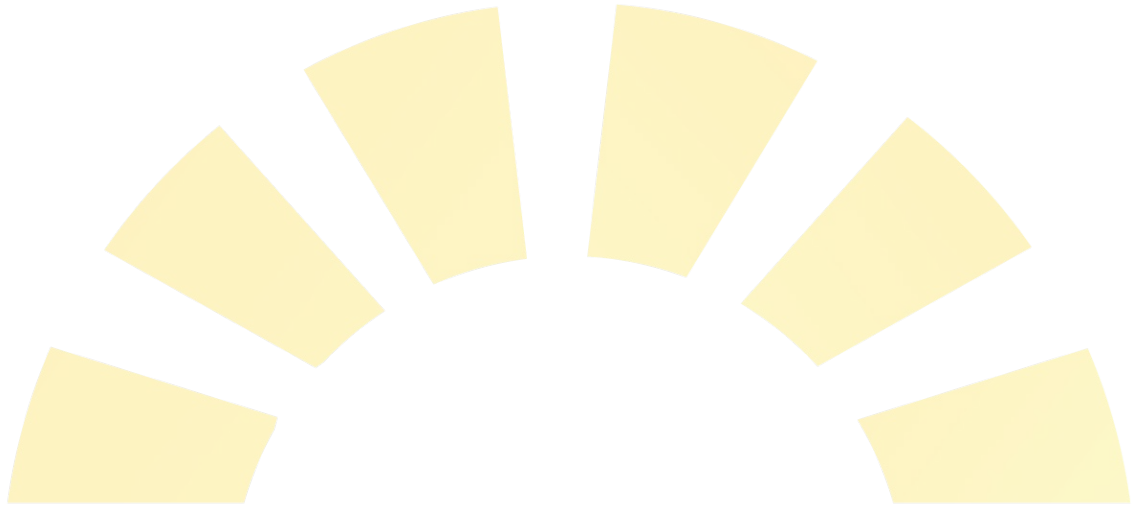


Appendix 9

Odour Assessment





‘S-Factor’ Odour Assessment & Management Plan

for the operation of a 1,000 productive cow intensive dairy (loose housing) system at Bream Creek, Tasmania

October 2025



Progressive Rural Solutions

www.prsLtd.com.au



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Related Documents

Type	Author	Name	Date
Environment Impact Statement	Progressive Rural Solutions	J373-EIS-V1R4	26/10/2025
Effluent Management Plan	South East Soil and Water	Effluent Management Plan for Stroud Dairies Loose Housing Barn – V4	24/10/2025
Feedback and Complaints Management Plan	Progressive Rural Solutions	J373-F&CMP-V1R3	16/10/2025

Related Plans

Plan Number	Sheet	Rev	Plan Title	Prepared by	Date
			Site Plan – Existing	NJC Irrigation Solutions	-
50001-F IS-674	1	2	Layout Plan	NJC Irrigation Solutions	12/09/2025
51462 IS-674	1	1	Cross Sections	NJC Irrigation Solutions	01/08/2025
51462 IS-674	2	0	Cross Sections	NJC Irrigation Solutions	01/08/2025
51493 IS 674	1	0	Stage Plan	NJC Irrigation Solutions	20/10/2025
51493 IS-674	1	0	Proposed new effluent solids pond 1	NJC Irrigation Solutions	30/09/2025
51493 IS-674	2	0	Proposed commodities area and run-off storage	NJC Irrigation Solutions	30/09/2025
51493 IS-674	3	0	Proposed new effluent storage pond 3	NJC Irrigation Solutions	30/09/2025
Nil	-	A	Shed Plan & Elevations	Quingdao	24/07/2023
-	G1	-	Cover	Provost and Pritchard	14/10/2024
-	G2	-	General	Provost and Pritchard	14/10/2024
-	C1	-	Existing Site	Provost and Pritchard	14/10/2024
-	C4	-	Floor Plan 1	Provost and Pritchard Plans	14/10/2024
-	C5	-	Floor Plan 2	Provost and Pritchard Plans	14/10/2024
-	C6	-	Loafing barn floor plan	Provost and Pritchard Plans	14/10/2024
-	C7	-	Maternity barn floor plan	Provost and Pritchard Plans	14/10/2024
-	D1	-	Details 1	Provost and Pritchard Plans	14/10/2024

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EXECUTIVE SUMMARY

This document has been prepared to support the development and licence application for the conversion of Stroud Dairies, Bream Creek, from their current grazing and supplementary feed dairy operation to a 1,000-cow intensive loose housing system.

Stroud Dairies at Bream Creek has the following goals with relation to their proposed development:

- Enhance animal welfare and productivity through cleaner, safer housing and consistent milk production.
- Improve workforce safety and provide opportunities for modern skills development.
- Protect the environment with best-practice effluent management and nutrient recycling systems.
- Manage odour and emissions to ensure neighbouring receptors are not unreasonably affected.
- Safeguard land and waterways by reducing erosion and nutrient runoff.
- Build climate resilience to maintain production during extreme climatic conditions.
- Increase resource efficiency across feed, fertiliser, water, and labour use.
- Deliver community benefits by improving amenity and reducing traffic hazards.
- Ensure full compliance with planning, dairy industry, and environmental regulations.

The purpose of this document is to identify potential odour impacts associated with the proposed operation, assess separation distances to sensitive receptors using the conservative “S-Factor” methodology, and outline management measures that ensure compliance with regulatory expectations while safeguarding community amenity.

The assessment finds that odour risks relating to the proposed operation are primarily associated with effluent ponds and manure storage however also considers other activities such as bedding and fodder storage and management. By transitioning from a pasture and feedpad-based system to a fully housed operation, the proposal consolidates manure and effluent into a controlled collection and treatment system. This approach significantly reduces diffuse odour emissions that typically arise from open paddocks, cow tracks, and wet feedpads, particularly during wetter months.

The S-Factor separation distance analysis demonstrates that the proposed operation is compatible with its rural setting and can achieve appropriate buffer distances for the majority of surrounding receptors. Where receptors are located closer, the risk is mitigated by topographic barriers, prevailing wind patterns, and the adoption of strict management measures. Importantly, the assessment confirms that the largest single contributor to odour risk will be the effluent pond system. The impact of the effluent ponds can be effectively controlled through a staged system of solids separation, anaerobic settling, and storage and application management.

Bedding management is also central to reducing odour risk, with success depending on consistent aeration and maintaining optimal conditions of moisture and temperature. Collectively, these findings demonstrate that odour impacts are predictable, manageable, and within acceptable limits.

The report recommends implementing the staged construction of the loose housing and effluent management system, including additional ponds and solids separation infrastructure. Bedding management protocols and facility design will be adopted that support animal health and minimise odour. The success of these protocols should be determined through ongoing internal monitoring of odour performance, supported by relative weather station data, record-keeping systems, and a structured complaints management procedure. The operation will adopt a continuous improvement framework, with regular review of effluent and nutrient reuse practices to optimise performance and ensure ongoing compliance.

Adoption of the proposed measures will provide tangible benefits for both the farm and the wider community. The transition to a housed system will reduce odour risks and improve amenity for neighbouring landholders while delivering enhanced animal welfare outcomes through more consistent housing conditions and improved animal welfare. Environmental benefits will also be realised, with effluent captured, treated, and recycled to reduce reliance on synthetic fertilisers and improve soil health across the property. The project further strengthens compliance with planning and environmental requirements, protecting the enterprise from operational risks and safeguarding its reputation as a responsible operator.

This odour ‘S-Factor’ assessment confirms that the proposed transition to an intensive loose housing dairy at Stroud Dairies is both feasible and manageable. With the recommended design and operational controls in place, odour risks can be effectively mitigated, ensuring compliance with regulatory standards and maintaining strong community relations. The project delivers long-term sustainability benefits through improved nutrient management, animal welfare, and reduced environmental impact, making it a sound investment for the future of the enterprise.

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1. INTRODUCTION

1.1. ORGANISATION

This report has been commissioned by the owner **Stroud Dairies** represented by Mr Jack Bignell as Project Manager and operator of Stroud Dairies which is the entity that is the project **Applicant**.

Progressive Rural Solutions director, Mrs Clare Fitzpatrick, is the author of this report and has been engaged to provide a 'S factor' assessment as part of an *intensive dairy* (intensive animal husbandry) Development Application.

1.2. PURPOSE

The purpose of this assessment and management plan is to:

- Identify the sites existing climatic, topographic and general conditions using publicly available regional information,
- Review the proposed plans and available information in relation to the site conditions,
- Identify potential sensitive receivers in relation to the site utilising satellite imagery, site inspections, and information supplied by the applicant,
- Identify and describe the potential sources of odour within the proposed operation,
- Determine appropriate buffer distances for the operation utilising the 'S factor' methodology,
- Provide a basis for further site and operation assessments if the 'S factor' methodology does not meet the required separation distance for odour modelling, and
- Where relevant, describe the methods proposed to manage potential odour sources as reasonably practical.

This report and assessment have been completed using a 'S' Factor odour assessment – being a conservative Tier 1 assessment following inspections to ground truth the topography, landscape, terrain, vegetation and receptors.

1.3. REPORT FORMAT

This report is set out in the following format:

Table 1-1 – Table showing report format.

Section	Address
1	Purpose, documentation and background.
2	Site description and analysis.
3	Proposed Operation and Odour Generation
4	Assessment of Separation Distances
5	Odour Management, Control and Monitoring
6	Site Odour Objectives
7	Responsibilities
8	Complaints Management
9	Document Implementation and Review
10	Continuous Improvement

1.4. BACKGROUND & PROJECT HISTORY

The existing enterprise operates the 'Stroud Dairies' at Bream Creek Tasmania. The current dairy operation is a mixture of pasture based and supplementary fed dairy herds which currently maintains a 780 cow productive herd. The operation for many years has included the use of fixed feed pad system as a supplementary feed tool within their pasture based dairy system. This application seeks approval for a change in use on the property to an intensive dairy operation system.

The change in use and operational activities at the site propose the incorporation of a loose housing (bedded pack) system which includes the full-time use of a single productive cow housing facility (open shed) and construction and use of the existing feedpad as a roofed maternity housing facility and young/dry cow housed area. Other associated existing ancillary infrastructure will continue to support this operation and additional effluent ponds will be constructed to meet the future effluent generation and management within the site.

The property is an aggregation of contiguous properties purchased by the Bignell family over the last 20 plus years and includes extensive areas historically utilised for grazing which will now support the growth of the feed for the facility. This includes the incorporation of the beneficial effluent captured and re-used reducing synthetic fertiliser use and incorporating a cyclic system within the farming operation.

'Stroud Dairies' as a property is addressed as 106 Bream Creek Rd, Bream Creek Tasmania, and is located south of the town of Bream Creek in the Hobart region of Tasmania. The following figures identify the location in relation to the State and Region.



Figure 1-1 - Map showing location of project site within the State (source PRS QGIS)



Figure 1-2 - Map showing location of the project within the region (source PRS QGIS)

2. SITE DESCRIPTION

2.1. LOCATION

The property is located in the Hobart region of Tasmania and the Sorell Council Local Government Area. The property address is identified as ‘106 Bream Creek Rd, Bream Creek Tasmania’ and the property, which adjoins multiple roads including Bream Creek Road, Burnt Hill Road and Marion Bay Road, south of the small Village of Bream Creek. The business operates over 1,029ha (owned and leased) and is divided by each of the above referenced roads with the activity area that is the subject of this application being located on the southeast side of the Bream Creek Road.

The activity area which includes existing dairy, supporting buildings, feedpad and effluent pond, is located centrally on the contiguous property aggregation referred to as “Stroud Dairies”. The complex’s infrastructure and supporting works are proposed on titles 2/35297, 1/35298, 1/100903 and 2/106067. The remaining portions of the property will be integrated for the beneficial use of effluent and manure generated by the system which will be utilised in crops grown to meet the grain and fodder requirements of the operation.

The location of the project site is shown in the figures and tables below.

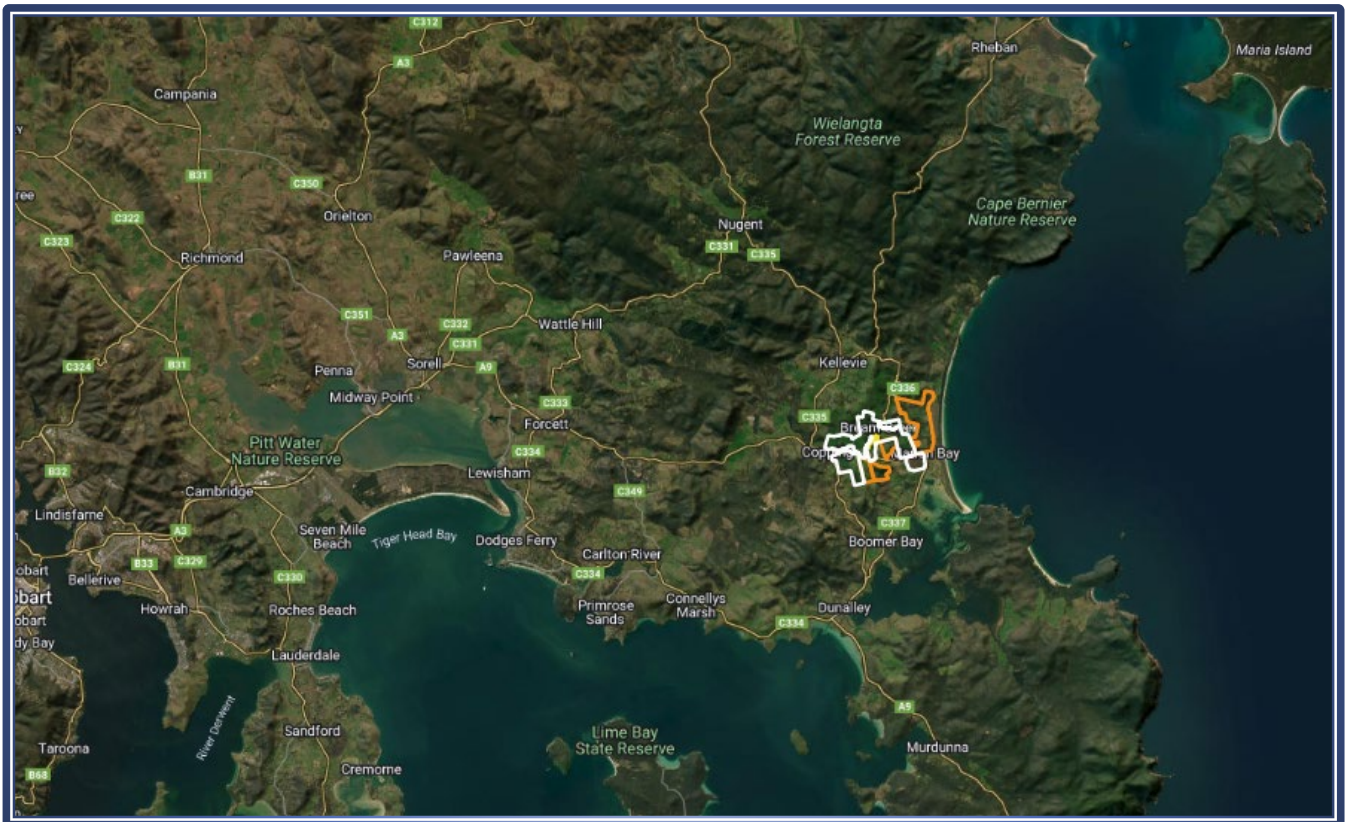


Figure 2-1 – Map identifying properties owned (white), properties leased (orange) and project site (yellow) in relation to the region (Source: PRS QGIS)



Figure 2-2 – Map identifying location of project (yellow) in relation to the properties owned (white) and leased (orange) (source; PRS QGIS)

The land details of the project are summarised as follows:

Table 2-1 - Land details of the project

Details	Specific related to project site			
Address	106 Bream Creek Rd, Bream Creek Tas 7175			
Title Reference Lot	2	1	1	2
Title Reference Plan	35297	35298	100903	106067
Property ID	3370760	3370760	7873947	3370752
Municipality	Sorell Council			
Zone	Rural Zone (20)			
Catchment Area	South-East Coastal Catchment			
IBRA	Tasmania South East			
Floodplain Management Plan	Nil			
Land Stature	Freehold			
Area of project works	Approx. 10Ha			
Area of this property	641.5Ha plus 387.3ha leased			
GPS Reference	Zone:	55		
	Easting:	567788		
	Northing:	5259440		
	Latitude:	-42.814596		
	Longitude:	147.829187		

2.2. EXISTING SITE

The existing site conditions of the area of this proposal include:

- Existing dairy complex area,
- Existing feedpad,
- Existing effluent system,
- Proposed loose housing facility, and
- Proposed effluent pond and manure storage area.

DAIRY COMPLEX

The existing dairy complex area within the property contains existing buildings and infrastructure commonly associated with a functional dairy system. This includes the 60 cow rotary dairy, yard, access tracks (tanker, vehicles and cows), calf shed and grain and fodder storage. The existing 15ML effluent pond is also located to the east of the dairy area.

The cow yard is sized to hold the entire herd prior to milking on the 60 cow rotary. Milking occurs twice daily taking around 2.5 hours daily. Milk is currently held in a 25,000L vat on farm, prior to daily pick up by milk tanker. Once milking is completed cows access the concrete feedpad area where supplementary feed is provided in addition to grazing with approx. 30% of current daily nutritional requirements is met through this system.

A baby calf area is also located adjoining the dairy where calves are housed during their early stages. Bedding in this system is a woodchip base system and any washdown water is directed to the effluent system. Supporting the feed and supplementation system are multiple grain and fodder storage areas which consist of silos, container storage and hay shed.

The dairy complex area is zoned 'Rural' under the Tasmanian Planning Scheme and is classified as Class 3 and Class 4 land under the Land Capability Classification system. The site is not affected by the Waterway and Coastal Protection Code or the Priority Vegetation Area Overlay. However, it is subject to several applicable overlays. The property is entirely covered by the Bushfire-Prone Areas Overlay, and as such, the Bushfire-Prone Areas Code is triggered. The site is also within the Scenic Protection Code, specifically within the Ragged Tier Scenic Protection Area. Additionally, the Landslip Hazard Code applies to part of the broader property, though the mapped landslip hazard area does not encompass the area of the existing dairy complex.

There are no physical changes proposed to the dairy complex area.

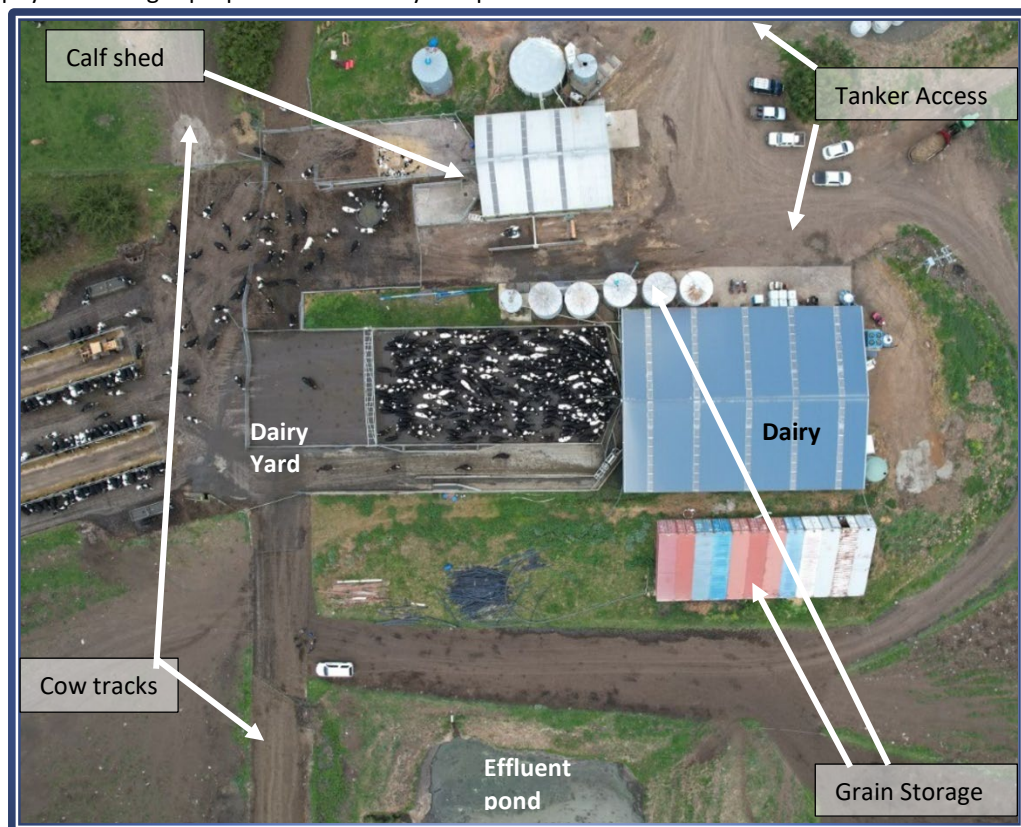


Figure 2-2 - Aerial photo showing existing dairy complex (Source: PRS)

FEEDPAD

The current operation includes a dual feed lane feed pad which has four feed faces available for cows to access following milking. Cows access this area following each milking before returning to grazing areas on the property.

The areas surrounding the feedpad have been historically modified to support the existing use of the area. The ground cover is exotic and introduced species and the west of the feedpad consist of planted exotic vegetation.

