

ANNEXURE J: IMPACT AND RISK ASSESSMENT FOR EACH ALTERNATIVE

Environmental impact assessment matrix

Project: The Decommissioning of an Aquaculture Facility and Redevelopment of a Portion of Farm 1259, Malmesbury RD at Paternoster **Authority ref.:** 16/3/3/6/7/1/F4/15/3229/25

EAP: Dupré Lombaard **Date:** 03 February 2026
EAP registration: 2019/304

Probability	None	Unlikely	Low	Medium	High	Unknown
	0	1	2	3	4	5
Extent	Footprint	Site	Local	Regional	National	Unknown
	0	1	2	3	4	5
Consequences	None	Minor	Low	Medium	High	Very high
	0	1	2	3	4	5
Duration	None	Immediate	Short term	Medium term	Long term	Permanent
	0	1	2	3	4	5

Significance rating	SR=(E+C+D)xP
Low (L)	< 12
Medium (M)	13-27
High (H)	28-48
Very high (VH)	49 <

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Project:	The Decommissioning of an Aquaculture Facility and Redevelopment of a Portion of Farm 1259, Malmesbury RD at Paternoster	Authority ref.:	16/3/3/6/7/1/F4/15/3229/25
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Potential impact		Environmental significance: Pre mitigation						Mitigation / Comment	Environmental significance: Post mitigation					
Environmental issue	Activity and significance threshold	Extent	Duration	Consequences	Probability	Total	Significance Rating		Extent	Duration	Consequences	Probability	Total	Significance Rating
Impact / Criteria	Description													
1.1.1 Nuisance impacts	Dust and noise during construction.	1	1	1	2	6	L		1	1	1	1	3	L
· Nature of impact	Demolition of the existing tanks and structures would cause noise and dust.													
· Extent	Limited to site area in view of distance to neighbours and ambient sound levels.	1	1	1	2	4	L	Best practice EMPr provisions will limit any potential negative effect.	1	1	1	1	3	L
· Duration	Short term effects during construction only.	1	1	1	2	4	L	Best practice EMPr provisions will limit any potential negative effect.	1	1	1	1	3	L
· Consequence	The construction effects should be minor as the majority of the work is inside existing buildings.	1	1	1	2	4	L	Best practice EMPr provisions will limit any potential negative effect.	1	1	1	1	3	L
· Probability	It is unlikely that the surrounding environment will suffer negative effects of the nuisance caused by construction.	1	1	1	2	4	L	Best practice EMPr provisions will limit any potential negative effect.	1	1	1	1	3	L
· Reversibility	The effects are quickly reversible.													
· Irreplaceable loss of resources	None.													
· Avoidance	Effects can be mitigated through implementation of an EMPr.													
· Management	EMPr to address potential effects.													
· Mitigation	Limit construction times and movement of vehicles on sand and gravel tracks / roads.							Best practice EMPr provisions will limit any potential negative effect.						
· Significance rating	L													
1.1.2 Health impacts	Removal of asbestos roofs and sheeting.	3	3	5	4	36	H		3	3	3	3	27	M
· Nature of impact	Asbestos fibres potentially cause serious negative health effects in humans.													
· Extent	The sheets need to be removed from site to a hazardous material landfill, currently Vissershok or Mossqas.	3	3	5	4	36	H	Adhere to the Asbestos Abatement Regulations - proper sealing on site.	3	3	3	3	27	M
· Duration	The potential negative effects endure until the waste is disposed of to landfill.	3	3	5	4	36	H	Adhere to the Asbestos Abatement Regulations - immediate removal.	3	3	3	3	27	M
· Consequence	Asbestos fibre effects are significant and working with the material requires specialist intervention.	3	3	5	4	36	H	Adhere to the Asbestos Abatement Regulations - appoint specialists.	3	3	3	3	27	M
· Probability	Fibres are released into the environment as a result of any disturbance.	3	3	5	4	36	H	Adhere to the Asbestos Abatement Regulations - no alterations.	3	3	3	3	27	M
· Reversibility	The effects of asbestos fibres released into the environment are not easily reversed and depending on the volume released, could endure for long periods.													
· Irreplaceable loss of resources	None.													
· Avoidance	Effects can be mitigated through implementation of an EMPr.													
· Management	EMPr to address potential effects.													
· Mitigation	Asbestos roofs and construction elements are to be retained untouched, or, if essential to be removed or altered, then by specialists in compliance with the OHS Asbestos Abatement Regulations, 2020.							Do not undertake any work on asbestos materials until the entire building is to be demolished and reconstructed or for emergency repairs when essential.						
· Significance rating	H													

