pond;
- a sheep processing area including a weighbridge, weighing yards and ramps for unloading and loading sheep;
- a screening and crushing plant.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017). To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Decision Report are detailed in Table 1 below. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Crushing of material, vehicle movements, lift-off from stockpiles and earthworks	Air/windborne pathway	Separation to sensitive receptors. Applicant has advised that water will be available and used for dust suppression as required during construction. Watering during operation of the screening plant as required
Noise	Crushing and screening of material	Air/windborne pathway	Screening and crushing plant to only operate within day time hours. Separation distance
Operation			
Noise	Operation of the feedlot	Air/windborne pathway	Screening and crushing plant to only operate within day time hours. Separation distance
Dust	Dry pens and unsealed road	Air/windborne pathway	Separation distance Dust suppression as required
Odour	Manure build up in pens	Air/windborne pathway	Pens inspected and cleaned as regularly
	Stockpiles of solid waste		Removal of solid waste from the premises as required Composting of sheep carcasses
	Wastewater treatment ponds		Sedimentation pond to remove solids prior to wastewater entering evaporation pond Cleanout sedimentation pond when 10% full
Wastewater	Leachate from pens, solid waste storage areas, drains and wastewater ponds	Direct discharge Over topping of ponds Seepage through soil	All wastewater directed to wastewater treatment ponds Inspection of drainage system regularly Pens to be constructed with a 300mm compacted base and 2.5 to 4% slope towards the drainage system Drains to have a 1-2% slope and have a hydraulic conductivity of no more than $1x10^{-8}$ m/s Wastewater treatment pond liners constructed to guidelines specifications and to meet a hydraulic conductivity of $<1.5x10^{-9}$ m/s and with a minimum thickness of 450mm Wastewater ponds designed to contain a 1 in 20 24 hour rainfall event with a spill frequency to not be less than 10 years Feedlot within a controlled drainage area Groundwater monitoring

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded applicant's employees, visitors and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guidance Statement: Environmental Siting* (DER 2016)). Figure 1 below shows the distance to the nearest residence.

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Residential premises	The residential premises is approximately 680 metres from the boundary of the premises, about 1 km from the nearest construction and 1.2 km from the proposed sheep lots. There are no other residential premises within 2km of the operational area.
Environmental receptors	**Distance from prescribed activity**
Threatened Ecological Communities and Priority Ecological Communities	Eucalyptus woodland of the Western Australian Wheat belt across Youngs Road to the west and some individual species along the eastern boundary of the prescribed area.
Soil conservation Act 1945 covenant 34.2 hectares retained in perpetuity and fenced (961518VOIP00)	Located adjacent to the Northern Boundary of the prescribed area.
Groundwater	Groundwater within the vicinity of the controlled drainage area is more than 5m below ground level.