The feedpad area is zoned 'Rural' under the Tasmanian Planning Scheme and is classified as Class 3 and Class 4 land under the Land Capability Classification system. The site is not affected by the Waterway and Coastal Protection Code or the Priority Vegetation Area Overlay. However, it is subject to several applicable overlays. The property is entirely covered by the Bushfire-Prone Areas Overlay, and as such, the Bushfire-Prone Areas Code is triggered. The site is also within the Scenic Protection Code, specifically within the Ragged Tier Scenic Protection Area. Additionally, the Landslip Hazard Code applies to part of the broader property, though the mapped landslip hazard area does not encompass the area of the existing feedpad.



Figure 2-3 - Aerial photo showing existing feedpad (Source: PRS)

This area is proposed to be modified as a result of this application to update the effluent management area and convert the feedpad to a covered maternity and dry/young cow housing area. See **Section 3** for further details.

EXISTING EFFLUENT SYSTEM

The existing effluent system includes catch and conveyor drains, sump and trafficable solids trap, solids separation, effluent pond and manure storage. Stored effluent is then utilised on paddocks via irrigation.

All effluent and washdown water from the dairy platform is conveyed in a drain to the trafficable solids trap located at the end of the feed pad. The cow yard is part washed with a yard blaster system using freshwater and part scraped with all effluent from this and adjoining concrete areas is directed into a culvert and drains to the trafficable solids trap and sump. Effluent from the feedpad is scraped once daily in the mornings with solids pushed into the sump at the south end of the feedpad.

The existing Trafficable Solids Trap (TST) includes a weeping wall which incorporates an overtopping provision. Effluent that passes through or over the weeping wall enters the sump where it is agitated and then passed through a screw press solids separator, removing approx. 20% of the solids remaining within the system. Solids are held on the solids storage area prior to being applied to land as a soil ameliorant. Liquid effluent is conveyed to the effluent pond where it is held until it is applied to land by means of irrigation.

The existing manure storage pad is 30m x 30m and is compacted earthen pad with controlled drainage being conveyed to the effluent pond. The effluent pond is a single pond system with a capacity of 15ML. Effluent is conveyed to the areas of the property via a gravity and pressurised irrigation network that allows the application of recycled effluent through an overhead travelling pivot irrigator.



Figure 2-4 - Solids Separator



Figure 2-5 - Sump and trafficable solids trap



Figure 2-6 - Effluent pond (Source: PRS)

The existing effluent management system is zoned 'Rural' under the Tasmanian Planning Scheme and is classified as Class 3 and Class 4 land under the Land Capability Classification system. The site is not affected by the Waterway and Coastal Protection Code or the Priority Vegetation Area Overlay; however, it is subject to several applicable overlays. The property is entirely covered by the Bushfire-Prone Areas Overlay, and as such, the Bushfire-Prone Areas Code is triggered. The site is also within the Scenic Protection Code, specifically within the Ragged Tier Scenic Protection Area. Additionally, the Landslip Hazard Code applies to part of the broader property, though the mapped landslip hazard area does not encompass the area of the existing effluent system.

Significant changes are proposed to the effluent system including expanding the area occupied by effluent management infrastructure.

PROPOSED EFFLUENT SYSTEM AREA

The proposal includes the addition of two effluent ponds, extension of the existing manure storage area and modification to the existing trafficable solids trap and solids separation equipment. These activities are proposed in the following locations:



Figure 2-7 – Proposed effluent system (Source: PRS)

The proposed effluent management system area is zoned 'Rural' under the Tasmanian Planning Scheme and is classified as Class 3 and Class 4 land under the Land Capability Classification system. The site is not affected by the Waterway and Coastal Protection Code or the Priority Vegetation Area Overlay, however, it is subject to several applicable overlays. The property is entirely covered by the Bushfire-Prone Areas Overlay, and as such, the Bushfire-Prone Areas Code is triggered. The site is also within the Scenic Protection Code, specifically within the Ragged Tier Scenic Protection Area. Additionally, the Landslip Hazard Code applies to part of the broader property, though the mapped landslip hazard area does not encompass the area of the proposed effluent system.

PROPOSED LOOSE HOUSING FACILITY AND COMMODITIES AREA

The area proposed for the loose housing facility and commodities storage is parallel to the Bream Creek Rd and is currently used for the purpose of grazing cattle. The area includes a powerline running close to and parallel to the road, an internal access laneway system used for cow access to the dairy, paddocks, fences and waterlines and troughs. One of the properties freshwater dams is also located within this area with no change proposed to this dam.

The area includes a stand of introduced exotic plantation trees which are located within the paddocks which will partially require removal as part of the project activities – being those located within the area of the earthworks and shed. The area on the northern end of the facility will also require some removal of exotic plantation trees to facilitate a concrete cow access and separate feed wagon access between the dairy area and the housing system.

There is an existing access point from Bream Creek Road into the paddock where the commodities area is proposed which will continue to be utilised for occasional entry from the road.

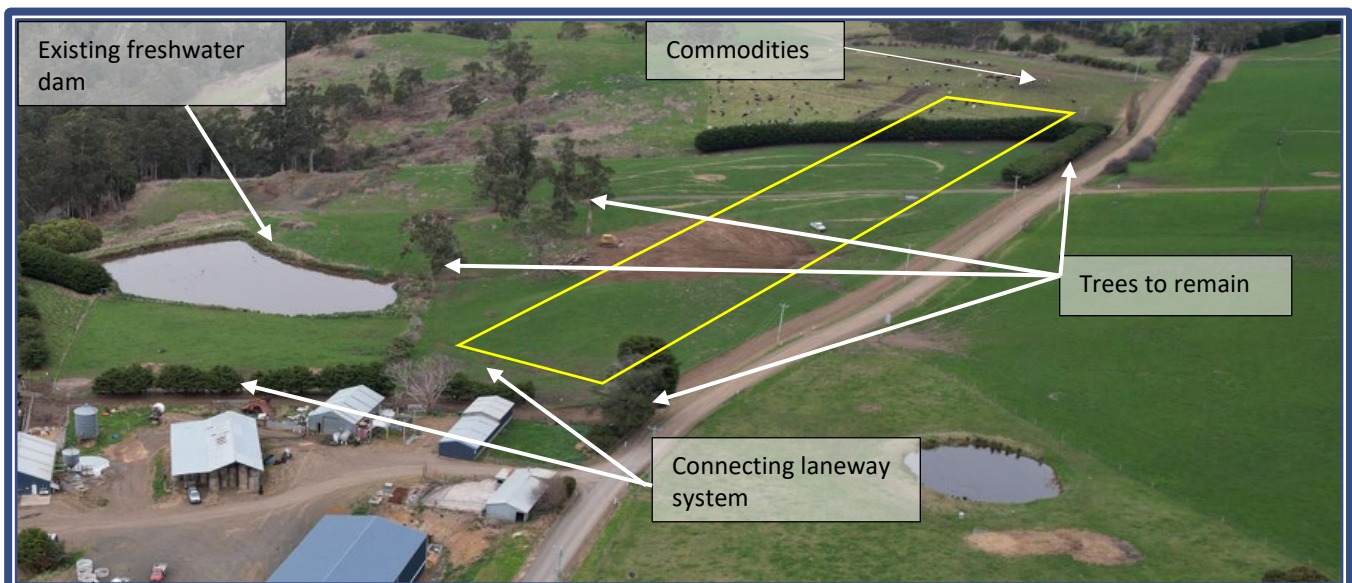


Figure 2-8 – Aerial image showing location of proposed facility, commodities area and connecting lanes (Source: PRS)



Figure 2-9 – Photo showing site of proposed housing facility showing vegetation and site (Source: PRS)



Figure 2-102-11 – Proposed connecting area between housing facility and dairy area showing vegetation and site (Source: PRS)

The proposed loose housing system area is zoned 'Rural' under the Tasmanian Planning Scheme and is classified as Class 3 and Class 4 land under the Land Capability Classification system. The site is subject to several applicable overlays. The property is entirely covered by the Bushfire-Prone Areas Overlay, and as such, the Bushfire-Prone Areas Code is triggered. The site is also within the Scenic Protection Code, specifically within the Ragged Tier Scenic Protection Area. Additionally, the Landslip Hazard Code applies to part of the broader property, though the mapped landslip hazard area does not encompass the area of the proposed housing system. This site includes a small area encompassed by the Waterway and Coastal Protection Code and the Priority Vegetation Area Overlay.

2.3. SITE SURROUNDS

The site is located within a rural area and is surrounded by other rural properties which include dairy, grazing and timber industry. Other smaller properties are also located within the area and include small farmlets of <1ha to 5ha in size. The applicant operates a significant enterprise within the area which has been consolidated over time with an aggregation of many farms within the area.

The surrounding area features diverse topography and terrain, characterized by undulating to hilly landforms with elevations generally under 400 metres. Fertile farmlands dominate the lower slopes and valleys, interspersed with patches of dense bushland comprising both native dry sclerophyll forest and plantation forestry. The landscape includes a mix of grassy paddocks, wooded areas, and gentle ridgelines that form part of the broader Wielangta Range, a coastal range extending through southeastern Tasmania.

Vegetation within the operational property and surrounding area consists of both introduced species established as shelterbelts along natural contours to provide protection for grazing livestock and enhanced native vegetation areas. The plantings are interspersed with remnant native vegetation typical of the region, including dry sclerophyll forest species. Larger plantation areas in the broader landscape are associated with the sustainable timber industry and include managed eucalypt forestry consistent with land use patterns in the area.

2.4. NEIGHBOURING LAND USE

The surrounding land use consists of farming activities typically found within the area including dairy, beef and high rainfall cropping. The renewable timber industry is also active within the region. The property is located within the vicinity of Copping, zoned as a village with a population 183 people, Marion Bay zoned as Low Density Rural with a population of 72 people and locality of Bream Creek which is not formally identified or zoned as residential or rural residential area.

There are several houses located within the vicinity of the property, many of which are owned by the applicant. The following table is a summary of those receptors and their details in relation to the development.

The property and surrounding area are zoned Rural.



Figure 2-12– Map identifying project in relation to local property ownership (Source: PRS QGIS)

Table 2-2 - Receptors in relation to the site

ID	Owned	Address	Title particulars	ID	Type	Existing Distance	Existing Direction	Proposed Distance	Proposed Direction	Activity area	Change
-	No	Copping	NA		Rural Living	1,400 2,010	W SW	1,580 1,670	W SW	Silage Housing	+180 -340
-	No	Marion Bay	NA		Rural Living	2,360	SE	2,310	Southeast	Pond 1	-50
R1	No	115 Bream Ck Rd, Bream Ck	26872/1	5959974	Dwelling	110	NW	130	NW	Dairy	-20
R2	Yes	124 Bream Ck Rd, Bream Ck	106067/2	3370752	Dwelling	146	N	55	NW	Pond 3	-91
R3	Yes	198 Burnt Hill Rd Bream Ck	107420/1	3370779	Dwelling	563	N	434	N	Pond 3	-129
R4A	No	263 Burnt Hut Rd Bream Ck	35548/1	7509387	Dwelling	505	NNE	415	NNE	Pond 3	-90
R4B	No	183 Bream Ck Rd, Bream Ck	113549/1	5959982	Dwelling	525	N	430	NE	Pond 3	-95
R4C	No	264 Burnt Hut Rd, Bream Ck	37025/2	7608895	Dwelling	575	NE	480	NNE	Pond 3	-95
R4D	No	194 Bream Ck Rd, Bream Ck	37025/1	7608887	Dwelling	615	NE	525	NE	Pond 3	-90
R4E	No	197 Bream Ck Rd, Bream Ck	107419/1	1539139	Dwelling	620	NE	530	NE	Pond 3	-90
R4F	No	205 Bream Ck Rd, Bream Ck	133459/1	5960027	Dwelling	715	NE	625	NE	Pond 3	-90
R5A	No	201 Bream Ck Rd, Bream Ck	8046/1	5960019	Dwelling	790	N	700	NNE	Pond 3	-90
R5B	No	217 Bream Ck Rd, Bream Ck	103574/3	5960035	Dwelling	960	N	865	NNE	Pond 3	-95
R6A	No	216 Bream Ck Rd, Bream Ck	107537/1	1539454	Dwelling A	770	NNE	680	N	Pond 3	-90
R6B	No	218 Bream Ck Rd, Bream Ck	108537/1	5960078	Dwelling B	815	NE	720	NNE	Pond 3	-95
R6C	No	229 Bream Ck Rd, Bream Ck	185807/1	5960051	Dwelling C	890	NE	800	NE	Pond 3	-90
R6D	No	Cape Bernier' 230 Bream Ck Rd	202381/1	5960086	Dwelling	930	N	845	NE	Pond 3	-85
D6E	No	Cape Bernier' 230 Bream Ck Rd	202381/1	5960086	Dwelling	965	N	875	NE	Pond 3	-90
R6F	No	Cape Bernier' 230 Bream Ck Rd	202381/1	5960086	Dwelling	970	N	880	NE	Pond 3	-90
R7	No	241 Burnt Hill Rd, Bream Ck	138932/1	2179657	Dwelling	500	NE	415	NE	Pond 3	-85
R8	Yes	198 Burnt Hill Rd Bream Ck	156892/1	3370779	Dwelling	946	NE	872	E-SE	Pond 3	-74
R9A	No	110 Burnt Hill Rd Bream Ck	79013/1	7509475	Dwelling	1470	ENE	1430	ENE	Pond 1/2/3	-40
R9B	No	114 Burnt Hill Rd Bream Cr	233248/1	7509467	Dwelling	1600	ENE	1605	ENE	Pond 1/2/3	5
R9C	No	114 Burnt Hill Rd Bream Cr	116209/1	7509467	Dwelling	1695	E	1670	E	Pond 1/2/3	-25
R10	No	58 Burnt Hill Rd Bream Ck	158719/3	3027719	Dwelling	1885	SE	1845	SE	Pond 1	-40
R11A	No	408 Marion Bay Rd, Bream Ck	161908/2	3192132	Dwelling	1545	SE	1458	SE	Pond 1/ existing pit	-87
R11B	No	308 Marion Bay Rd, Bream Ck	226112/1	5961118	Dwelling	1340	SE	1,270	SE	Pond 1/ existing pit	-70

Site Description

ID	Own ed	Address	Title particulars	ID	Type	Existing Distance	Existing Direction	Proposed Distance	Proposed Direction	Activity area	Change
R11C	No	'Beachbreaks' Marion Bay' 357 Marion Bay Rd Bream Ck	29655/1	7374136	Dwelling	1,220	SE	1,160	SE	Pond 1/ existing pit	-60
R11D & E	No	Beachbreaks Marion Bay' 357 Marion Bay Rd Bream Ck	29655/1	7374136	Dwelling	1,105	SE	1,040	SE	Pond 1/ existing pit	-65
R11F	No	Bream Creek Vineyard 321 Marion Bay Rd, Bream Ck	116335/2	7374101	Dwelling	870	SE	831	SE	Pond 1/ existing pit	-39
R11G	No	314 Marion Bay Rd, Bream Ck	11424/3	5961070	Dwelling	1,130	SE	1,084	S-SE	Pond 1/ existing pit	-46
R11H	No	312 Marion Bay Rd, Bream Ck	251823/1	5961054	Dwelling	1,190	W	1,092	SSE	Pond 1/ existing pit	-98
R11I	No	316 Marion Bay Rd, Bream Ck	11424/2	5961062	Dwelling	995	S	955	S	Pond 1/ existing pit	-40
R12	No	Wattle Farm 279 Marion Bay Rd, Bream Ck	210894/1	5961038	Dwelling	455	SSE	455	S to E	Pond 1/ existing pit	0
R13	No	298 Marion Bay Rd, Bream Ck	11424/1	5961046	Dwelling	887	S-SE	840	SE	Silage (new)	-47
R14	No	Tara Hills 238 Marion Bay Rd, Bream Ck	33268/2	7567181	Dwelling	995	S	770	SE	Silage (new)	-225
R15	No	Ocean View 212 Marion Bay Rd, Bream Ck	147764/1	5960991	Dwelling	1230	S	830	S	Silage (new)	-400
R16A	No	215 Marion Bay Rd, Bream Ck	44268/1	7723826	Dwelling	830	SW	465	S	Silage (new)	-365
R16B	No	211 Marion Bay Rd, Bream Ck	159970/1	7723834	Dwelling	850	SW	420	SSW	Silage (new)	-430
R16C	No	Marion Lodge 207 Marion Bay Rd, Bream Ck	240667/1	5960967	Dwelling	805	SSW	400	SSW	Silage (new)	-405
R17	No	20 Bream Ck Rd, Bream Ck	113099/1	5959931	Dwelling	160	SW	225	SSW	Silage (new)	65
R18	Yes	51 Bream Ck Rd, Bream Ck	37042/1	7873947	Dwelling	585	SW	133	W	Silage (new)	-452
R19A	Yes	12 Townsend Lane, Copping	241387/1	5960959	Dwelling	845	SW	605	SW	Silage (new)	-240
R19B	No	6 Townsend Lane, Copping	50655/1	5960940	Dwelling	340	SW	520	SW	Silage (new)	180
R20A	No	159 Marion Bay Rd Copping	12389/1	5960932	Dwelling	185	SW	390	SW	Silage (new)	205
R20B	No	153 Marion Bay Rd Copping	29967/2	5960924	Dwelling	260	SW	465	SW	Silage (new)	205
R21A	No	133 Marion Bay Rd, Copping	28433/1	7311856	Dwelling	430	SW	635	WSW	Silage (new)	205

Site Description

ID	Own ed	Address	Title particulars	ID	Type	Existing Distance	Existing Direction	Proposed Distance	Proposed Direction	Activity area	Change
R21B	No	Derford 131 Marion Bay Rd, Copping	124238/1	5960887	Dwelling	460	SW	660	WSW	Silage (new)	200
R21C	No	127 Marion Bay Rd, Coppin	46568/1	7311864	Dwelling	485	SW	655	WSW	Silage (new)	170
R21D	No	130 Marion Bay Rd, Copping	211885/1	5960908	Dwelling	440	WSW	645	WSW	Silage (new)	205
R21E	No	117 Marion Bay Rd, Copping	239739/1	5960860	Dwelling	500	WSW	695	W	Silage (new)	195
R21F	No	Dragonhold 122 Marion Bay Rd, Copping	14886/1	5960895	Dwelling	550	SW	755	W	Silage (new)	205
R22	No	39 Browns Rd, Copping	25045/1	5960297	Dwelling	1055	W	760	W	Housing	-295
R23	No	70 Browns Rd, Copping	100657/1	7849381	Dwelling	995	WNW	895	NW	Housing	-100

Note: shaded receptors are owned by the applicant.

2.5. CLIMATE

INTRODUCTION AND DATA SOURCES

Meteorological conditions have the potential to influence a range of operational activities within intensive animal developments. An overview of the conditions at the property and surrounds, with a focus on their potential influencing factors to proposed activities, has been recorded below.

CLIMATE RECORDS

The climate records utilised in this assessment have been sourced from both the Hobart airport Weather Site (site 094008) (since 1958) and the Silo data portal (records between 1900 and 2024). The grid point utilised for the Silo search is Lat: -42.80 and Long: 147.85 which is located 2.3km to the north-east of the site.

Tasmania is described as a cool temperate oceanic climate (Cfb) under the Koppen climate classification. This classification system indicates a cool summer, mild winter, steady year-round rain with no extreme heat or cold. Temperatures seen within this climate zone typically see the coldest month averaging above 0°C and all months with an average temperature of 17°C. The average annual rainfall is 743mm.

Table 2-3 - Climate data

	Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
Temperature	Highest High	41.4	39.8	38.1	31.8	25.6	19.6	20.4	23.7	31.1	33.4	38.5	40.8	41.4
	Mean Max	22.7	22.4	20.9	18.2	15.3	13.0	12.6	13.5	15.5	17.4	19.1	20.8	17.6
	Mean Min	12.2	12.1	10.9	8.8	6.7	4.7	4.2	4.7	6.1	7.6	9.3	10.9	8.2
	Lowest Low	3.7	3.4	2.2	-0.6	-2.2	-3.9	-3.2	-2.0	-2.3	-1.0	1.7	2.7	-3.9
Rain	Mean mm	54.5	54.2	58.0	66.2	59.0	68.5	63.0	63.8	53.2	66.9	62.0	73.6	743.0
	Mean days	9.0	8.2	10.1	10.4	11.4	11.3	13.2	13.9	13.7	13.6	12.8	11.9	139.5
Wind Speed	Mean 9am	14.5	13.2	12.8	13.4	12.3	12.3	12.3	13.8	16.1	16.4	15.8	15.5	14.0
	Mean 3pm	23.9	22.2	20.1	18.1	15.5	14.0	15.2	17.6	20.9	22.5	23.7	24.2	19.8
Mean evaporation		164.5	128.4	105.2	66.1	44.1	29.6	34.6	49.7	73.5	104.8	125.3	154.3	1080.3

RAINFALL

Rainfall data for the property has been reviewed for the years between 1900-2024. Across this period the average annual rainfall is 743mm, with monthly rainfall amounts increasing being higher on average late in the year than earlier. Average rainfall amounts vary between 53mm in September and January to 74mm in December. The driest year on record was 1968 when 395mm of rainfall was recorded. By contrast the wettest year on record was 1916 when 1,334mm of rain was recorded.