1.1.3 Soil and water resource	Contamination and pollution of resources.	1	1	1	2	6	L	1	1	1	2	6	L
· Nature of impact	Building rubble and construction material could cause negative effects in the biophysical environment. Hydrocarbons from construction vehicles could cause contamination of the soil and water resources.												
· Extent	Rubble and material will build up on site while construction lasts and spills occur where vehicles move.	1	1	1	2	4	L	1	1	1	2	4	L
· Duration	Short term effects during construction only.	1	1	1	2	4	L	1	1	1	2	4	L
· Consequence	The potential negative effects should be minor as the majority of the work does not require large machinery or volumes of material.	1	1	1	2	4	L	1	1	1	2	4	L
· Probability	It is unlikely that the surrounding environment will suffer negative effects caused by build-up of rubble and materials and spillages should be minor.	1	1	1	2	4	L	1	1	1	2	4	L
· Reversibility	The effects are quickly reversible.												
· Irreplaceable loss of resources	None.												
· Avoidance	Effects can be mitigated through implementation of an EMPr.												
· Management	EMPr to address potential effects.												
· Mitigation	Predetermine construction yard on existing surfaced area where spillages can be contained and effects minimised.												
· Significance rating	L												
1.1.4 Traffic impacts	Movement of construction vehicles.	1	1	1	2	6	L	1	1	1	2	6	L
· Nature of impact	Construction vehicles using roads could disrupt traffic and pedestrian movement in surrounding area and streets.												
· Extent	Predicted low volumes required for the project might affect the Kreeftegang entrance, but should not affect St Augustine or wider.	1	1	1	2	4	L	1	1	1	2	4	L
· Duration	Short term effects during construction only.	1	1	1	2	4	L	1	1	1	2	4	L
· Consequence	The potential negative effects should be minor as the majority of the work does not require large machinery or traffic volumes.	1	1	1	2	4	L	1	1	1	2	4	L
· Probability	It is unlikely that the surrounding environment will suffer negative effects caused by additional traffic.	1	1	1	2	4	L	1	1	1	2	4	L
· Reversibility	The effects are immediately reversible.												
· Irreplaceable loss of resources	None.												
· Avoidance	Effects can be mitigated through implementation of an EMPr.												
· Management	EMPr to address potential effects.												
· Mitigation	Set times for movement of vehicles.												
· Significance rating	L												
1.1.5 Socio-economic impacts	Effects on health and well-being of citizens.	1	1	1	1	3	L	1	1	1	1	3	L
· Nature of impact	The change in use of the buildings could create new opportunities. Alteration of the buildings will not cause any change in the landscape.												
· Extent	The effects of the change in use should have a minor positive effect. Alterations will not be visible.	1	1	1	1	3	L	1	1	1	1	3	L
· Duration	Medium term positive effects are likely.	1	1	1	1	3	L	1	1	1	1	3	L
· Consequence	The potential positive socio-economic effects albeit minor will improve the livelihoods of some residents.	1	1	1	1	3	L	1	1	1	1	3	L
· Probability	It is unlikely that the surrounding environment will suffer negative effects caused by the changes.	1	1	1	1	3	L	1	1	1	1	3	L
· Reversibility	The effects are not easily reversible and will require a process.												
· Irreplaceable loss of resources	None.												
· Avoidance	Effects need not be mitigated.												
· Management	No measures required in EMPr.												
· Mitigation	None required.												
· Significance rating	L												