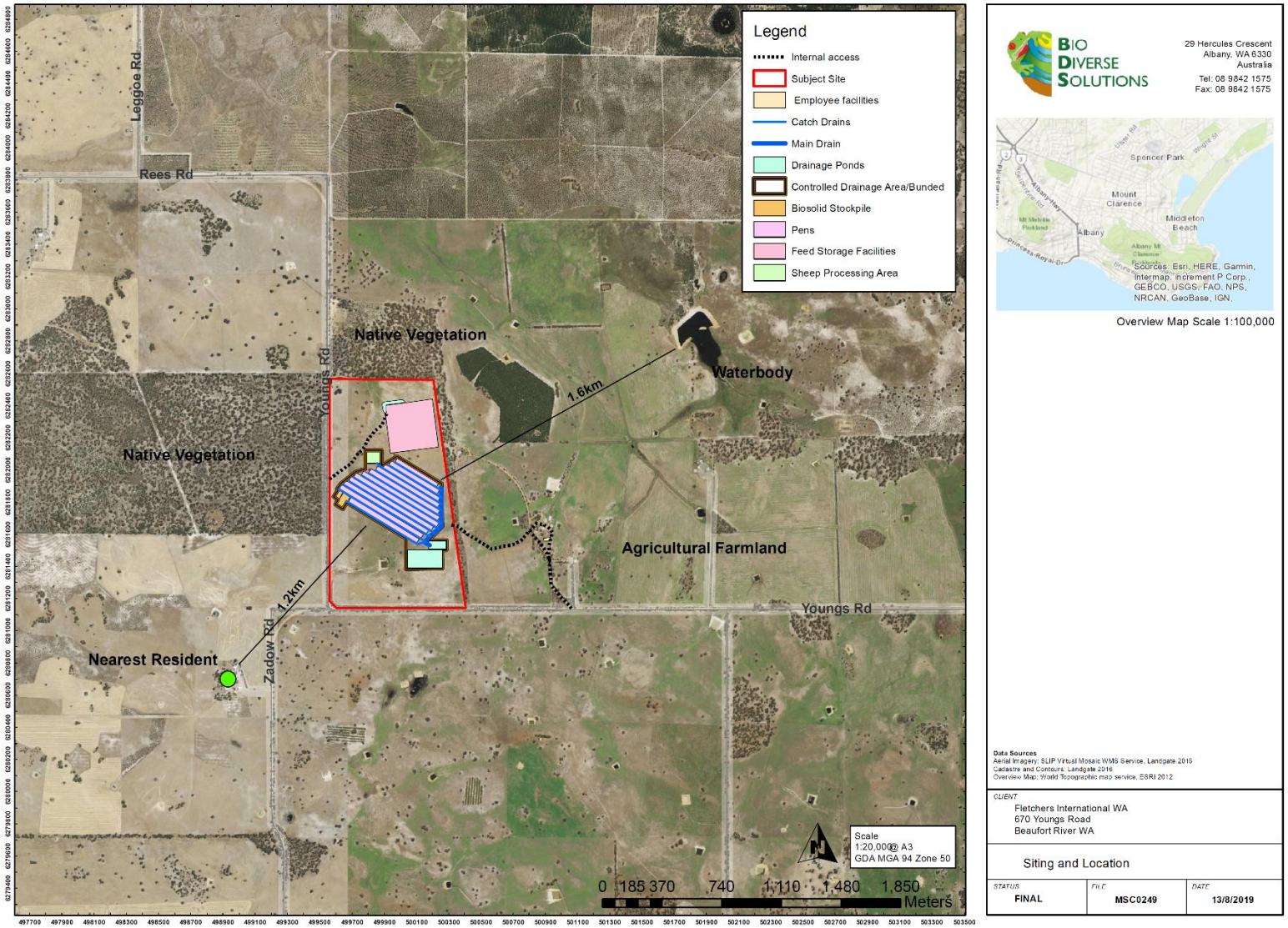

Figure 1: Distance to nearest premises from proposed operational area

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works Approval W6318 that accompanies this Decision Report authorises construction and time-limited operations. The conditions in the issued Works Approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the Premises. A risk assessment for the operational phase has been included in this Decision Report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3: Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions[2] of works approval	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Screening and crushing of gravel Feedlot construction	Dust	Air/windborne pathway causing impacts to amenity	Residences approximately 1km south west	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Yes	NA	NA - The separation distance and watering during operation of the screening plant is considered appropriate for managing dust impacts
	Noise							NA - Noise emissions are regulated under the *Environmental Protection (Noise) Regulation 1997*
Operation including time-limited-operations operations								
	Dust	Air/windborne pathway causing impacts to amenity	Residences 1.2km south west of feedlot operations	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Yes	NA	NA -The separation distance and watering of unsealed roads as required is considered appropriate for mitigating dust impacts
	Noise							NA - Noise emissions are regulated under the *Environmental Protection (Noise) Regulation 1997*
	Odour	Air/windborne pathway causing impacts to amenity	Residences 1km south west of feedlot operations	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	No	*Applicant Proposed controls with more specific additional controls:* *Condition 8*	Additional controls have been included in the works approval for the management of odour emissions including: Condition 8 • Condition 8 requires that the pens are cleaned every 10 weeks to ensure manure build up does not generate unacceptable odour. The MLA 2011 guidelines state pens should be cleaner out frequently and the Works Approval Holder committed to this requirement. • Condition 8 limits the volume of solid waste to be stored on the premises to a maximum of 9,600m^3 • Condition 8 specifies carcass composting management as per the MLA 2011 guidelines.so carcasses are not a source of odour.
Operation of feedlot: Solid waste storage Wastewater	Wastewater Leachate or over flow from pens, drains and wastewater ponds	Seepage through soil	Groundwater is approximately 6m below ground level	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	No	*Applicant Proposed controls with more specific additional controls:* *Conditions* *1, 2, 3, 8, 9*	Conditions have been included in the works approval that are a combination of Works Approval Holder proposed controls and additional controls. The conditions require the works approval holder manages wastewater appropriately and includes: Condition 1 • Condition 1 requires that the Controlled drainage area, pens, manure stockpile, carcass composting area, sedimentation pond, evaporation pond are constructed to the required specification set out in MLA 2011 and SA EPA Guideline on Wastewater Lagoons to ensure that wastewater is adequately contained. • As the material to be used for the pond liner construction has a hydraulic conductivity of ~1.5x10^{-9} m/s pond liners are required to be 50% thicker (450mm) than required by the guidelines. • As the material used for the drain liner construction will have a hydraulic conductivity of 1x10^{-8} m/s drains are required to be inspected to ensure water does not pool in them and they are free from pot holes. Condition 2 • Condition 2 specifies construction quality assurance testing requirements of pond liners to ensure the liners are constructed to the specifications stated I the application and recommended by and reporting to ensure pond liners have been installed to the standards specified in the South Australian EPA Wastewater Lagoon Guidelines 2019 (Appendix 4A) as they are considered the appropriate design specifications for animal industry wastewater ponds. This requirement is generally in line with the liner specifications proposed by the applicant. Condition 8 • Condition 8 specifies the operation and maintenance requirements of the infrastructure during time limited operation and is generally in line with the application and MLA 2011 and the works approval application. Condition 3 and condition 9 • Condition 3 requires three groundwater bores to be installed and additional parameters to be monitored to ensure breach of wastewater containment of excessive seepage from ponds can be identified. The works approval holder proposed one groundwater bore, however it has been determined one bore is not sufficient to provide enough information to determine if groundwater is being impacted by leachate. Additional requirements for the design and installation of monitoring bores was also included in the absence of detail in the Application. This will ensure the bores are installed to an acceptable standard for obtaining credible and accurate groundwater monitoring data. • Condition 9 requires that groundwater is monitored on a 6 monthly basis, additional parameters known to be associated with agricultural wastewater emissions have also been included in the groundwater monitoring parameters in condition 9.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).
Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