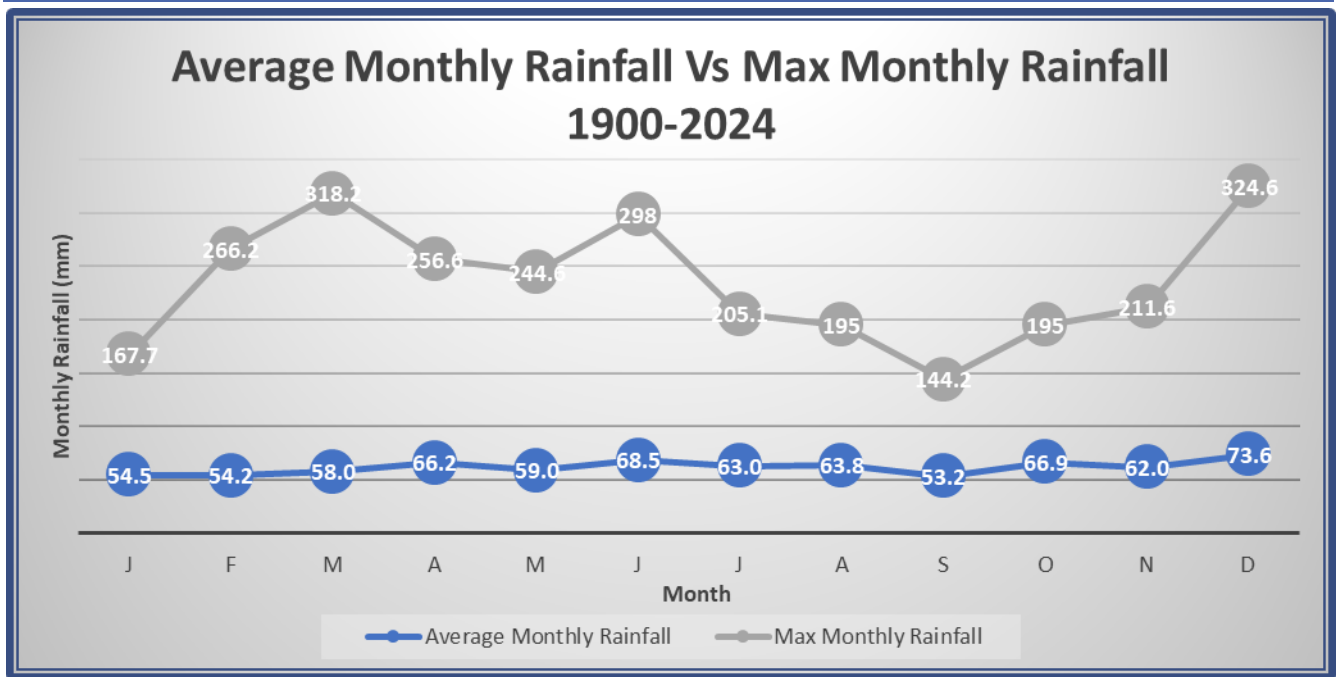


Figure 2-13-2-14 – Graph of average monthly rainfall (Source: Silo)

The maximum daily rainfall recorded in the area is 130.3mm which was recorded on 23 April 1960. The following graph shows the rainfall patterns of highest daily rainfall and average rainfall recorded at Hobart BOM station. In summary, the area normally receives moderate, evenly spread rainfall, but it is occasionally impacted by intense, short-lived rain events—especially in April and May. These spikes in daily rainfall greatly exceed what's typical for a full month.

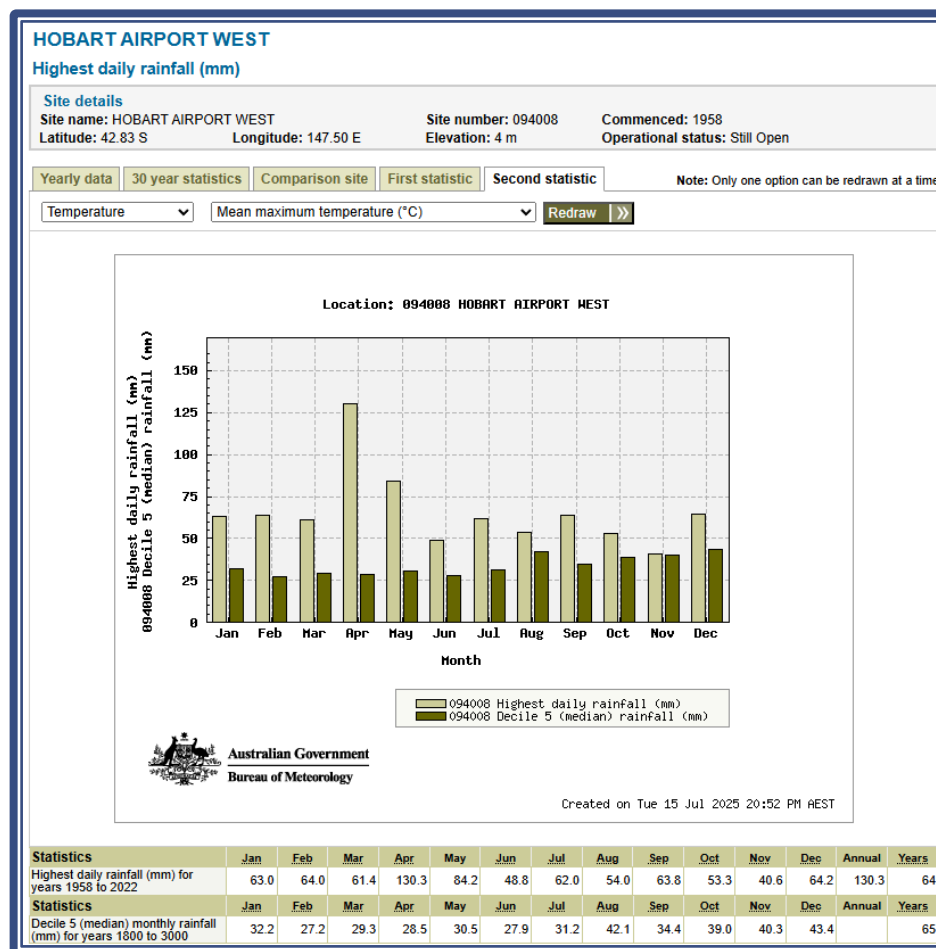


Figure 2-15- Hobart weather station median monthly rainfall vs highest daily rainfall (1958-2024) (Source: BOM)

EVAPORATION

The average annual evaporation at the property is 735mm. The highest evaporation months are January and December and the lowest months are May, June and July. The following graph compares the monthly evaporation against the monthly rainfall which shows rainfall exceeds evaporation between May and August during the winter months and this is inverse through the summer months where evaporation increases as expected.

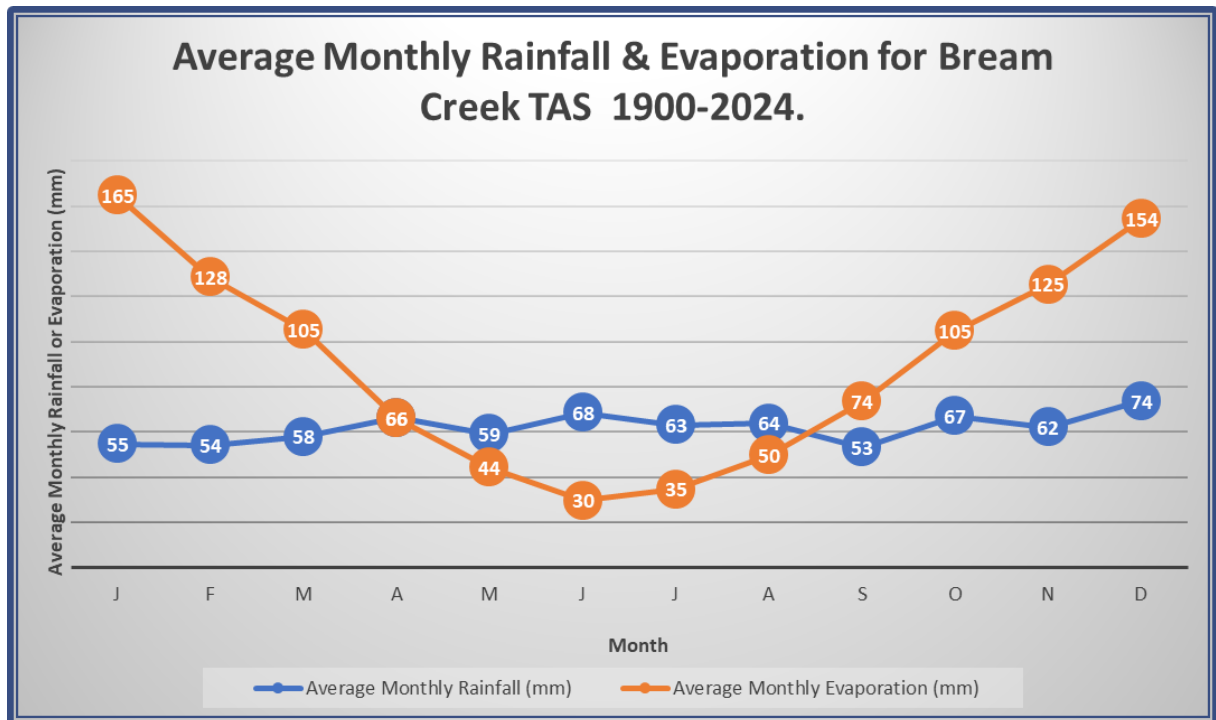


Figure 2-16 – Graph of total monthly evaporation vs rainfall

WIND

The annual wind records displayed as a wind rose for the area has been provided below. These average wind roses for 9AM and 3PM show the difference between wind direction within the area and are used to determine wind patterns and identify site activities within relation to any potential odour generation. It can be identified from the above that the site and surrounds are subject to winds predominantly from the northwest and southeast.

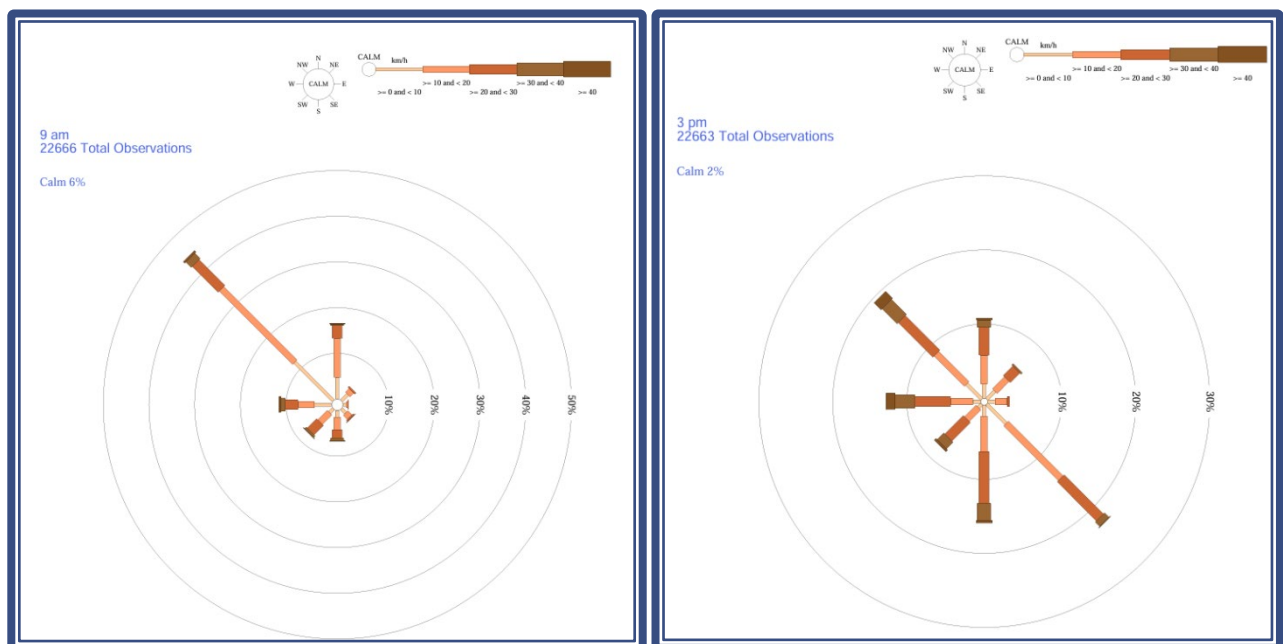


Figure 2-17 9AM and 3PM wind rose data (Source: BOM Hobart weather station)

The wind roses for the Hobart area identify the following:

- Winds in the area are calm (0.1 - 1km/hr) 4% of the time (6% at 9AM and 2% at 3PM).
- Winds are light (1.1-12.6km/hr) primarily early in the morning.
- Winds are gentle (12.6-19.8km/hr) 27.75% of the time.
- Winds are moderate (19.8-28.8 km/h) and moderate (29.8-38.9 km/h) most frequently making up the majority of observed conditions.
- Winds are fresh (28.8-38.9km/h) and strong (38.9-50km/h) more common in the afternoon, indicating higher intensity later in the day.
- Winds are rarely near gale or gale force (50-74.9km/hr).
- Winds blow most often from the west, especially WNW in the morning, and in the afternoon they are more variable coming from both east-southeast and west.

Wind conditions at the site indicate a predominant north-westerly influence during the morning period, with light breezes recorded at 9am and calm conditions occurring in approximately 6% of observations. By the afternoon, wind direction becomes more variable, with south-easterly, southerly, westerly and continued north-westerly flows commonly observed. Afternoon winds are typically stronger, most frequently occurring in the moderate range of 20–30 km/h, reflecting the coastal influence on local wind behaviour. Calm conditions in the afternoon are rare, accounting for only 2% of observations.

The observed patterns suggest that potential dispersion is likely to be greatest during the afternoon period when wind speeds increase and directional variability enhances mixing. In contrast, the relatively lighter morning breezes may reduce dispersion capacity, however the low frequency of calm periods at both 9am and 3pm reduces the risk of odour stagnation events.

2.6. TOPOGRAPHY

The following images have been provided to demonstrate the elevation variation within the area. **Figure 2-9** shows the elevation variation from the highest (red) to lowest (blue) at Marion Bay. **Figure 2-10** demonstrates the site with relation to contours. These images show that the region located between Copping and Marion Bay which transitions from gently rolling uplands to coastal plains and dune systems. The elevations range from approximately 28m to 400m above sea level with farming areas common on the gentler slopes and forested rises in the higher elevations. Eastward towards the coast, the terrain slopes steadily down through farmland and small valleys. The coastline in this area features broad sandy beaches, dunes and a long spit formed by sediment deposition at the mouth of Bream Creek.

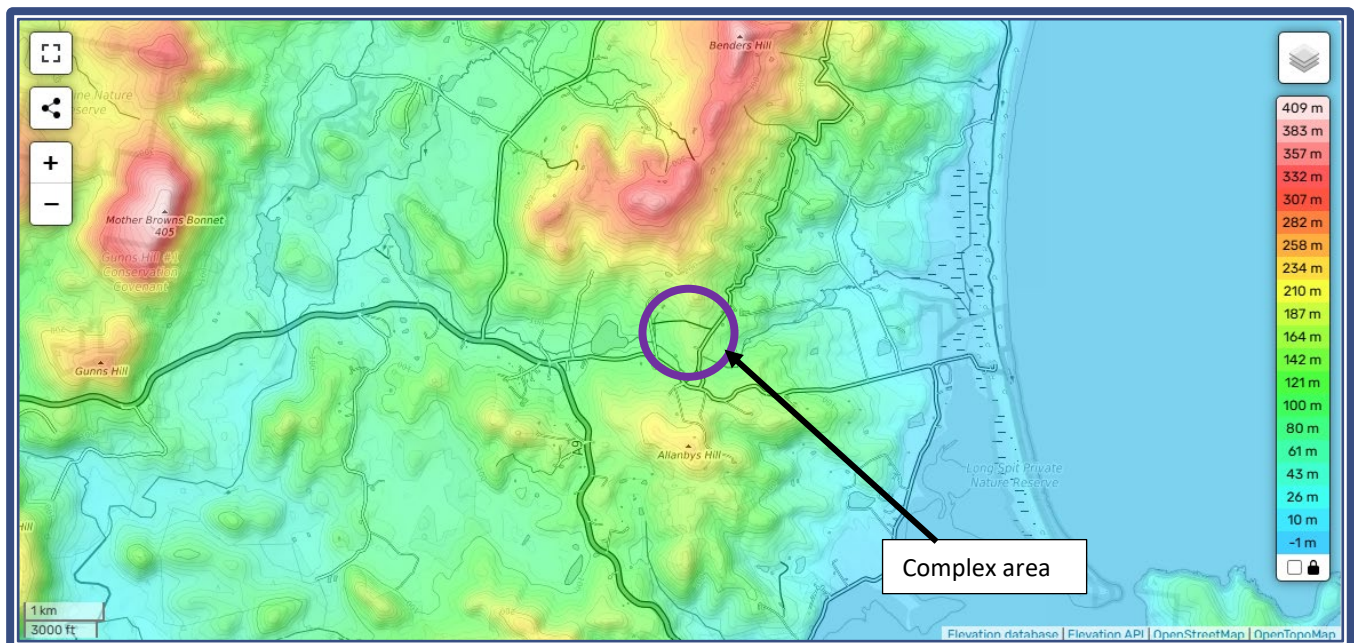


Figure 2-18 - Topography of the site (Source: en-au.topographic map)

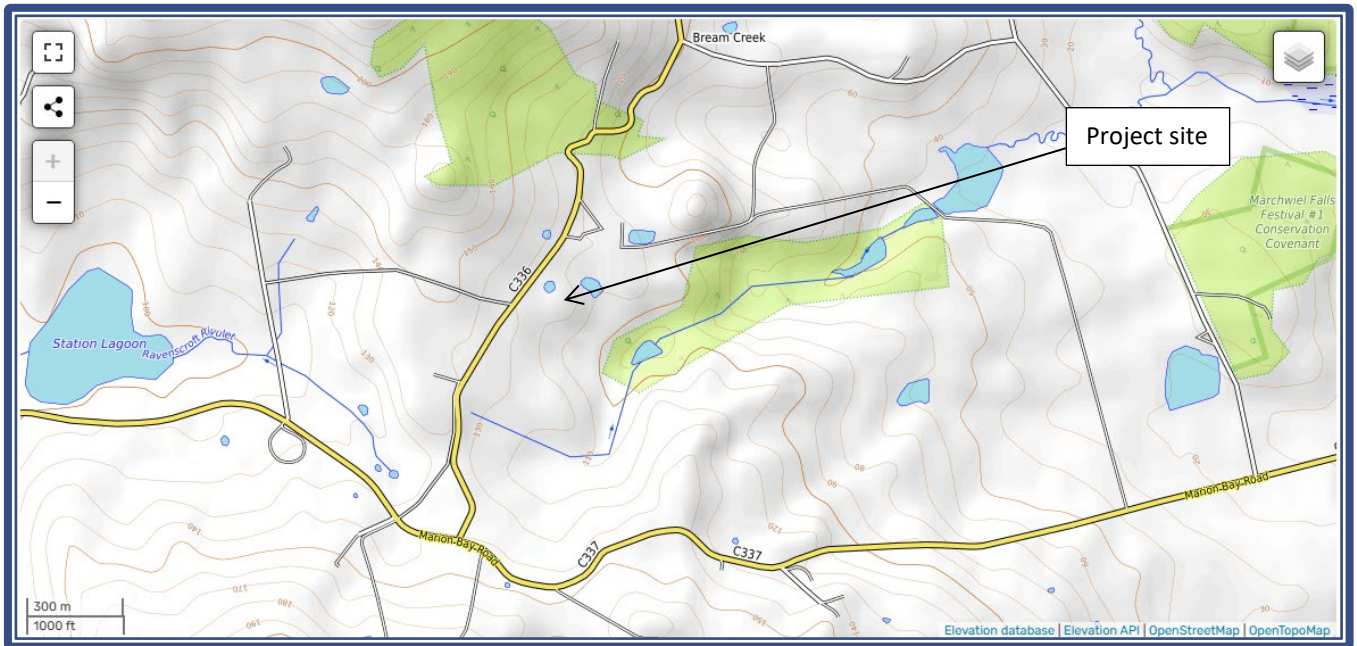


Figure 2-19 – Map indicating regional topography of the area (Source: PRS QGIS)

3. PROPOSED OPERATION & ODOUR

3.1. PROPOSED OPERATION

This project proposes the construction and full-time operation of a loose housing dairy system complex at Stroud Dairies, incorporating a new loose housing facility designed to accommodate up to 1,000 Holstein dairy cows. The development includes a staged construction of a state-of-the-art bedded pack housing system, the reconfiguration of the existing feedpad into a housed maternity and dry cow facility, and the expansion of effluent management infrastructure to support increased volume and improved environmental control. The loose housing facility will operate as a full-time housed dairy system, supported by the existing dairy infrastructure and the reconfigured feedpad, which will serve as housing for maternity and dry/young cows.

The proposed transition from a paddock-based and supplementary feedpad system to a fully housed dairy operation has the potential to significantly reduce odour generation across areas of the property and within the dairy site. Under the existing system, typical of dairies farms worldwide, manure and effluent are more widely distributed across paddocks and feedpads where they mix with soil and water, creating areas of mud and elevated odour potential, particularly during wet conditions. Transitioning to a housed system, manure and effluent is collected in a controlled manner, enabling improved management through a tightly controlled effluent management system. This approach reduces the formation of potentially odorous cow tracks, wet and anaerobic areas within gates and troughs, and allows for greater consistency in effluent handling.

HOUSING COMPLEX

The design of the proposed loose housing facility features a central 6-metre-wide feed alley (drive lane) for mixer wagon deliveries, bordered by a 4-metre-wide concrete feed access lane that allows cows to reach feed without entering the lane. This feed access lane will be flushed with recycled effluent water twice daily or as required. The internal layout includes divided sections to facilitate herd management, minimise time away from the housing area, and streamline milking operations.