1.1.6 Bio-physical environmental impacts	Loss of habitat for fauna adapted to the built environment.	1	1	1	1	3	L		1	1	1	1	3	L
· Nature of impact	The construction activities and change in use of the buildings could cause loss of habitat to birds, rodents and reptiles which have adapted to the facilities.													
· Extent	Changes will only occur in the affected buildings and only if they are significantly changed. Internal changes and changes in use will probably have no significant effect.	1	1	1	1	3	L		1	1	1	1	3	L
· Duration	Short term effects during construction only.	1	1	1	1	3	L		1	1	1	1	3	L
· Consequence	The potential negative effects should be minor as the buildings and structures will be intact and the fauna will probably adapt thereto after construction.	1	1	1	1	3	L		1	1	1	1	3	L
· Probability	It is unlikely that the bio-physical environment will suffer negative effects caused by internal renovation of the buildings.	1	1	1	1	3	L		1	1	1	1	3	L
· Reversibility	The effects are quickly reversible.													
· Irreplaceable loss of resources	None.													
· Avoidance	Effects need not be mitigated.													
· Management	No measures required in EMPr.													
· Mitigation	None required.													
· Significance rating	L													
1.1.7 Water pipeline installation	Disruption of services to citizens.	1	1	1	1	3	L		1	1	1	1	3	L
· Nature of impact	The construction activities will cause water supply disruptions and limit use of the roads where construction occurs.													
· Extent	Pipeline laid along existing roads over 800m distance.	1	1	1	1	3	L		1	1	1	1	3	L
· Duration	Short term effects during construction only.	1	1	1	1	3	L		1	1	1	1	3	L
· Consequence	The potential negative effects should be minor as the water supply has redundancy and supply is maintained in network.	1	1	1	1	3	L		1	1	1	1	3	L
· Probability	It is unlikely that the water supply will suffer negative effects caused by replacement of the existing pipe.	1	1	1	1	3	L		1	1	1	1	3	L
· Reversibility	The effects are immediately reversible.													
· Irreplaceable loss of resources	None.													
· Avoidance	Effects need not be mitigated.													
· Management	No measures required in EMPr.													
· Mitigation	None required.													
· Significance rating	L													
1.1.8 Sewer pipeline installation	Disruption of services to citizens.	1	1	1	1	3	L		1	1	1	1	3	L
· Nature of impact	The construction activities will cause disruptions and limit use of the roads where construction occurs.													
· Extent	Pipeline laid along existing roads over 500m distance.	1	1	1	1	3	L		1	1	1	1	3	L
· Duration	Short term effects during construction only.	1	1	1	1	3	L		1	1	1	1	3	L
· Consequence	The negative effects are minor as the service is maintained.	1	1	1	1	3	L		1	1	1	1	3	L
· Probability	It is unlikely that the sewerage will suffer negative effects caused by replacement of the existing pipe.	1	1	1	1	3	L		1	1	1	1	3	L
· Reversibility	The effects are immediately reversible.													
· Irreplaceable loss of resources	None.													
· Avoidance	Effects need not be mitigated.													
· Management	No measures required in EMPr.													
· Mitigation	None required.													
· Significance rating	L													
1.1.9 Kreeftegang road upgrading	Disruption of services to citizens.	1	1	1	1	3	L		1	1	1	1	3	L
· Nature of impact	The construction activities will cause disruptions and limit use of the road during construction.													
· Extent	Road upgrading occurs over 50m distance.	1	1	1	1	3	L		1	1	1	1	3	L
· Duration	Short term effects during construction only.	1	1	1	1	3	L		1	1	1	1	3	L
· Consequence	The negative effects are minor as the road is maintained.	1	1	1	1	3	L		1	1	1	1	3	L
· Probability	It is unlikely that the traffic will suffer negative effects.	1	1	1	1	3	L		1	1	1	1	3	L
· Reversibility	The effects are immediately reversible.													
· Irreplaceable loss of resources	None.													
· Avoidance	Effects need not be mitigated.													
· Management	No measures required in EMPr.													
· Mitigation	None required.													
· Significance rating	L													

ANNEXURE K: NEED AND DESIRABILITY ASSESSMENT

Not applicable – left blank