3.3 Reporting Conditions

Conditions 4 and 5 require the Works Approval Holder audit and submit a compliance report on the on the works including the construction of the infrastructure, pond liners and the installation of bores

Conditions 11 and 12 requires the Works Approval Holder to submit a report on the groundwater and animal numbers monitoring under taken during time limited operations

Conditions 13, 14 and 15 require the Works Approval holder to maintain books to do with the operation and record any complaints that are received.

3.4 Time limited operation condition

Conditions 6 through 12 specify what the Works Approval Holder is require to do to allow and during time limited operation.

Conditions 6 requires that the Works Approval Holder ensures the works meet the requirements of the works approval prior to the commencement of time limited operations

Conditions 7 the time limited operations are limited to 180 days

Condition 8 requires the Works Approval Holder to maintain and operate the infrastructure to mitigate impacts from leachate and odour

Conditions 9 requires the Works approval holder to monitor groundwater on a 6 monthly basis.

Condition 10 requires the Works Approval Holder to monitor animal numbers on the premises to ensure they are less than the assessed capacity.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Summary of comment of third party comments	DWER response
Concerns regarding rehabilitation of gravel extraction area	No native vegetation proposed to be cleared. If native vegetation is to be cleared the Works Approval Holder is required to determine if a clearing permit is required
Buffers to land that public have access	The separation distances to the operational areas are considered adequate to be able to manage impacts from emissions and discharges from the construction and operation of the premises
Water supply for dust suppression	The Works Approval Holder will need to source adequate water for dust control.
Groundwater abstraction affecting the paleochannel. Is a groundwater licence required	The Works Approval holder will need to determine if they need to apply for a groundwater abstraction licence.
Wastewater treatment in ponds acceptable form of treatment	Treatment of wastewater from feedlots in ponds is standard practice and if designed and managed appropriately the operations should not impact the environment.
Solid waste management – removal from site and stockpiling Carcass management	The applicant has provided the maximum volume of manure to be stored on the premises at one time. The works approval requires the composing of carcasses is under take as per the recommended procedure in MLA 2011
Does Clearing impact conservation covenant bushland?	The feedlot is not within the conservation covenant bushland The construction management plan (Bio Diverse Solutions 2019) shows that the areas for gravel extraction (not assessed as part of the works approval) are not within the conservation covenant area and the area has a 30m buffer.
Odour issues, no odour management plan	The works approval has assessed odour emissions from the premises and imposed controls to mitigate dour impacts on the closest residences. Please see Table 3 above for the odour risk assessment and controls.

The department sought input from the Department of Primary Industries and regional Development (DPIRD). DPIRD provided comments which can be summarised as:

- Lack of detail about the design and operation of the feedlot to assess against MLA 2011;
- Lack of detail on provision of adequate shade and shelter from extreme weather;
- Adequate supply of water for sheep welfare as the application assumes water consumption of 4 L per day which is at the lower range of published information;
- Lack of detail around the design and construction of the feedlot and biosolids storage areas;
- Management of manure biodolids and animal carcass stockpile, including information if composting is used to dispose of animal carcasses;
- Design and construction of the sedimentation and evaporation ponds;
- Rehabilitation of gravel extraction areas;
- Fencing requirements under a *Soil and Land Conservation Act 1945* conservation covenant;
- Potential water extraction impacts on the Beaufort Paleochannel.