The below image shows an example of a loose housing system with the central drive lane and flood washed feed lane with bedding areas either side of the feed and access areas.

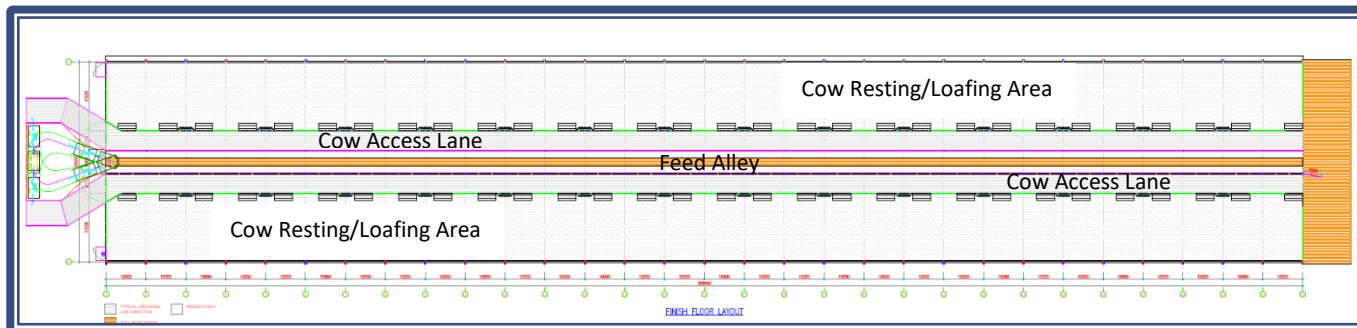


Figure 3-1 - Plan view of typical loose housing facility

The loose housing facility as shown in the above diagram will be operated as a 'bedded pack' bedding system. This type of system has no stalls or partitions and allows an open area for cows to loaf (rest) upon. A bedded pack system must be aerated at least twice daily as the bedding within a housing facility relies on micro-organisms, decomposing organic matter which results in CO₂, water and heat. The manure and urine produced by cows housed in this system are a key component for the bacteria to commence and continue the composting process. This process is an aerobic activity and is reliant on the daily and regular aeration process and requires careful management.

How a facility's bedding system is managed, will depend on the regularity of the bedding removal and adding process. Each site varies depending on the bedding type used, local climate and management. There is no one size fits all with the management of the bedding however ongoing and careful management must be undertaken to ensure that the bedding system is managed with the correct mix of oxygen, moisture and heat. Temperatures within the active system must be maintained between 43°C and 60°C (15-30cm below the surface) (Dairy Australia, 2024) to ensure that cow welfare is at optimum levels and any potential odour generation is minimised. Similarly, moisture levels of the pack must be maintained between a minimum of 40% and maximum 60% (Dairy Australia, 2024).

The following elements are included in the calculation factor utilised for site management for odour being the basis for the effluent system contribution and the bedding management. This assessment has been undertaken utilising the occupation time of cows within an area that is floodwashed/washed being utilised by productive housed cows for 6 hours

(25%) of the day and the remaining time within the loose housing loafing area of 18 hours (75%). A total bedding utilisation area equates to a minimum of 12.6m²/cow at maximum utilisation. The average weight of cows within the system equating to 650-675kgs that aim to produce an average of 38L of milk daily.

MATERNITY, VETRINARY AND YOUNG COW AREA (REFURBISHED FEEDPAD)

The existing feedpad is proposed to be refurbished as a maternity and dry/young cow housing system. When constructed this area will operate consistently with the loose housing area, with cows spending approximately 90% of their time loafing in the bedded area and the remainder on the concrete feedpad. This significantly reduces their odour and effluent output compared to the main herd.

CALF HOUSING

The current site also includes a baby calf area which ensures that calves are provided with adequate shelter and their welfare needs are met. This area houses calves prior to their transition towards a pasture-based area. Bedding in this system is a woodchip style bedding which absorbs 100% of all effluent generated within this system. Spent bedding is changed over within this system and applied to land in line with solids management processes.

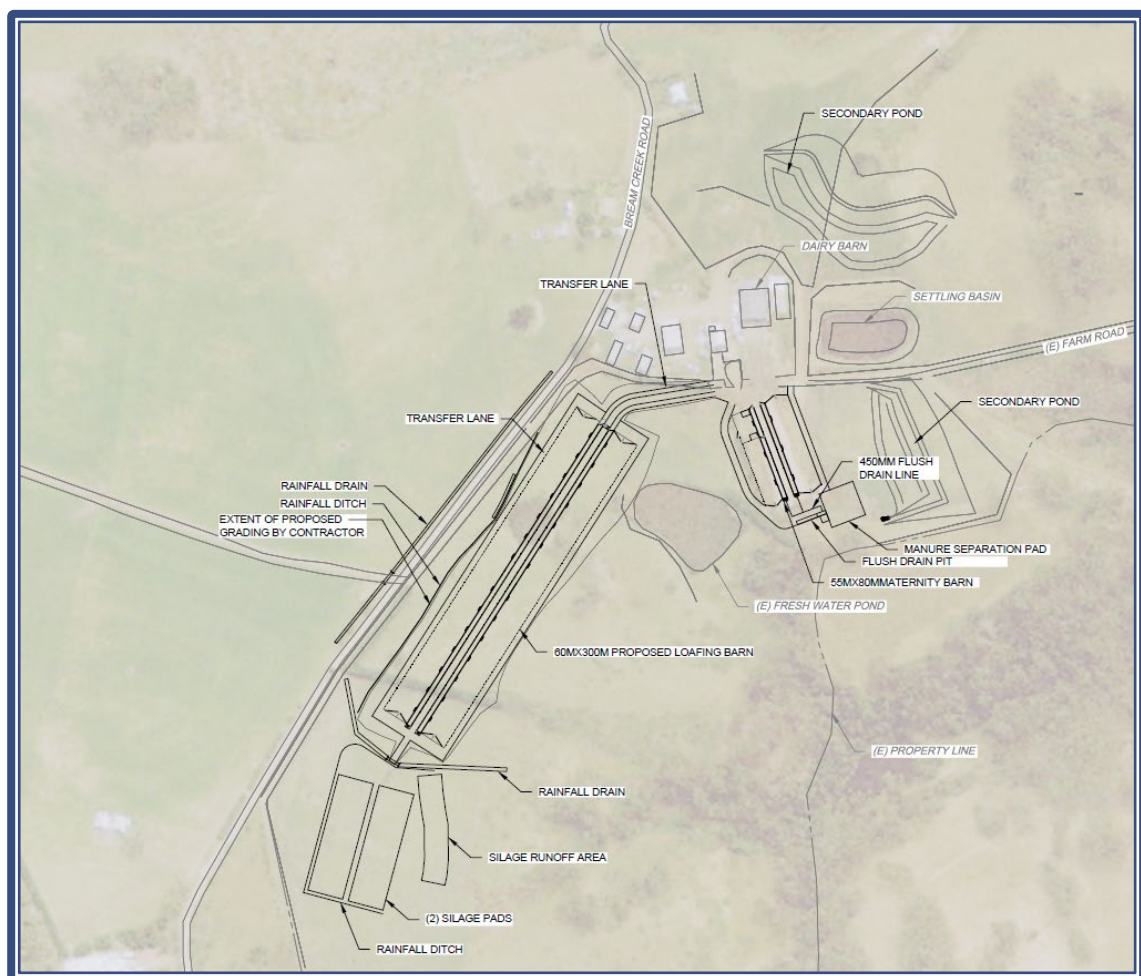


Figure 3-2 - Overview of activity areas (Source: Provost and Pritchard)

EFFLUENT SYSTEM

Effluent from the dairy will continue to be captured and conveyed in its current method (see **Section 2.2** above) however in future may include a floodwash component with recycle water capability. Effluent management of the feedpad will remain unchanged until it is converted to a roofed maternity and dry cow housing system with a loafing area and feed lane, where the management of effluent within this area will be updated to a floodwashed lane system captured in the adjoining collection pit.

The proposed loose housing facility, being constructed on a 2% slope from south to north, will include a dual flood washed lane system that continues from the northern end of the shed along the transfer lane system until it is intercepted near the start of the existing dairy yard. At this point, all wash water is captured and conveyed directly via gravity to the reconfigured effluent collection pit.

Solids separation will continue to be incorporated as part of the management of effluent at this site. Effluent collected in the reconfigured collection pit will be agitated and pumped to the new solids screen where up to between 20 and 40% of solids will be removed from within the effluent stream. Solids removed will be stored on the adjoining manure storage pad. This pad is connected to the effluent pond system where any remaining liquid is directed to the pond system. Solids will be removed and applied to land at a suitable application time and rate.

Following screening, liquid and remaining solids from the effluent stream is directed to Pond 1 which is proposed as an anaerobic sedimentation pond. Following a settling period of 3.5 days, effluent will be transferred via gravity to the pond 2 storage pond where any remaining solids are allowed to settle. Effluent is then conveyed via gravity to Pond 3 being the final storage pond where it is stored for recycle purposes or until use on the property.

EFFLUENT USE

The method of effluent removal from the storage pond will be either as recycled water through the floodwash system or total removal from the system via irrigation through an overhead pivot system from the final storage pond (pond 3). Solids removal from the primary ponds will be undertaken through mixing and transferring to slurry tanker for direct application to land without the need to store on site during the pond cleaning process. These activities are currently undertaken on site and are well managed.

MORTALITIES MANAGEMENT

General operation mortalities are managed via on site composting/collection and removal from the property by a reliable long term utilised contractor and no odour generation from this is considered. Mass mortality is proposed to be managed in accordance with veterinary and biosecurity advice based on the type of event. Where mortalities are to be managed on site, they will be managed through burial. As a result of this, odour generation is unlikely to reach an offensive level.

3.2. ODOUR SOURCES

The potential sources of odour within the complex are predicted to be consistent with other dairy loose housing operations located throughout Australia. It should be noted that there is limited odour specific background data available relating to dairy and bedded pack housing systems. Where possible, dairy specific odour considerations have been used, where this information is not available, feedlot data has been used.

A simplified process chart of an intensive dairy operation is presented below in **Figure 3-3**.

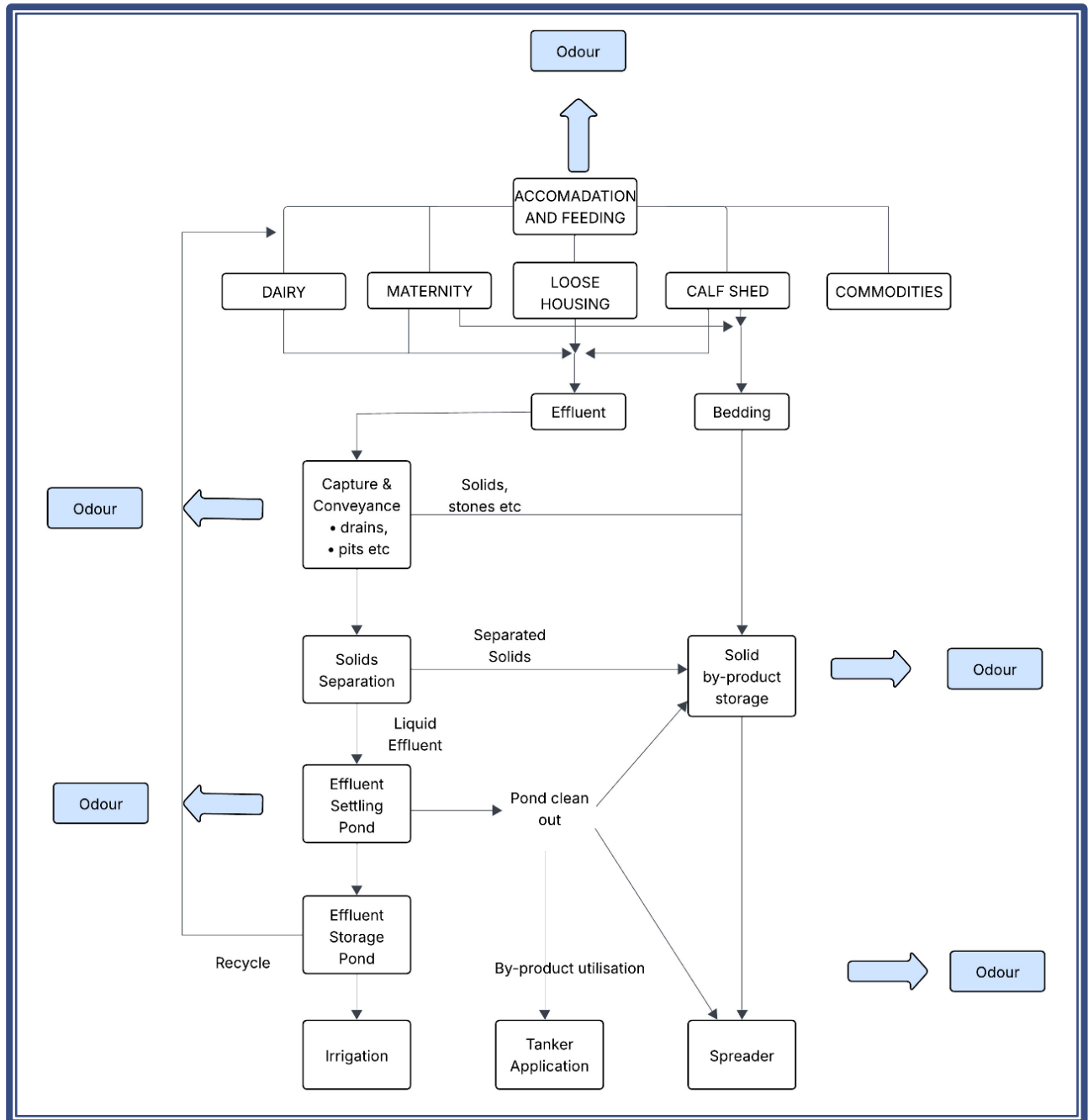


Figure 3-3 – Overview of the intensive dairy facility and the odour generating areas (PRS, 2025)

It can be seen from the above figure that there are five potential sources of odour that relate to the operation. These are:

1. Accommodation (sheds), dairy and commodities,
2. Drainage, capture and conveyance system,
3. Effluent pond system,
4. Manure and bedding storage, and
5. By-product utilisation.

Of these, the primary source of odour generation is predicted to be the effluent pond system. Separated solids and spent bedding storage have also been considered to be a contributor if poorly managed. Minimal volumes of solids will be removed from within collection traps, drains or vehicle roads and stored in the proposed area for manure storage. This solid material, including waste feed, not used elsewhere within the operation, will be incorporated with any used bedding and re-used within farm system as a source of fertiliser.

The above identified odour sources are further described below with the proposed management measures to minimise the risk of adverse impacts detailed in **Table 7-1** located within the management section.

3.2.1. Accommodation and Feeding

Accommodation and feeding activities have the potential to create odour within the operation. These sources can be further divided into the following areas.

Housing

The housing system within the operation is a roofed, open sided shed system. The facility is constructed on a 2% slope which meets the minimum recommended slope for loose housing and bedded pack facilities in Australia. A bedding system (described above) is maintained within the loafing areas in the facilities which is important for animal health and odour management. Alleys, consisting of a concrete sloped surface, are cleaned regularly through a recycled flood wash system to ensure that the excreta (urine and faeces) collected within this area of the facility is expelled from the sheds and treated.

Housing systems of this type, when operating in line with the National Guidelines, generally do not emit significant odour. It is in the operations best interest to ensure odour levels are maintained at optimum level to ensure cow welfare is managed at an optimum level.

Feed Storage and Processing

Feed processing may also contribute to odour where there are levels of undigested starch within the manure. Feed processing methods must be monitored to ensure feed grains are processed optimally. Feed storage particularly silage can contribute to odour emissions where a silage stack has been poorly generated or managed.

Silage pits and storage areas must remain covered until in use at which time only the face of the pit will be opened. The 'face' of the silage pits requires careful management to ensure that the silage exposed to the open air is managed and minimised.

3.2.2. Solids traps, sumps, drainage & laneways

Adequate drainage from the facilities, lanes and surrounding areas assists with the minimisation of odour emissions by allowing all areas to dry quickly. An even drain surface, free of potholes and low areas, must be maintained to prevent poor drainage and additional odour emissions. Where lanes are constructed from concrete, the surface must be checked to ensure that there are no cracks or defective areas that could allow water and effluent to undermine the slab. Vegetation in earthen drains must be minimised to ensure that there is limited organic matter entering the pond system assisting with the reduction in odour from the ponds. Where sediment has accumulated within the drains, it must be allowed to dry prior to removal to the manure storage area or for utilisation.

As described above, drainage of effluent from each of the facilities, including their laneways, occurs via internal concrete laneway (flush and hose washed) and drain which encompasses the full width the flood washed lane of each area within the complex. This drainage system conveys captured effluent from each area to the collection pit, trafficable solids trap and solids separation system where solids are removed and stored in the manure storage area. The liquid component is conveyed to effluent pond 1. Effluent will be settled before transmitting via gravity pipe through to the storage pond systems of Pond 2 and Pond 3. Liquid effluent will be stored prior to use for irrigation and recycling through the facilities flood wash systems.

All pipes and drains employed within this system will be maintained and cleaned at regular intervals to ensure there is no build-up of waste products. Materials cleaned from this system must be stored within the manure storage area located on the east side of the existing feedpad prior to use on farm.

3.2.3. Effluent Treatment and Ponds

Effluent ponds have been assessed and detailed in the South East Soil and Water report '*Effluent and Management Plan for Stroud Dairies, Loose housing barn*, September 2025. The report identifies the required size and management activities relating to the ponds considering the proposed housing system at the site. A site plan has been prepared by NJC Irrigation Solutions which identifies the existing pond characteristics and nominates an additional pond to meet SESW's

requirements. This odour assessment report has considered the effluent volumes detailed in the SESW report and the location of the ponds identified in the NJC Irrigation Solutions plans.

The SESW report has nominated a dual pond system consisting of a single sedimentation pond connected with a gravity pipeline to a two-pond winter storage system. The proposed sedimentation pond will be constructed adjoining the manure storage area and incorporates catchment of runoff from this area. This pond settling system (pond 1) has been designed to allow the deposition solids from the effluent stream with a clean out interval of 6 months.

The proposed storage system includes the repurposing of the existing effluent pond (Pond 2) and together with the proposed pond 3 will facilitate the storage and reuse of water for flood washing systems within the complex and be utilised for irrigation purposes during the months of October to March. The storage of effluent will occur during the remaining period when application to land is not advisable (i.e. during winter or between irrigation applications). When ponds are cleaned, solids and sludge will be removed and applied directly to paddocks.

Accumulated effluent solids and sediment must be removed from other operational areas to ensure all drainage structures continue to operate as designed and drainage systems are not impeded.

3.2.4. Solids Storage

Manure solids will be generated as part of the solids separation and bedding management. These will be in the form of separated solids, material removed from drains and traps and spent wet bedding. It may also include solid crust where removed from the primary pond system. Sludge and mobile solids will be removed from the pond system (Pond 1, Pond 2) by mixing and application to land by tanker, a method consistent with the existing operation. Liquid effluent from the storage pond (pond 3) will be irrigated directly to land.

The facility bedding management strategy includes the use of dry bedding, readily available locally at any time, to add into the existing bedding to reduce moisture levels through the wetter months. Where bedding is considered to be at its end of life within the system or does not meet the requirements for the facility management in terms of moisture, temperature and comfort score, it is removed following winter and taken to paddocks for incorporation into the cropping rotation.

In conjunction with agronomic advice, manure solids and sludge will be utilised through incorporation into the soils/utilised by plants immediately following removal from the system. Any solids removed from the solids traps and drains will be stored within the existing manure storage area adjoining the solids separation screen, located on the east side of the existing feedpad near effluent pond 1 which has been constructed with an impermeable base.

3.2.5. By-product Utilisation

Manure solids and sludge can be a valuable source of nutrients and organic matter for improving soil fertility, structure, water holding capacity and crop or pasture production. This assessment does not consider the impacts on the surrounding area of the application of solids and sludge due to the varying possibilities and locations that this material could be applied. Instead, the following requirements must be met with relation to areas where effluent, solids and sludge are applied.

Manure export and utilisation areas must be carefully selected taking into account the following:

- Application method,
- Separation distances between any sensitive receptors and watercourses,
- Prevailing winds,
- Area to be spread,
- Time of day (spreading not to occur before 7 am or after 4 pm),
- Existing nutrient levels and application history,
- Topography, flood inundation and weather for 48 hours pre and post spreading, and
- Grazing rotation of non-productive livestock.

Once the utilisation area is selected, the application timing must be considered. This includes:

- Crop or pasture needs (nutrient balance) and rotation stage,
- Manure maturity,
- Timing of other management events (cultivation etc),
- Soil moisture, and
- Wind conditions.

Further detail relating to the use of manure and effluent is contained in the Effluent Management Plan prepared by South East Soil and Water – Section 9.2. This describes the requirement to comply with the following measures:

- No application of effluent, sludge and manure within 30-metres of watercourses and waterbodies.
- No application of effluent, sludge and manure within 10-metres of a property boundary.
- Applying liquid effluent at times of soil moisture deficit of 10mm, allowing for an 8mm irrigation to be applied by centre pivots without runoff.
- No effluent, sludge or manure application prior to forecast rainfall of >10mm within 24 hours.
- No application of effluent when forecasted wind speeds exceeds 5 m/s, or 18 km/h reflecting gentle breeze, to avoiding risks of effluent passing across land boundaries.
- No application of sludge and manure within the winter storage period.
- Sludge and manure will not be applied on days where wind speed exceeds 5 m/s, or 18 km/h reflecting gentle breeze, to avoiding risks of odour emissions.

Furthermore, effluent application should be:

- Absorbed by soil (liquid), to reduce the likelihood of loss to surface runoff or groundwater, and
- Adsorbed by clay or soil particles (nutrients), minimising off-site loss of nutrient through runoff or leaching to groundwater.

Sludge and manure application are favoured immediately prior to soil cultivation or planting, to achieve incorporation and minimise loss via runoff or volatilisation. Sludge will be applied using a tanker.

3.3. SITE ACTIVITY AREA

As identified above, the project proposes to extend and intensify its existing operational area. This includes the use of the following infrastructure:

- Existing:
 - Dairy,
 - Feedpad,
 - Manure Storage area
 - Grain, silage and commodities,
 - Calf shed,
 - Effluent pond (existing pond 1/proposed pond 2),
 - Trafficable Solids trap/sump/pit,
 - Solids separation system,
 - Connecting pipework and pump systems, and
 - Freshwater supply system, and
 - Irrigation infrastructure.
- Proposed
 - Loose housing facility with internal floodwash and bedding,
 - Conversion of the feedpad area to include a vet, maternity and dry/young cow housed area,
 - Connection to Pond 1,
 - Extension to the manure storage area (impermeable).
 - New effluent ponds (pond 1 and pond 3), and
 - Silage system and silage catchment dam,

The area and activities relating to potential odour generation at the site have been identified (above) and includes all areas within the project site with the exception of the freshwater storage area. For the purpose of the assessment and to adequately consider relevant separation distances, the odour activity boundary has been reduced from the total site boundary to exclude the freshwater storage ponds. These areas are identified in the following image as the existing activity area in green and the assessment odour generation area boundary in red.



Figure 3-4 - Image showing proposed activity boundary (yellow) (Source: PRS QGIS)

4. ASSESSMENT OF SEPERATION DISTANCES

4.1. METHODOLOGY

This methodology utilises a “S-factor” or Site factor equation which has been used throughout Australia to determine the minimum separation distances required between various types of receptors and intensive animal developments. This type of assessment provides a conservative approach to assessing odour and separation distances between a source and a sensitive receptor. It is often used as a preliminary approach to determine if further assessments are required to consider any potential impacts of a proposal.

A review of the Tasmanian Planning Scheme indicates there are no site-specific separation distances defined that relate specifically to intensive dairy operations. Intensive dairy is not defined within the Planning Scheme and the operation is considered to be best described as ‘*Intensive Animal Industries*’ which is formally defined as *the use of land to keep or breed farm animals, including birds, within a concentrated and confined animal growing operation by importing most food from outside the animal enclosures and includes a feedlot, poultry farm or piggery.*

Table C9.1 of the Attenuation Code under *Feedlot* provides a description of the Activity of *Intensive animal husbandry (excluding piggeries, poultry farms, horse stables, and any such operation carried out at an abattoir, slaughterhouse or saleyard or for the purpose only of drought or other emergency feeding) - emissions such as odour, noise and dust*, and nominates that a Level 1 Activity triggers a 3,000m Attenuation Distance. Level 1 activities and their assessment remain within the responsibility of the Local Government to administer.

There are also no technical assessment guidelines, codes or references on odour assessments relating to Intensive Animal Industry in Tasmania, however, intensive feedlots are generally referred to the National Guidelines for Beef Cattle Feedlots as the relevant method. It must be clearly stated that the Feedlot Guidelines have been developed by the Beef Feedlot Industry to consider the required separation distances from cattle accommodated within open pens, which may or may not include minor shade or roof structures, with the majority of the area exposed to climatic conditions (wind, rain, heat). This includes the consideration of operational activities such as whole of pen cleaning activities at the site where large open areas of pen surfaces have manure layers removed and stored within the site prior to their removal and utilisation – thus generating large odour emissions from a site. The *National Guidelines for Contained Housing and Feedpads* also refers to this method as being *inconsistent with intensive dairy management activities*.

A *Multi Species Animal Production Separation Distance* method which includes dairy industry specific factors has been developed by Agriculture Victoria and is currently awaiting formal adoption into their planning scheme. This adoption is imminent and once adopted, it is understood that the methodology will be incorporated into the *National Guidelines for Dairy Feedpads and Contained Housing*. This method provides a relevant assessment process for this type of operation – being one that is not exposed to the elements and is a tightly managed system with controlled effluent and multiple cleanings throughout the day of high occupation areas.

The following assessment has undertaken an assessment utilising the Victorian Dairy Specific Assessment and calculation method with the methodology and results of all identified Receptors provided below:

The S-Factor equation is as follows:

Animal Production Separation Distance Method (Vic)	
$D = N^{0.62} \times S$	
D	= Minimum Separation Distance
N	= Number of SAU /animal factor
SDCU	= Standard Dairy Cow Unit
SAU	= SDCU multiplied by the SDCU
Composite site factor (S1 x S2 x S3 x S4 x S5)	

The Composite Site Factor (S) is the variable that accounts for the site to site and time to time variations. This is given by:

$$S = S_1 \times S_2 \times S_3 \times S_4 \times S_5$$

Where:

Site	Animal Production Separation Distance Method (Vic)
S₁ =	Design and management factor
S₂ =	Sensitive use factor (Receptor type)
S₃ =	Surface roughness factor
S₄ =	Terrain factor
S₅ =	Wind direction factor

Further details are provided in the following sections relating to each of the factors considered in the assessment.

4.1.1. Design and Management Factor (S1)

The multi species tool applies to variable species. As a result, it is necessary to apply an animal factor to the calculation which is relative to the manure (volatile solids) excretion rate and typical feed type. The Animal Factor value attributed to a dairy cow is 9.

The type and management of the facility proposed influences the amount of odour generated. The assessment must review the type of facility together with the amount of time each type of animal is occupying the area. The facility types used within this operation include:

Table 4-1 – Design and Management Factor (S1)

Facility Type	Factor
Sheds/covered pens with by-product, uncovered pond, >25% solids separation prior pond	1.5
Sheds/covered pens with by-product, uncovered pond, >25% solids separation prior pond	1.3
Uncovered pen or feedpad	1.2
Shed/covered pen or shelter with no bedding	1.0
Shed/covered pen or shelter with bedding	0.8
Shed/covered pen with by-product removal at least every 6 weeks.	0.6

4.1.2. Receptor Type Factor (S2)

The receptor value allows for a variance in sensitivity to odour based on population. The greater the exposed population, the more likely it is that 'sensitive' individuals might be exposed to nuisance odour. (MLA, 2012). The values attributed to each type or receptor has been provided below.

Table 4-2 - Receptor Factor (S2)

Receptor type	Dairy Value
Residential Zones (Town)	60
Rural Living Area	40
Single rural residence	20

4.1.3. Vegetation and Surface Roughness Factor (S3)

Vegetative cover is a major factor in the drag that the earth's surface exerts on air moving over it. Where the surface is rougher (vegetated areas) the more turbulent the air flow which will increase mixing and dilution of air.

Table 4-3 - Vegetation Factor (S3)

Vegetation	Dairy Value
Long grass, few trees of crops ¹	1.00
Undulating hills with minimal vegetation ²	0.93
Level wooded country	0.85
Heavy timbered country	0.77
Significant hills and valleys ³	0.68

1. 'Crops only' implies annual field crops are sown on a seasonal basis and that the intervening land is bare for at least part of the year – isolated, scattered or small clumps of trees are not sufficient tree cover to provide for a higher value.
2. Undulating hills: Situations where topography consists of continuous rolling, generally low-level hills and valleys, but with sharply defined ranges, ridges or escarpments. (assumes minimal vegetation)
3. Significant hills and valleys: situations where one of more lines of hills sufficiently large enough to influence air movement exist between the sensitive use and the facility.

4.1.4. Terrain Factor (S4)

The terrain surrounding any site is known to impact on the spread and concentration of odours and must be a consideration in relation to odour behaviour.

Table 4-4 - Terrain Factor (S4)

Terrain	Dairy Value	
	Downslope	Upslope
Valley drainage zone – Avg slope from centre of valley/gully to confining ridgeline is >5%	2.0	1.0
Valley drainage zone – average slope from centre of valley/gully to confining ridgeline is 2-5%	1.5	1.0
Valley drainage zone – broad valley >10km and a valley or gully with low side walls with the average slope from centre of valley to confining ridgeline is <2%	1.2	1.0
Low relief >2% from animal production facility – Not in a valley drainage zone, but the source lies above the sensitive land use at an average grade of more than 2%	1.2	
Flat terrain (<2%) ⁴	1.0	1.0
All other situations	1.0	1.0

4.1.5. Wind Direction Factor (S5)

Wind direction has the potential to increase the exposure of a receptor located in the downwind path. While most intensive animal sites will have some form of prevailing wind, it is unlikely that it will blow from that general direction ($\pm 40^\circ$ of the direct line) for most of the time (>60%).

No site-specific data was utilised as part of this assessment and no discounting factor was applied for wind conditions at any site and the maximum value of 1 was applied to each receptor assessed.

4.2. RESULTS

The results of the assessment following varying assessment methods have been provided below together with the justification of the factors utilised.

4.2.1. Herd Number and type

As identified above, the design and management of this site is for a bedded pack loose housing system connected to an existing rotary dairy milking system. A maternity facility is proposed to be located within the complex and is connected to the loose housing area and the dairy. The maternity section will vary in number significantly however for the purpose of the assessment, the total area of the facility has been assumed to be occupied at 15m²/cow for maximum density occupation.

Dairy Standard Cow Unit / Standard Animal Unit

The Standard Dairy Cattle Unit (SDCU) is defined by the by the lactation cycle of the animal and its weight. The following table shows the scaling factor relating to lactation activity and weights. The total number of animals within a facility and each class are multiplied by the related scaling factor to determine the Standard Animal Unit (SAU) number.

This is derived from the following:

Table 4-5 – DSCU scaling factor

Average liveweight (kg)	Dairy Scaling Factor	
	Dry	Lactating
350 and below	0.563	0.647
351 - 400	0.593-0.622	0.682-0.716
401 - 450	0.651-0.680	0.749-0.782
451 - 500	0.708-0.736	0.814-0.846
501 - 550	0.763-0.790	0.877-0.909
551 - 600	0.817-0.843	0.939-0.970
601 - 650	0.870-0.983	1.000-1.030
651 - 675	0.921	1.059
676 - 700	0.947	1.089

RESULTS

The scaling factor results require that the total number of animals are multiplied by the scaling factor to determine the total Standard Animal Unit (SAU). The scaling factor for 651kg-675kg cows is different by lactation timing, however for the purpose of this assessment, it has been conservatively assessed that every cow is lactating (being the higher factor). The total SAU calculations are shown below.

- **Number:** 1,000 Cows
- **Lactation Cycle:** Lactating
- **Weight:** 651-675kg

Therefore the scaling factor applied is 1.059.

$$\text{SAU} = 1.059(\text{factor}) \times 1,000 (\text{cows}) = 1,059 \text{ SAU}$$

This value is then divided by the animal factor (in this case a dairy cow = a factor of 9 which results in a value of **117.6**).

4.2.2. Management Factor (S1)

The S1 factor considers the management of the housing facility, effluent system and time spent on differing areas within the operation. In this complex, the following times have been utilised:

All Cows:

- Total time on concrete = 25%
 - Milking time = 1.5hour/milking x 2 times a day = 12.5%
 - Eating time = 6 times/day @ 30mins/feed = 12.5%
- Total Time on bedding = 75%

Table 4-6 - Value of S1, as related to facility type, occupation and cow number

Facility Type	Factor	Housing occupation time	SDSU	Composite
Sheds/covered pens with by-product, uncovered pond, >25% solids separation prior pond	1.5	-	0	0.91
Sheds/covered pens with by-product, uncovered pond, >25% solids separation prior pond	1.3	12.5%	132	
Uncovered pen or feedpad	1.2	12.5%	132	
Shed/covered pen or shelter with no bedding	1.0	-	0	
Shed/covered pen or shelter with bedding	0.8	75%	795	
Shed/covered pen with by-product removal at least every 6 weeks.	0.6	-	0	

The identified factor for S1 under this calculation for the site is **0.91** where solids will be removed prior to the ponds, the ponds are uncovered, and the facilities are covered.

4.2.3. Receptor Type Detail (S2)

The type of receptors surrounding sites vary. The Village of Copping and Rural Hamlet of Marion Bay have been considered with the receptor value of **40** applied as Rural Living Areas. All other areas and receptors, including Bream Creek have applied the Dwelling Factor value of **20**.

4.2.4. Surface Roughness Factor (S3)

The surface roughness factor also varies between receptors assessed. Many receptors had no meaningful native woodland or forest and limited topographic impact between the site and the receptor and as a result, received a factor of **1.0** (long grass, few trees and crops) which is the highest value. Several other receptors were separated from the site by situations where hills and valleys are present between the receptor and this site, and the lowest factor of **0.68** was applied.

4.2.5. Receptor Terrain Detail (S4)

As with the Surface Roughness, the terrain factors vary with each receptor. The value of each factor attributed to this assessment has been based on topographic maps, elevation changes, waterway overlays, photos and site inspections. These are further detailed at the individual or grouped assessment of each receptor below.

4.2.6. Receptor Wind Direction Factor (S5)

All receptors were attributed the maximum wind condition value of **1** as no site-specific wind data is available relevant to this location.

4.2.7. Receptor Detail

General details.

A significant amount of receptors have been considered as part of this assessment. Many receptors shared the same site characteristics and as a result have been assessed together. The following descriptions and images are provided using the methodology described above to calculate the required separation distances from the site. The following section identifies each receptor surrounding the project site in relation to the proposed operation activity boundary described in **Section 3.3**.

Receptor distances were either measured between the property boundary or from the edge of the domestic utilisation area, eg garden fence, pool, entertainment area. These methods and measurement locations are detailed in the following section.

OWNED DWELLINGS

The dwellings identified as R2, R3, R8, R18 and R19A are owned by the **Applicant** and as the owner of these dwellings is the applicant, no consultation is required. Should any of these dwellings be proposed for sale in the future, it should be noted that they were not considered in this assessment.

VILLAGES

Copping

The village of Copping has been considered with the following information, factors applied and results.

Table 4-7 – Receptor Conditions

S	Assessment	Result	Comment
2	Receptor Type	Village	Population 183 (2021)
	Property Zone	Village (12)	
3	Surface Roughness	Significant hills and valleys	See below.
4	Terrain	All other situations	Does not meet any specific description
Conditions	Direction from activity	West	Measured from the zone boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	1,580m (New silage storage)	
	Distance to nearest housing	1,660m (Loose housing)	
	Distance to nearest effluent	2,006m (New Pond)	
	Distance to nearest commodities	1,580m (New silage)	

The terrain condition factor has been selected based on the elevation and topography between the complex and the township determining that the 'All other situations' is the most relevant factor to apply. There is significant elevation change, vegetation and valleys and hills between the site and Copping.

Table 4-8 – Copping Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	40	0.68	1.0	1.0	500 (476)	Complies

The village of Copping is currently located 1,400m from the existing silage area and 2,010m from the existing dairy activities. The proposed distances are a1,580m (increased) from silage area and 1,670m from the proposed loose housing shed. The results of the above assessment show that the Village of Copping is located a significant distance from the site, separated by natural topography. A separation distance of 476m is required (500m minimum for Rural Areas) with there being three times this distance available.



Figure 4-1 - Image showing the Village of Copping in relation to the site (Source: Google Earth)

Note: measurements have been taken from the nearest property zoned Village. The elevation line has been shown based on a central location within Copping.

Marion Bay

The Rural Residential area of Marion Bay has been considered with the following information, factors applied and results.

Table 4-9 – Receptor Conditions

S	Assessment	Result	Comment
2	Receptor Type	Village	Population 72 (2021)
	Property Zone	Low Density Rural (10)	
3	Surface Roughness	Significant hills and valleys	See below.
4	Terrain	All other situations	Does not meet any specific description
Conditions	Direction from activity	South east	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	2,310m (new Pond 1)	
	Distance to nearest housing	2,425 (Maternity)	
	Distance to nearest effluent	2,322m (New Pond 1)	
	Distance to nearest commodities	2,719m (new silage)	

The terrain condition factor has been selected based on the elevation and topography between the complex and the township. There is significant elevation change, vegetation and valleys and hills between the site and Copping.

Table 4-10 –Marion Bay Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	40	0.68	1.0	1.0	500 (476)	Complies

The village of Marion Bay is currently located 2,360m from the existing feedpad and dairy activities. The proposed distance as part of the project is slightly reduced with the inclusion of Pond 1 to 2,310m. The results of the above assessment show that the Area of Marion Bay is located a significant distance from the site, separated by natural topography. A separation distance of 476m is required (500m minimum for Rural Areas) with there being four times this distance available.

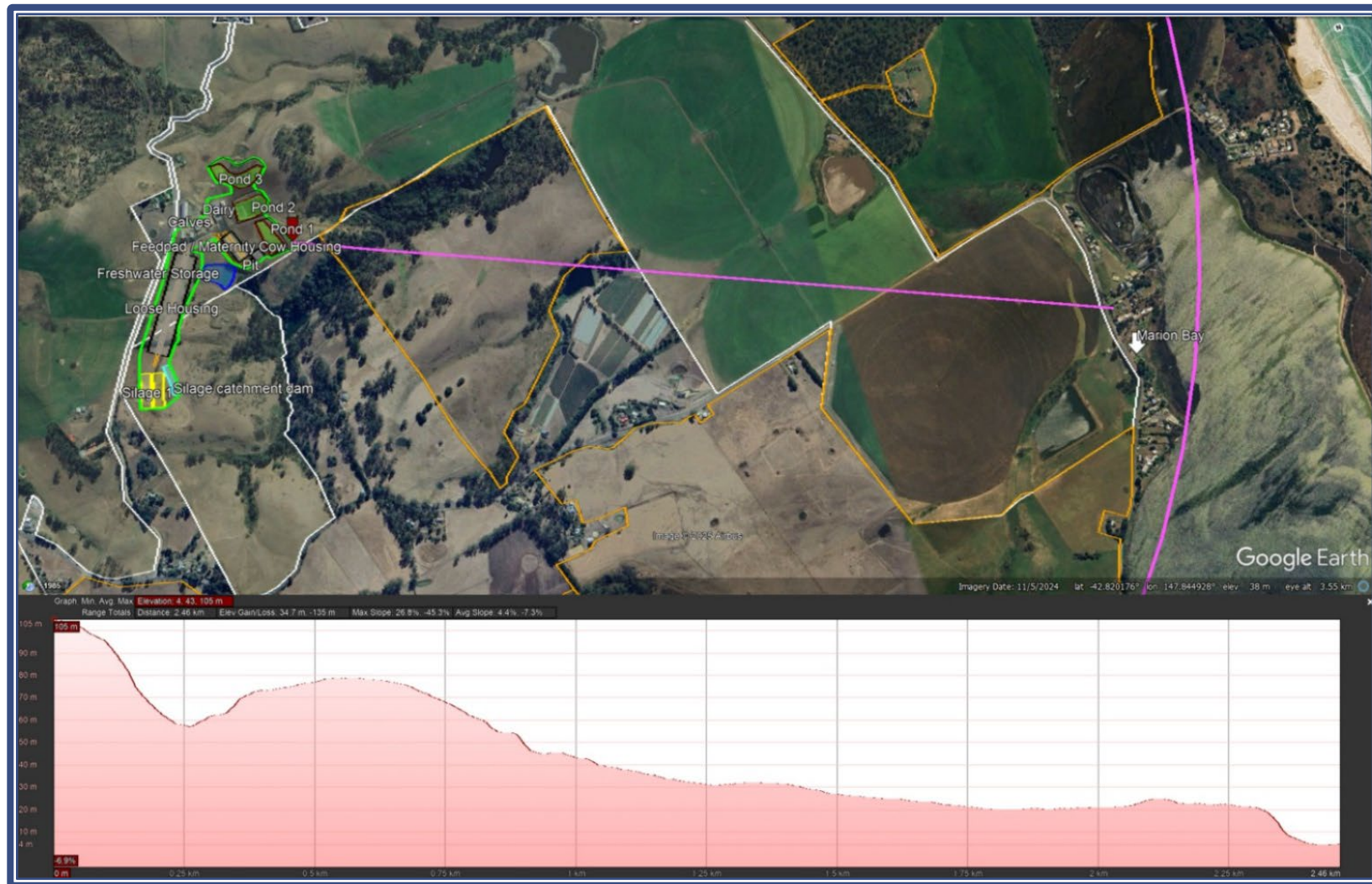


Figure 4-2 - Image showing the area of Marion Bay in relation to the site (Source: Google Earth)

Note: measurements have been taken from the nearest property zoned Low Density Rural. The elevation line has been shown based on a central location within Marion Bay.

DWELLINGS

R1 –115 Bream Creek Rd, Bream Creek (Lot 1/26872)

The following assessment relates to the site identified as Receptor R1.

Table 4-11 – R1 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 1.5ha property located within the farming zone.
3	Surface Roughness	Long grass, few trees or crops	No vegetation
4	Terrain	Flat	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	West, northwest and north	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	110m (existing)	
	Distance to nearest housing	150m (Loose housing)	
	Distance to nearest effluent	130m (Pond 3)	
	Distance to nearest commodities	500m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the category of 'flat' has been applied as it generally best represents the condition. The surface roughness factor has been determined based on the presence only of low and unremarkable vegetation applying the 'Long grass, few trees or crops' factor.

Table 4-12 – R1 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	1.0	1.0	1.0	350	Non-conforming.

The receptor is located approx. 110m from the existing site activities and the property owner is aware of the proposal and future development. During this consultation, there were no concerns raised regarding the proposed works and operation.