The Delegated Officer took into account these comments in the assessment. The comments

around the lack of design and operational detail were addressed through further information from the applicant. Based on the risk assessment outcomes, the Delegated Officer has specified requirements for the design and operation of relevant infrastructure that align with the recommendations within MLA 2011. Sheep welfare and groundwater abstraction are matters not within the scope of regulation under Part V of the EP Act. Fencing requirements were not considered to be relevant as sheep are to be held in dedicated enclosed pens.

The Shire of Woodanilling provided input on the works approval application that was considered in the asssessment. Comments related to DWER can be summarised as:

- Rehabilitation after soil/gravel extraction;
- Site buffers;
- Water abstraction and supply including paleochannel impacts;
- Pond overflow impacts as ponds are approx. 500m from the western boundary;
- Volume and treatment of waste water and suitability of a sedimentation pond including separation from the paleochannel;
- Solid waste volumes and management;
- Land capability;
- Potential vegetation impacts;
- Socioeconomic impacts – local community consultation;
- Carcass management including odour and flies;
- Noise, dust and odour management.

The Delegated Officer notes that a number of the comments have been addressed in Table 4 above.

5. Additional detail on regulatory controls

The works approval contains controls that the Delegated officer considers appropriate to control emissions and discharges from the construction and operation of the premises under time limited operations. Once the works are complete and compliance reporting submitted the Works Approval Holder will be required to submit an application for a Licence. Proposed controls for a licence are expected to be consistent with time limited operation conditions in the works approval, however DWER will consider if any additional regulatory controls are required upon consideration of works approval compliance reports and a licence application.

6. Conclusion

Based on the assessment in this Decision Report, the Delegated Officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Bio Diverse Solutions 2019 *Construction Management Plan Ronneby Park Sheep Feedlot*. Albany Western Australia
2. Bio Diverse Solutions 2019 *Operational Environmental Management Plan: Ronneby Park Sheep Feedlot* Albany Western Australia
3. Bio Diverse Solutions 2019 *Water Management Plan: Ronneby Park Sheep Feedlot* Albany Western Australia
4. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
5. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
6. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
7. DER, July 2015. *Guidance Statement: Regulatory principles*. Department of Environment Regulation, Perth.
8. DWER, June 2019. *Guideline Industry Regulation Guide to Licensing*, Department of Water and Environmental Regulation, Perth.
9. DWER, June 2019. *Guideline: Decision Making*. Department of Water and Environmental Regulation, Perth.
10. Geotechnical Investigation Fletchers International WA Fletcher Proposed Feedlot Project 17 September 2019
11. MLA 2011, *National procedures and guidelines for intensive sheep and lamb feeding systems,* Meat and Livestock Australia Limited, Sydney
12. South Australian EPA April 2019– *Guideline - Wastewater lagoon construction* Environmental Protection Authority. Adelaide, South Australia
13. Great Southern Geotechnical Pty Ltd *Geotechnical Engineering Advise – Fletchers Feeding Lots* October 2020

Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Through put of Category 55	Requested throughput be 90,000 animals instead of 180,000.	This was discussed with the applicant and clarified that the category 55 throughput relates to the animals that pass through the facility in a year not the holding capacity. The applicant advised that 240,000 sheep would be the maximum throughput for animals passing through the facility in a year. The works approval was updated to reflect this and a condition added to restrict the number of animals held on the premises at one time to 90,000 animals as this was the assessed holding capacity.
Category 70	Remove category as gravel will not be removed from premises	This was discussed with the applicant and clarified that the category 70 does not need screened material to be remove from the premises to meet the category. Applicant agreed the category should stay on the works approval
5(a)	Remove reference to category 3 as groundwater bore construction does not require engineer sign off	Works approval updated to remove reference to condition 3
5(d)	Reword so environmental compliance report to be signed off by a qualified driller	No change – Environmental compliance report to be signed off by a Representative of the Works Approval Holder
Table 1	Remove reference to size and number of sheep pens and	Number and size of pens not critical – removed from works approval
	Change pen pad thickness to 200mm of compacted clay or gravel from 300mm	Works approval updated
	Change requirement for catch and main drains to be compacted gravel.	Drain construction material change to low permeability sandy gravel. Drain hydraulic conductivity required to meet $1x10^{-8}$ m/s and to be inspected to and repaired are after flow events.
	Remove reference to evaporation pond having 0.9m freeboard between water level and confining wall.	Removed from works approval, 0.9m free board from weir crest to top of embankment remains on works approval
	Remove condition relating to category 70	As per above category 70 to remain on works approval