The proposed operation will not change the existing separation distance with the dairy (existing) being the nearest to this receptor, followed by Pond 3 (new) at 130m. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.



Figure 4-3 - Image showing the R1 receptor in relation to the site (Source: Google Earth)

R4 Receptor Group

The following assessment relates to six grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-13 - R4 Receptor group details

Receptor ID	Title ID	Address
R4A	35548/1	263 Burnt Hut Rd Bream Creek
R4B	113549/1	183 Bream Ck Rd, Bream Ck
R4C	37025/2	264 Burnt Hut Rd, Bream Creek
R4D	37025/1	194 Bream Ck Rd, Bream Ck
R4E	107419/1	197 Bream Ck Rd, Bream Ck
R4F	133459/1	205 Bream Ck Rd, Bream Ck

Table 4-14 – R4A-F Site Conditions

S	Assessment	R4A	R4B	R4C	R4D	R4E	R4F	Result	Comment
2	Receptor Type	Dwellings							Single dwellings
	Property Zone	Rural (20)							
3	Surface Roughness	Long grass, few trees or crops							See below
4	Terrain	All other situations							See below
Conditions	Direction from activity	North-northeast							Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	0m	0m	0m	0m	0m	0m		
	Distance to activity boundary	400m*	402m*	575m*	494m*	500m*	600m*		
	Distance to nearest housing	710m	703m	769m	800m	790m	900m		
	Distance to nearest effluent	415m	430m	480m	525m	530m	625m		
	Distance to nearest commodities	1,053m	1,045m	1,116m	1,140m	1,140m	1,246m		

* Distance to outside batter of effluent pond 3

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence only of low and unremarkable vegetation applying the 'Long grass, few trees or crops' factor which is reflective of the natural topographic variation between the site and the receptors.

Table 4-15 – R4A-R4F- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	1.0	1.0	1.0	350	Complies

These receptors are currently located currently approx. 500m from the existing site activities and there are no known complaints that have been received relating to the existing operation.

The proposed operation will reduce the existing separation distance with Pond 3 (effluent storage) being the nearest to these receptors. The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.

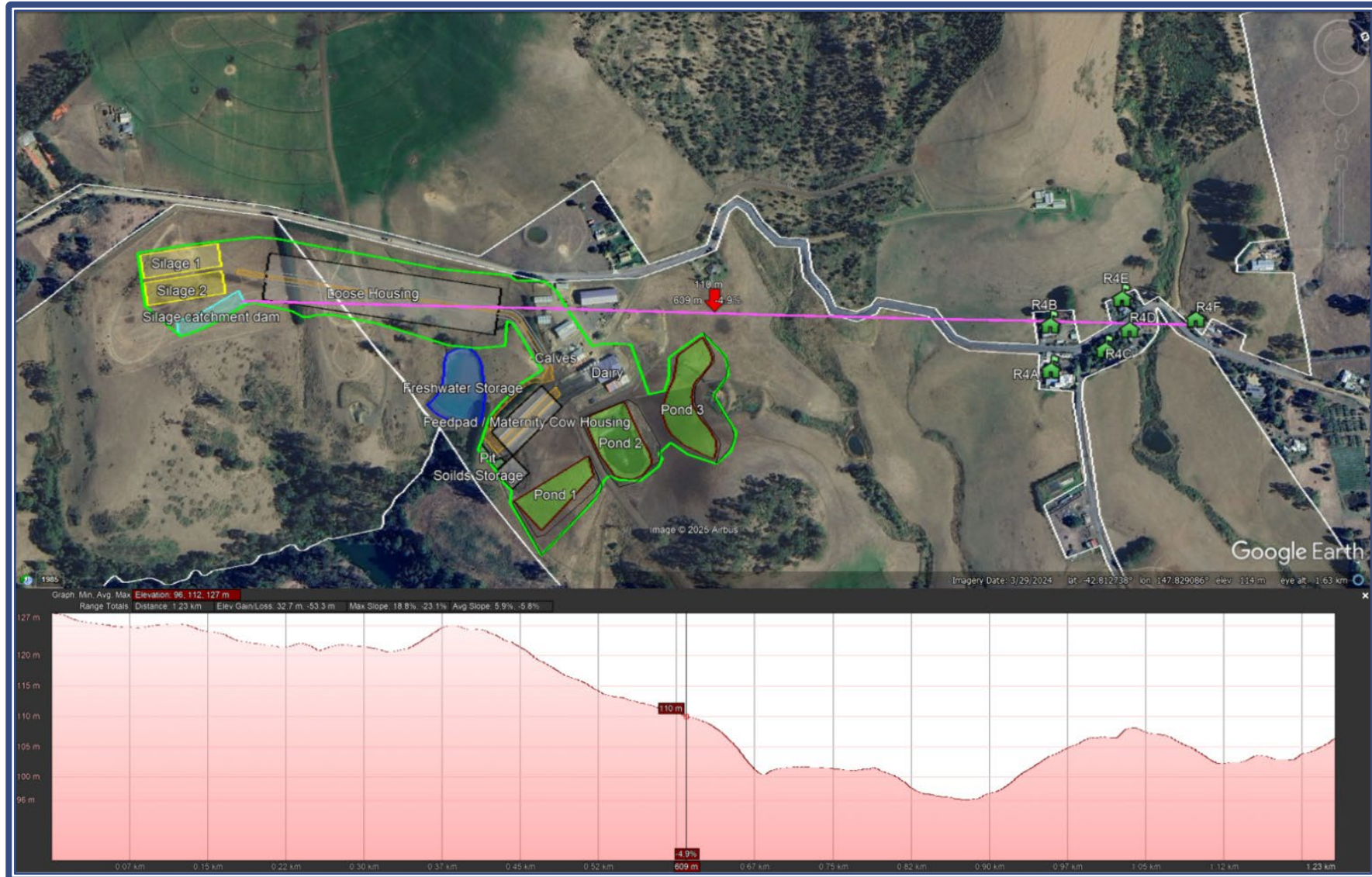


Figure 4-4 - Image showing the R4 receptors in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section, red arrow defines the location on the elevation cross section of the approx. edge of the activity area. The elevation line shows both the complex and the separation distance.

R5 Receptor Group

The following assessment relates to two grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-16 – R5 Receptor group details

Receptor ID	Title ID	Address
R5A	8046/1	201 Bream Ck Rd, Bream Ck
R5B	103574/3	217 Bream Ck Rd, Bream Ck

Table 4-17 – 5A & R5B - Site Conditions

S	Assessment	Result		Comment
		R5A	R5B	
2	Receptor Type	Dwellings		Single dwelling
	Property Zone	Rural (20)		
3	Surface Roughness	Significant hills and valleys		See below image
4	Terrain	All other situations		See below image
Conditions	Direction from activity	North-northeast		Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	0m	94m	
	Distance to activity boundary	665m	835m	
	Distance to nearest housing	945m	1,130m	
	Distance to nearest effluent	700m	865m	
	Distance to nearest commodities	1,294m	1,470m	

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence of notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

Table 4-18 – R5A & R5B- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

These receptors are currently located approx. 800m and 971m from the existing site activities and there are no known complaints that have been received relating to the existing operation.

The proposed operation will reduce the existing separation distance with Pond 3 (effluent storage) being the nearest to these receptors, however remaining separated by significant distance (double the calculated requirement). The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.

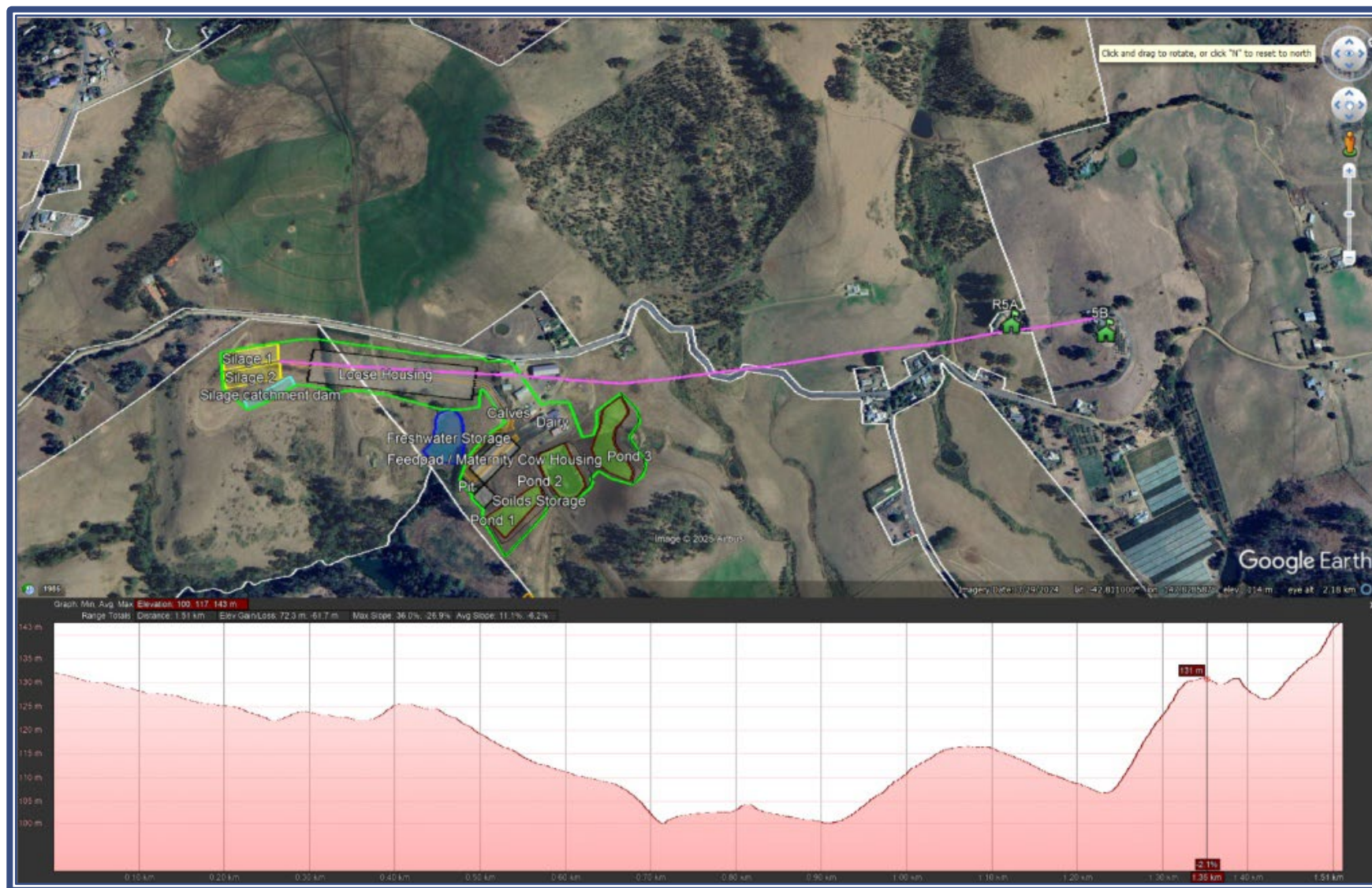


Figure 4-5 - Image showing the R5 receptors in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of R5A receptor. The elevation line shows both the complex and the separation distance to receptors.

R6 Receptor Group

The following assessment relates to six grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-19 – R6 Receptor group details

Receptor ID	Title ID	Address
R6A	107537/1	216 Bream Ck Rd, Bream Ck
R6B	108537/1	218 Bream Ck Rd, Bream Ck
R6C	185807/1	229 Bream Ck Rd, Bream Ck
R6D	202381/1	Cape Bernier' 230 Bream Ck Rd
R6E	202381/1	Cape Bernier' 230 Bream Ck Rd
R6F	202381/1	Cape Bernier' 230 Bream Ck Rd

Table 4-20 – R6 Site Conditions

S	Assessment	R6A	R6B	R6C	R6D	R6E	R6F	Result	Comment
2	Receptor Type	Dwellings							Single dwellings
	Property Zone	Rural (20)							
3	Surface Roughness	Long grass, few trees or crops							See below
4	Terrain	All other situations							See below
Conditions	Direction from activity	Northeast							Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	0m	0m	0m	50m	55m	57m		
	Distance to activity boundary	628m	703m	760m	770m	775m	866m		
	Distance to nearest housing	926m	1,007m	1,063m	1,090m	1,095m	1,195m		
	Distance to nearest effluent	680m	720m	800m	845m	875m	880m		
	Distance to nearest commodities	1,278m	1,325m	1,327m	1,438m	1,443m	1,540m		

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence only of low and unremarkable vegetation applying the 'Long grass, few trees or crops' factor which is reflective of the natural topographic variation between the site and the receptors.

Table 4-21 – R6- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	1.0	1.0	1.0	350	Complies

These receptors are currently located approx. 760m and 970m from the existing site activities with the closest being the existing effluent pond. There are no known complaints that have been received relating to the existing operation.

The proposed operation will reduce the existing separation distance with Pond 3 (effluent storage) being the nearest to these receptors, however remaining separated by significant (nearly double the required) distance. The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.



Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location of the edge of the activity area and the elevation line shows both the complex and the separation distance to all receptors.

R7 –241 Burnt Hut Rd, Bream Creek (Lot 1/138932)

The following assessment relates to the site identified as Receptor R7.

Table 4-22 – R7 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 0.5ha property located within the farming zone.
3	Surface Roughness	Long grass, few trees or crops	No vegetation
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	Northwest	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	400m (pond 3 embankment)	
	Distance to nearest housing	795m (Loose housing)	
	Distance to nearest effluent	415m (Pond 3 surface)	
	Distance to nearest commodities	1,133m	

This assessment has been undertaken on a single isolated dwelling. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwelling, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence only of low and unremarkable vegetation applying the 'Long grass, few trees or crops' factor which is reflective of the natural topographic variation between the site and the receptors.

Table 4-23 – R7 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	1.0	1.0	1.0	350	Complies

This receptor is located approx. 510m from the existing site effluent pond and there are no known complaints that have been received relating to the existing operation. The proposed operation will reduce the existing separation distance to 430m with Pond 3 (effluent storage) being the nearest to this receptor. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.

No consultation has been undertaken with these receptors through this process.

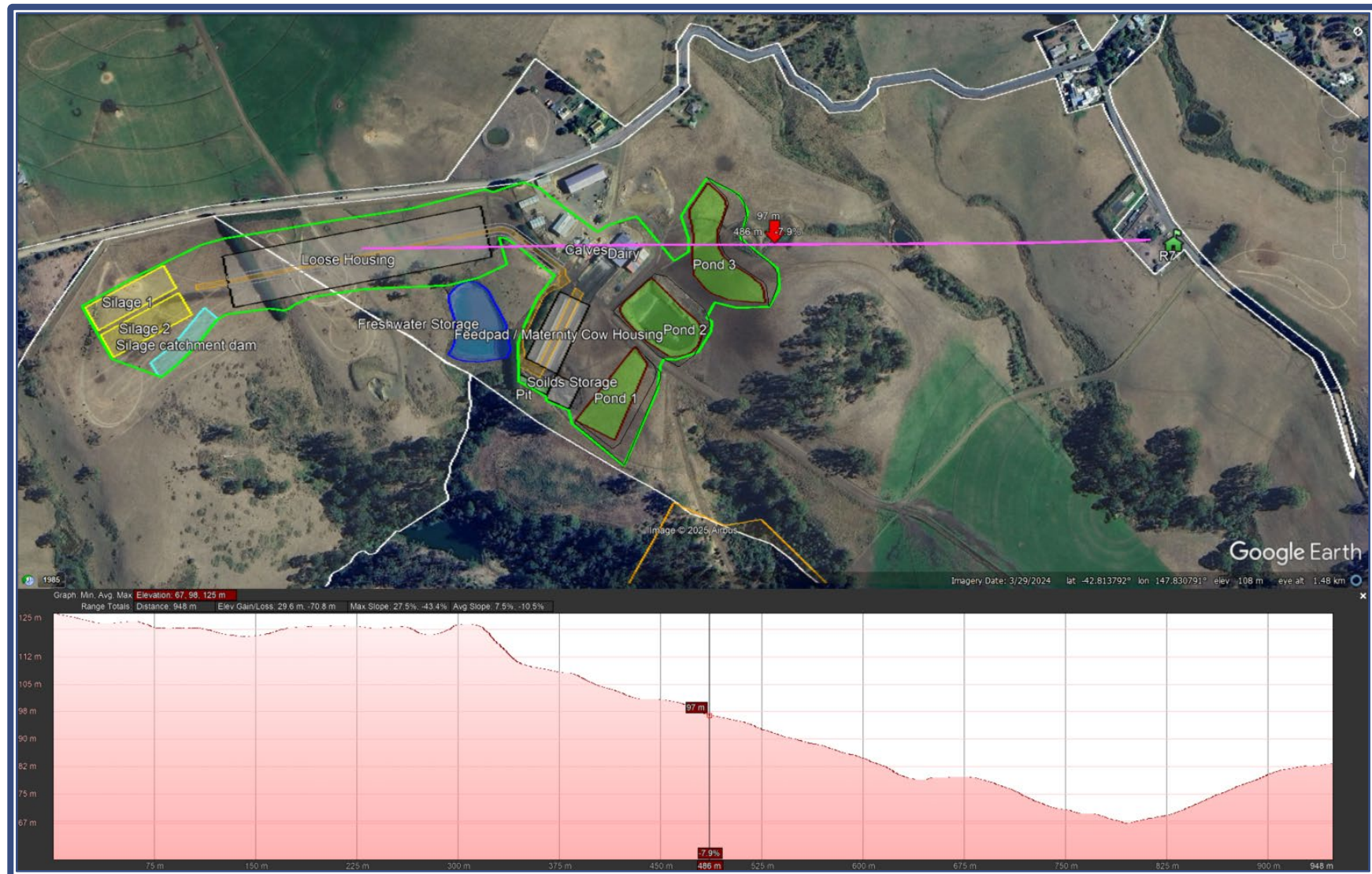


Figure 4-7 - Image showing the R7 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R9 Receptor Group

The following assessment relates to three grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-24 – R9 Receptor group details

Receptor ID	Title ID	Address
R9A	79013/1	110 Burnt Hill Rd Brean Ck
R9B	233248/1	114 Burnt Hill Rd Bream Cr
R9C	116209/1	114 Burnt Hill Rd Bream Cr

Table 4-25 – R9 - Site Conditions

S	Assessment	Result			Comment
		R9A	R9B	R9C	
2	Receptor Type	Dwellings			Single dwelling
	Property Zone	Rural (20)			
3	Surface Roughness	Significant hills and valleys			See below image
4	Terrain	Valley Drainage Zone			See below image
Conditions	Direction from activity	East-northeast			Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	70m	172m	205m	
	Distance to activity boundary	1,468m	1,605m	1,695m	
	Distance to nearest housing	1,730m	1,870m	1,956m	
	Distance to nearest effluent	1,430m	1,605m	1,670m	
	Distance to nearest commodities	1,990m	2,125m	2,205m	

These dwellings have been grouped together as they are located closely and share equal terrain conditions and as a result an equal separation distance. The terrain factor has been determined using elevation and topographic data for the area between the site and the dwellings. The site conditions do not exactly fit any predefined terrain categories accurately however the receptors are located within the valley edge downslope of the receptor. Using a conservative approach, the highest factor has been applied. For surface roughness, the significant hills and valleys factor has been applied as the locale between receptor and the site is separated by significant elevation changes.

Table 4-26 – R9- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	2.0	1.0	476	Complies

These receptors are currently located between approx. 1,470m and 1,695m from the existing site activities and there are no known complaints that have been received relating to the existing operation.

The proposed operation will slightly reduce the existing separation distance with Pond 1 (Solids storage) being the nearest to these receptors, however remaining separated by significant distance. The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.

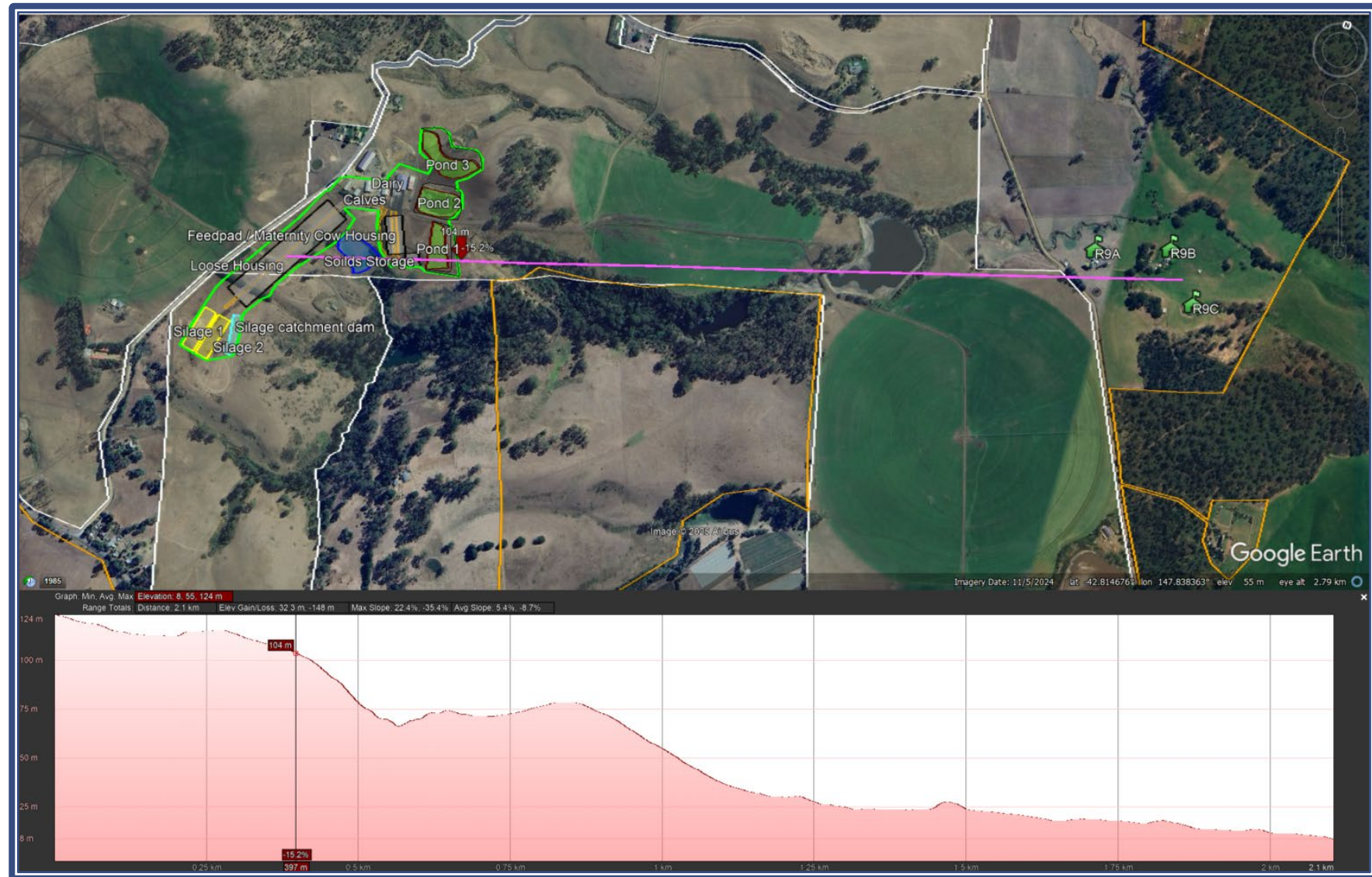


Figure 4-8 - Image showing the R9 receptors in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptors.

R10 –58 Burnt Hut Rd, Bream Creek (Lot 3/158719)

The following assessment relates to the site identified as Receptor R10.

Table 4-27 – R10 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 2.0ha property located within the farming zone.
3	Surface Roughness	Heavily Timbered Country	Dense and varying heights – 200m deep
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	Northwest	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	1,835m (existing)	
	Distance to nearest housing	1,960m (Maternity)	
	Distance to nearest effluent	1,845m (Pond 1)	
	Distance to nearest commodities	2,300m	

This assessment relates to a single isolated dwelling. The terrain factor has been determined using elevation and topographic data for the area between the site and the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. For surface roughness, the value of 'heavily timbered country' has been applied as there is a tall forest with dense timber with a width of over 200m between the receptor and site.

Table 4-28 – R10 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.77	1.0	1.0	270	Complies

The receptor is located approx. 1,885m from the existing site activities and there have been no complaints that have been received relating to the existing operation.

The proposed operation will slightly reduce the existing separation distance with Pond 1 (effluent solids) being the nearest to this receptor. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.

No consultation has been undertaken with this receptor through this process.

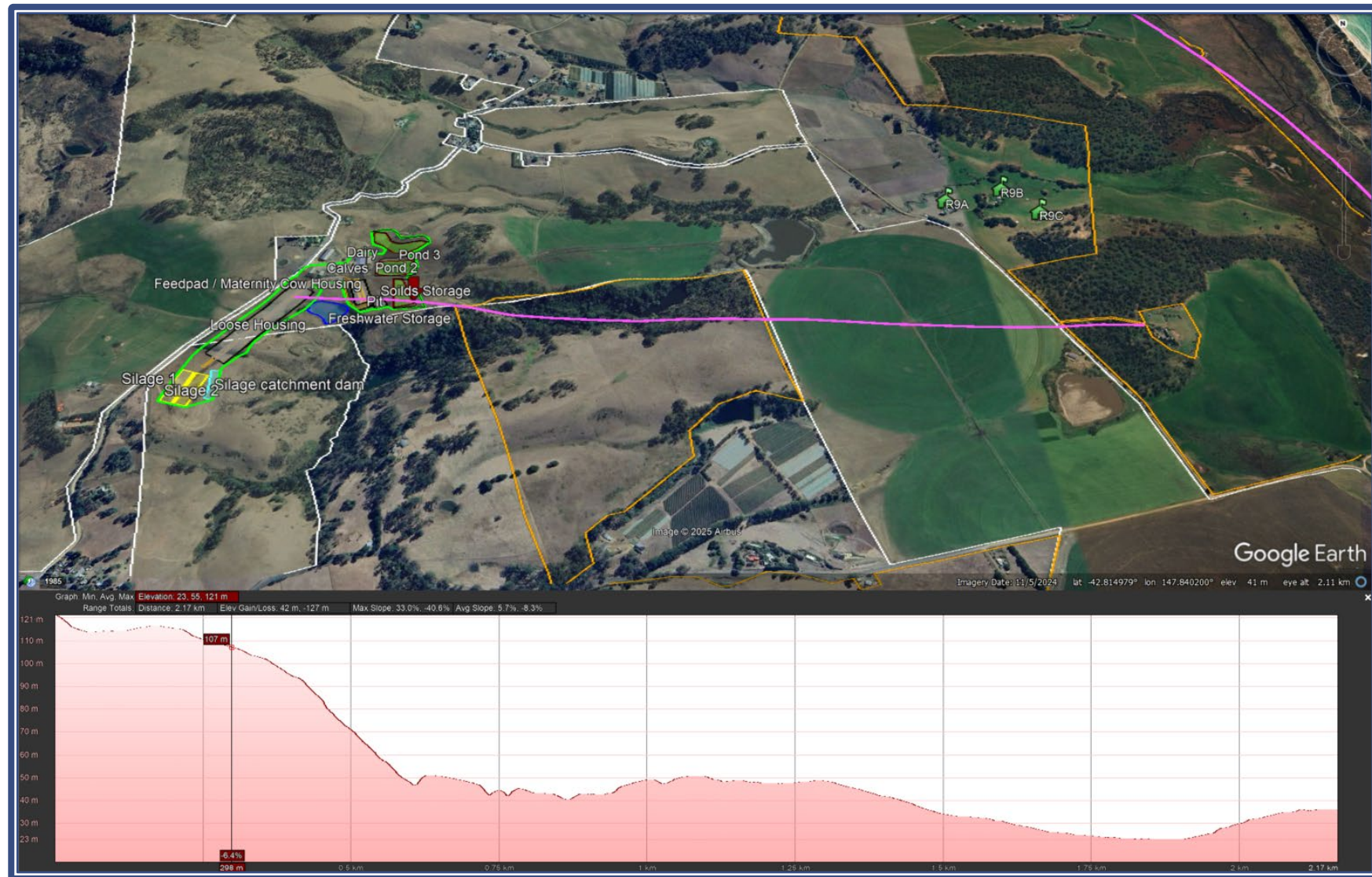


Figure 4-9 - Image showing the R10 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R11 Receptor Group

The following assessment relates to eight grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-29 – R11 Receptor group details

Receptor ID	Title ID	Address
R11A	161908/2	408 Marion Bay Rd, Bream Ck
R11B	226112/1	308 Marion Bay Rd, Bream Ck
R11C, D & E	29655/1	Beachbreaks Marion Bay' 357 Marion Bay Rd Bream Ck
R11F	116335/2	Bream Creek Vineyard 321 Marion Bay Rd, Bream Ck
R11G	11424/3	314 Marion Bay Rd, Bream Ck
R11H	251823/1	312 Marion Bay Rd, Bream Ck
R11I	11424/2	316 Marion Bay Rd, Bream Ck

Table 4-30 – R11A-11D - Site Conditions

S		Assessment	Result				Comment
			R11A	R11B	R11C	R11D&E	
2	Receptor Type	Dwellings					Single dwelling
	Property Zone	Rural (20)					
3	Surface Roughness	Significant hills and valleys					See below image
4	Terrain	All other situations					See below image
Conditions	Direction from activity	East-northeast					Measured using google earth from the edge of property or domestic use area to edge of activity
	Distance to property boundary	0m	0m	102m	95m		
	Distance to activity boundary	1,458m	1,270m	1,160m	1,040m		
	Distance to nearest housing	1,175m	1,536m	1,420m	1,293m		
	Distance to nearest effluent	1,458m	1,270m	1,160m	1,040m		
	Distance to nearest commodities	1,778m	1,537m	1,460m	1,303m		

Table 4-31 – R11E-11I - Site Conditions

S		Assessment		Result				Comment	
		R11F		R11G		R11H		R11I	
2	Receptor Type	Dwellings						Single dwelling	
	Property Zone	Rural (20)							
3	Surface Roughness	Significant hills and valleys						See below image	
4	Terrain	All other situations						See below image	
Conditions	Direction from activity	East-northeast						Measured using google earth from the edge of property to edge of activity	
	Distance to property boundary	0m	107m	0m	20m				
	Distance to activity boundary	831m	1,084m	1,092m	955m				
	Distance to nearest housing	1,000m	1,234m	1,223m	1,048m				
	Distance to nearest effluent	831m	1,084m	1,092m	955m				
	Distance to nearest commodities	1,010m	1,205m	1,180m	1,007m				

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate option in the absence of a more specific classification. The surface roughness factor has been determined based on the presence of notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

Table 4-32 – R11- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

These receptors are currently located between approx. 870m and 1,545m from the existing site activities and there are no known complaints that have been received relating to the existing operation.

The proposed operation will slightly reduce the existing separation distance with the silage storage area being the nearest to these receptors, however remaining separated by significant distance. The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.

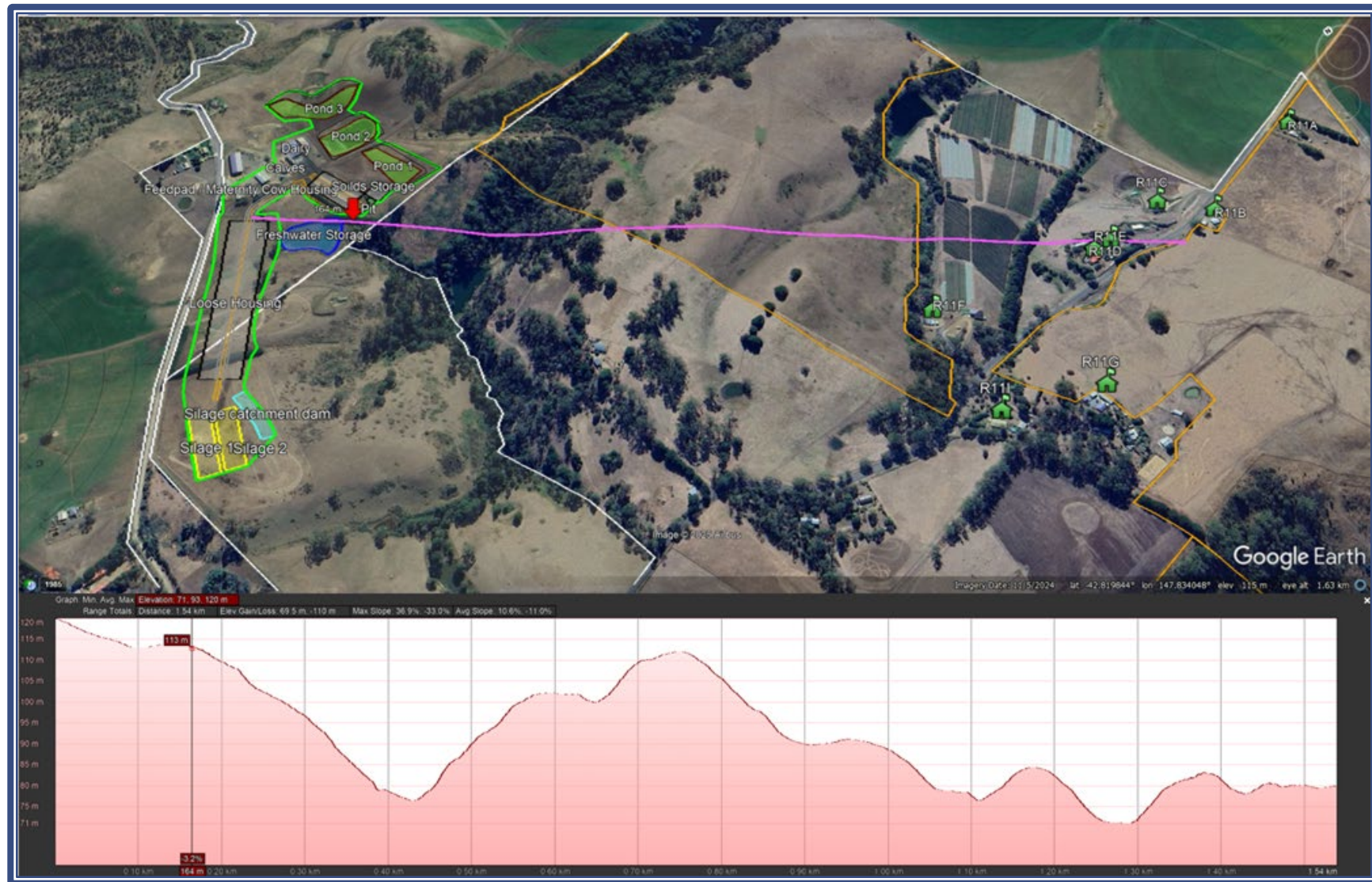


Figure 4-10 - Image showing the R11 receptor group in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptors.

R12 –Wattle Farm 279 Marion Bay Rd, Bream Creek (Lot 1/210894)

The following assessment relates to the site identified as Receptor R12.

Table 4-33 – R12 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 6.0ha property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant valley
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	Southeast	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	165m	
	Distance to activity boundary	440m (existing)	
	Distance to nearest housing	475m (Maternity)	
	Distance to nearest effluent	455m (Pit & Pond 1)	
	Distance to nearest commodities	455m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

Table 4-34 – R12 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

The receptor is located approx. 455m from the existing site activities being the feedpad, yard and effluent pit. There have been no recent complaints received relating to the existing operation.

The proposed operation separation distance will remain unchanged to the existing separation distance with the pit (existing), Pond 1 (effluent solids) and silage area being the nearest to this receptor. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.

No consultation has been undertaken with these receptors through this process.

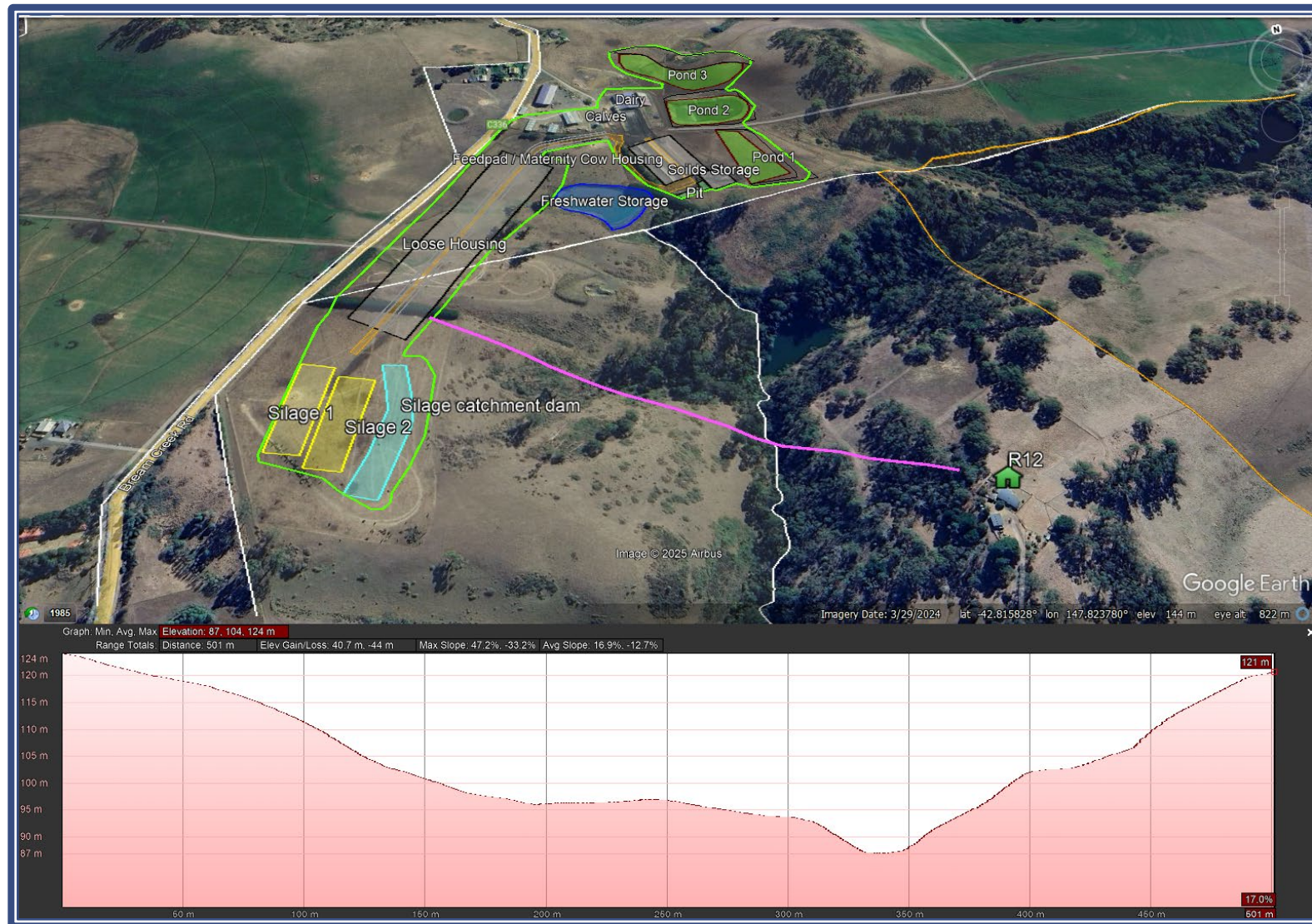


Figure 4-11 - Image showing the R12 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R13 –298 Marion Bay Rd, Bream Creek (Lot 1/11424)

The following assessment relates to the site identified as Receptor R13.

Table 4-35 – R13 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 1.0ha property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant valley
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	South east	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	200m	
	Distance to activity boundary	780m (silage)	
	Distance to nearest housing	880m (loose housing)	
	Distance to nearest effluent	885m (Pit & Pond 1)	
	Distance to nearest commodities	825m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptors

Table 4-36 – R13 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

The receptor is located approx. 887m from the existing site activities and there are no known complaints that have been received relating to the existing operation.

The proposed operation will reduce the existing separation distance with the silage area catchment pond being the nearest to this receptor (825m), followed by the loose housing facility at 880m – this being only 8m closer than the existing activities at the site. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.

No consultation has been undertaken with this receptor through this process.

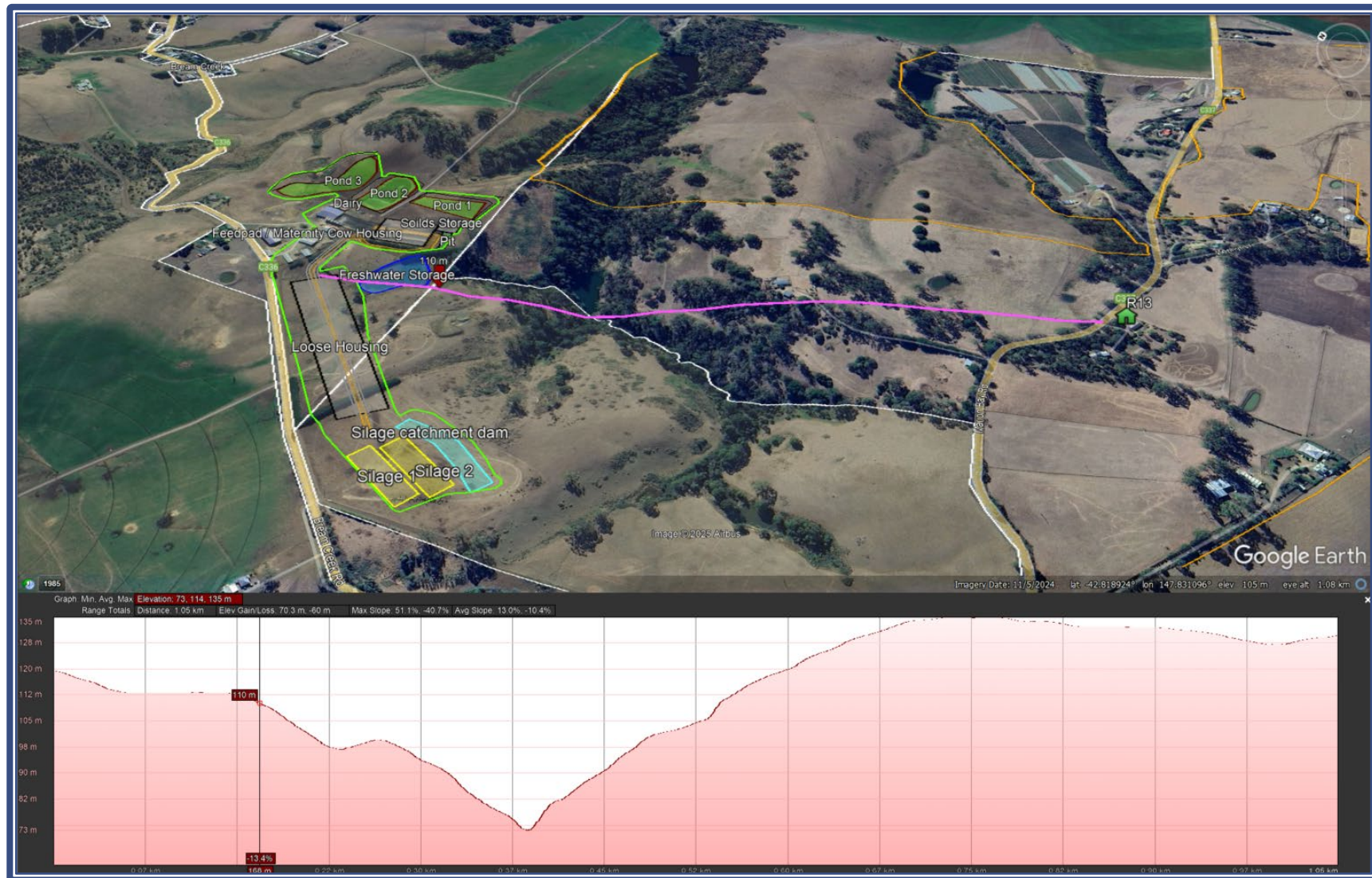


Figure 4-12 - Image showing the R13 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R14 –Tara Hills. 238 Marion Bay Rd, Bream Creek (Lot 2/33268)

The following assessment relates to the site identified as Receptor R14. There are two dwellings located on the property.

Table 4-37 – R14 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 17ha property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant valley
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	South-southeast	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	220m	
	Distance to activity boundary	722m (silage)	
	Distance to nearest housing	880m (loose housing)	
	Distance to nearest effluent	985m (Pit & Pond 1)	
	Distance to nearest commodities	770m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptors

Table 4-38 – R14 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	252 (238)	Complies

The receptor considering the closest dwelling and domestic area is located approx. 995m from the existing site activities and there are no known complaints that have been received relating to the existing operation.

The proposed operation will reduce the existing separation distance with the silage water catchment area being the nearest to this receptor (770m), followed by the loose housing facility at 880m – this being 115m closer than the existing activities at the site. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.

No consultation has been undertaken with this receptor through this process.



Figure 4-13 - Image showing the R14 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R15 – Ocean View 212 Marion Bay Rd, Bream Ck Lot (Lot 1/147764)

The following assessment relates to the site identified as Receptor R15.

Table 4-39 – R15 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 17ha property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant valley
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	South	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	300m	
	Distance to activity boundary	800m (silage)	
	Distance to nearest housing	980m (loose housing)	
	Distance to nearest effluent	1,235m (Pit & Pond 1)	
	Distance to nearest commodities	830m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptor.

Table 4-40 – R15 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

The receptor is located approx. 1,230m from the existing site activities (sump and trafficable solids trap) and there are no known complaints that have been received relating to the existing operation.

The proposed operation will reduce the existing separation distance with the silage catchment dam being the nearest to this receptor (830m), followed by the loose housing facility at 980m. The dwelling is located outside of the calculated separation distance measured between the domestic area of the property and the surface area of the pond.

No consultation has been undertaken with these receptors through this process.



Figure 4-14 - Image showing the R15 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R16 Receptor Group

The following assessment relates to three grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-41 – R16 Receptor group details

Receptor ID	Title ID	Address
R16A	44268/1	215 Marion Bay Rd, Bream Ck
R16B	159970/1	211 Marion Bay Rd, Bream Ck
R16C	240667/1	Marion Lodge 207 Marion Bay Rd, Bream Ck

Table 4-42 – R16 - Site Conditions

S	Assessment	R16A	Result R16B	R16C	Comment
2	Receptor Type	Dwellings			Single dwelling
	Property Zone	Rural (20)			0.4-1.0ha properties
3	Surface Roughness	Significant hills and valleys			See below image
4	Terrain	All other situations			See below image
Conditions	Direction from activity	South			Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	0m	0m	130m	
	Distance to activity boundary	370m	402m	370m	
	Distance to nearest housing	620m	580m	550m	
	Distance to nearest effluent	860m	835m	840m	
	Distance to nearest commodities	465m	420m	400m	

These dwellings have been grouped together as they are located closely and share equal terrain conditions and as a result an equal separation distance. The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

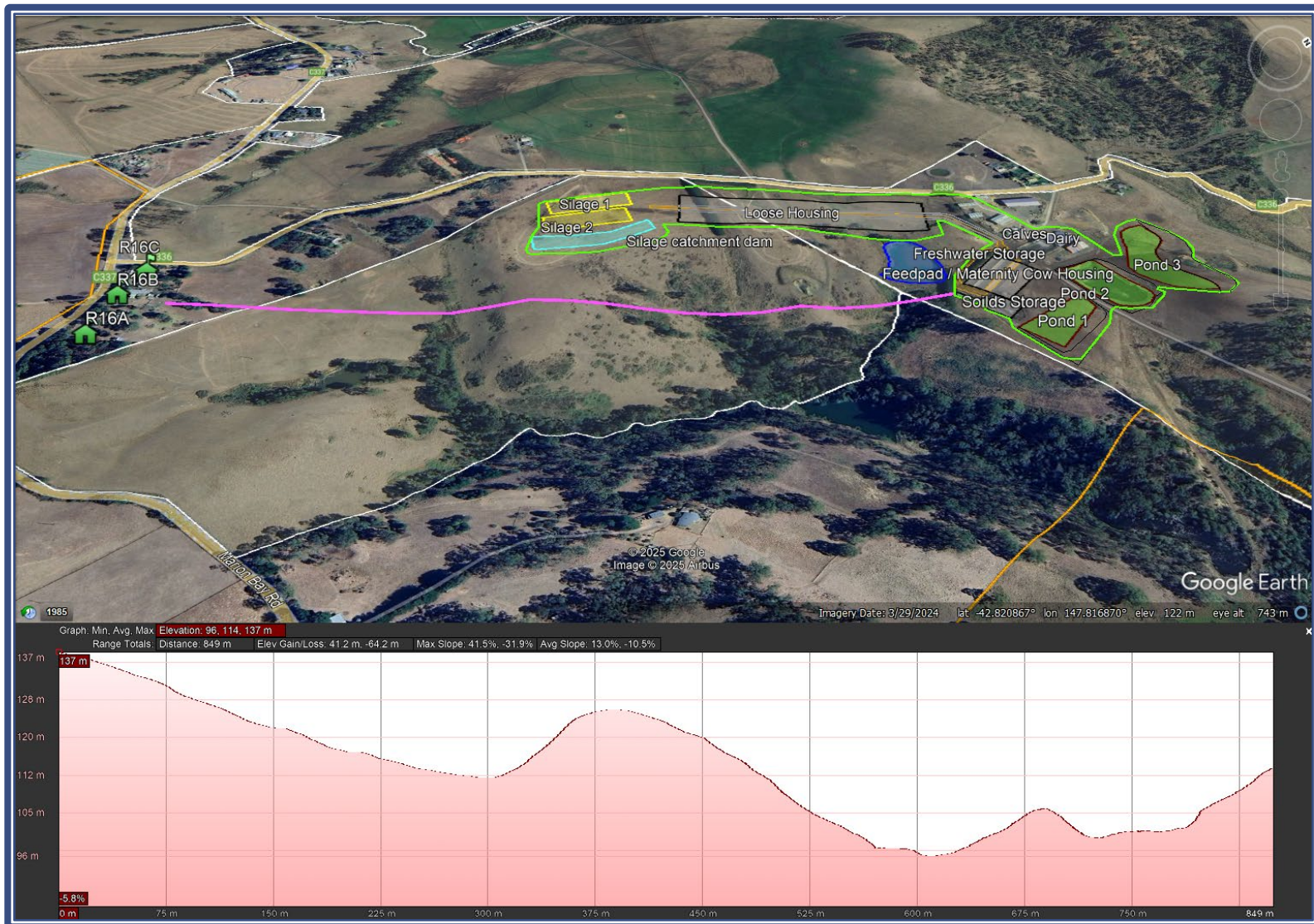
Table 4-43 – R16- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

These receptors are currently located between approx. 805m and 850m from the existing main site activities and 340m from the existing silage activities. There are no known complaints that have been received relating to the existing operation from these dwellings.

The proposed operation will increase the existing separation distance with the silage area but will reduce the distance between other activities on the site with the loose housing shed area being the nearest to these receptors after the silage. The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.



R17 – 20 Bream Creak Road, Bream Ck Lot (Lot 1/147764)

The following assessment relates to the site identified as Receptor R17.

Table 4-44 – R17 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 4.5ha lifestyle property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant valley
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	South-southwest	Measured from the property boundary or domestic occupation area at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	210m (silage)	
	Distance to nearest housing	377m (loose housing)	
	Distance to nearest effluent	687m (Pit & Pond 1)	
	Distance to nearest commodities	225m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptors

Table 4-45 – R17 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Increased distance to existing operation

The receptor is located approx. 690m from the existing site activities and 160m from the existing silage area. There are no known complaints that have been received relating to the existing operation from this dwelling.

The proposed operation will increase the existing separation distance by 65m to 225m with the silage area being the nearest to this receptor, however, will decrease the distance between activities with the new loose housing facility to be 377m at its closest point. The dwelling is located within the calculated separation distance measured between the domestic area of the property and the proposed activity areas within the complex however is impacted by the proposed silage storage area at an increased distance.

No consultation has been undertaken with these receptors through this process.

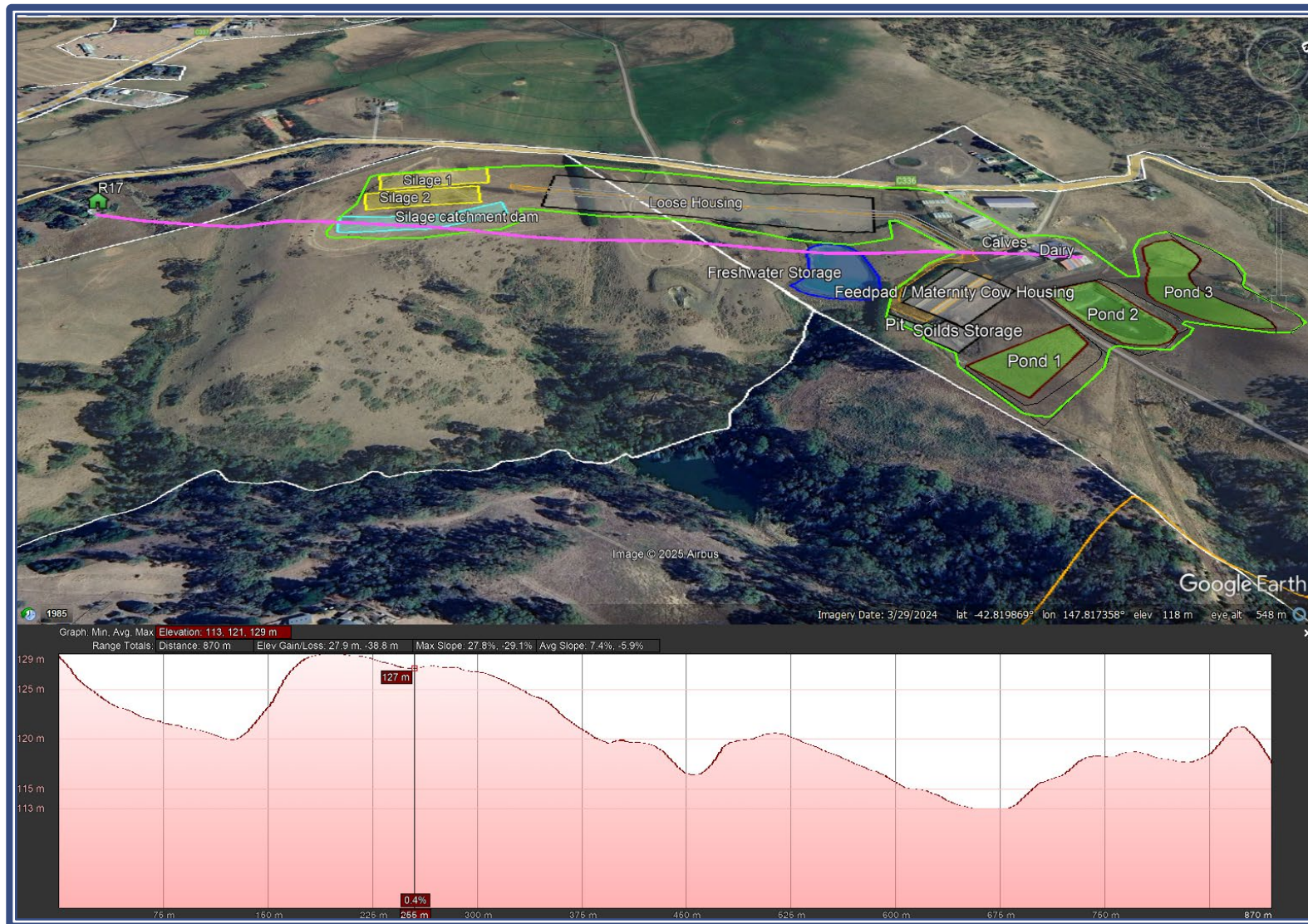


Figure 4-16 - Image showing the R17 receptor in relation to the site (Source: Google Earth)

Note: orientation of image has been altered to align with elevation cross section, red arrow defines the location on the elevation cross section of the edge of the activity area.

R19 Receptor Group

The following assessment relates to two grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-46 – R19 Receptor group details

Receptor ID	Title ID	Address
R19A (Owned)	241387/1	12 Townsend Lane, Copping
R19B	50655/1	6 Townsend Lane, Copping

Table 4-47 – R19 - Site Conditions

Table 4-47: R19 – Site Conditions				
S	Assessment	Result		Comment
		R19A	R19B	
2	Receptor Type	Dwellings		Single dwelling
	Property Zone	Rural (20)		
3	Surface Roughness	Significant hills and valleys		See below image
4	Terrain	All other situations		See below image
Conditions	Direction from activity	Southwest		Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	0m	0m	
	Distance to activity boundary	605m	520m	
	Distance to nearest housing	775m	680m	
	Distance to nearest effluent	1,100m	1,020m	
	Distance to nearest commodities	605m	520m	

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence of notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

Table 4-48 – R19- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

These receptor 19B is currently located approx. 1,020m from the existing site activities and 340m from the existing silage activities. There are no known complaints that have been received relating to the existing operation from these dwellings.

The proposed operation will increase the separation distance from silage activities but will decrease the other general site activity separation distance to 680m with the loose housing shed being the nearest to this receptor. The dwellings are located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.

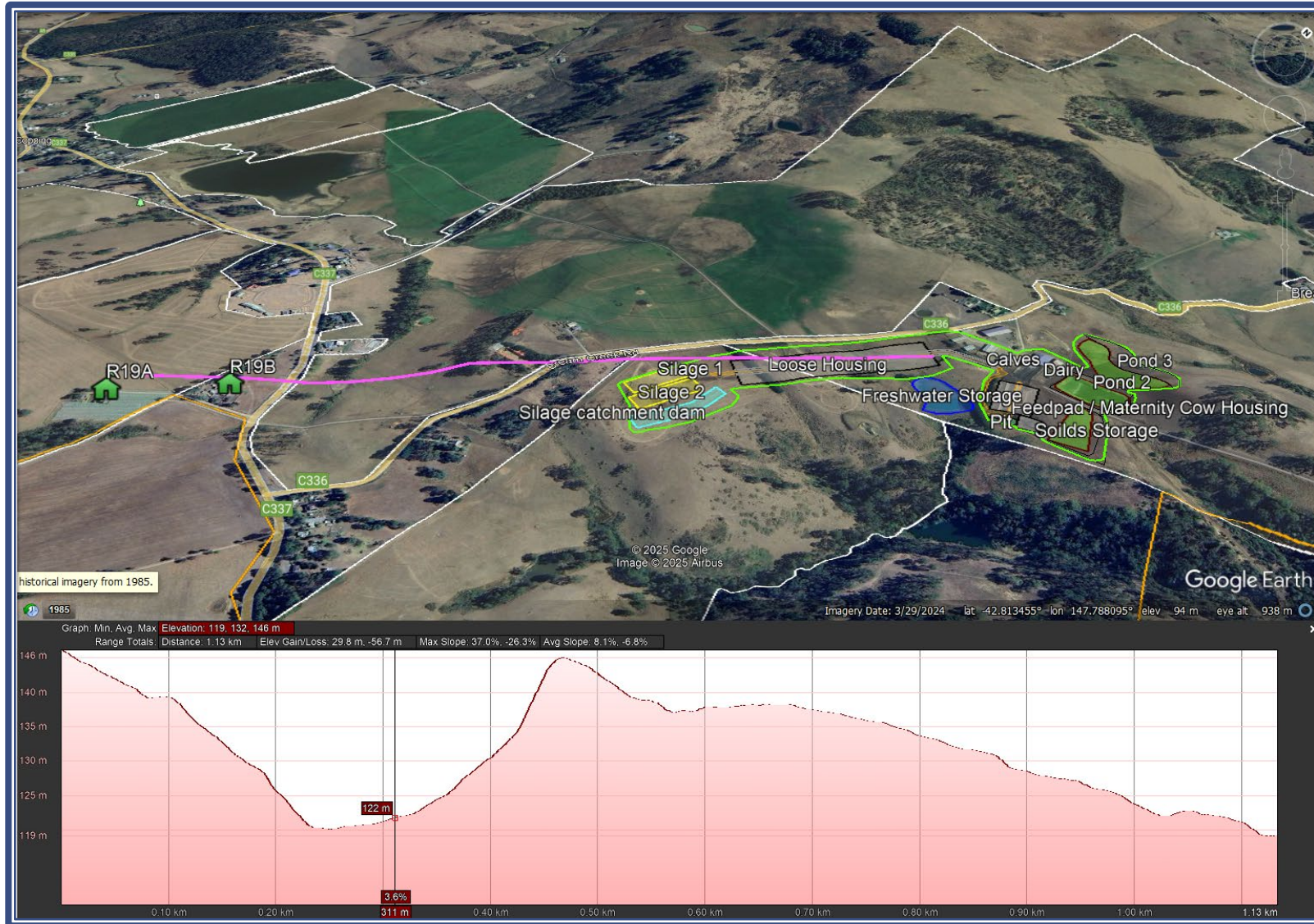


Figure 4-17 - Image showing the R19 receptors in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R20 Receptor Group

The following assessment relates to two grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-49 – R20 Receptor group details

Receptor ID	Title ID	Address
R20A	12389/1	159 Marion Bay Rd Copping
R20B	29967/2	153 Marion Bay Rd Copping

Table 4-50 – R20 - Site Conditions

S	Assessment	Result		Comment
		R20A	R20B	
2	Receptor Type	Dwellings		Single dwelling
	Property Zone	Rural (20)		0.3-0.4ha properties
3	Surface Roughness	Significant hills and valleys		See below image
4	Terrain	All other situations		See below image
Conditions	Direction from activity	Southwest		Measured using google earth from the edge of property to edge of activity
	Distance to property boundary	0m	0m	
	Distance to activity boundary	400m	470m	
	Distance to nearest housing	535m	595m	
	Distance to nearest effluent	894m	958m	
	Distance to nearest commodities	390m	465m	

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence of notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

Table 4-51 – R20- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

These receptors are currently located approx. 895m and 960m from the existing site activities and 185m and 260m from the existing silage activities. There are no known complaints that have been received relating to the existing operation from these Dwellings.

The proposed operation will increase the separation distance with silage activities but will decrease the other general site activity separation distance with the loose housing facility being the nearest to these receptors. The dwellings are all located outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.



Figure 4-18 - Image showing the R20 receptors in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R21 Receptor Group

The following assessment relates to six grouped dwellings that have aligned site factor conditions between the dwelling and the activity area.

Table 4-52 – R21 Receptor group details

Receptor ID	Title ID	Address
R21A	28433/1	133 Marion Bay Rd, Copping
R21B	124238/1	Derford 131 Marion Bay Rd, Copping
R21C	46568/1	127 Marion Bay Rd, Coppin
R21D	211885/1	130 Marion Bay Rd, Copping
R21E	239739/1	117 Marion Bay Rd, Copping
R21F	14886/1	Dragonhold 122 Marion Bay Rd, Copping

Table 4-53 – R21 Site Conditions

S	Assessment	Result						Comment
		R21A	R21B	R21C	R21D	R21E	R21F	
2	Receptor Type	Dwellings						Single dwellings
	Property Zone	Rural (20)						small blocks
3	Surface Roughness	Significant hills and valleys						See below
4	Terrain	All other situations						See below
Conditions	Direction from activity	West - southwest						Measured using google earth from the edge of property or domestic use area to edge of activity
	Distance to property boundary	0m	40m	50m	75m	77m	138m	
	Distance to activity boundary	637m	663m	655m	690m	700m	760m	
	Distance to nearest housing	730m	750m	745m	790m	780m	855m	
	Distance to nearest effluent	1,086m	1,110m	1,105m	1,150m	1,130m	1,210m	
	Distance to nearest commodities	635m	660m	655m	645m	695m	755m	

These dwellings have been grouped together due to their close proximity and shared terrain characteristics, resulting in the application of a common separation distance. The terrain factor has been selected based on the elevation and topographic profile between the site and the dwellings, with the 'All Other Situations' category applied as the most appropriate factor in the absence of a more specific classification. The surface roughness factor has been determined based on the presence of notable hills and valleys, reflecting the natural topographic variation between the site and the receptors.

Table 4-54 – R21- Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

These receptors are currently located between 1,080m and 1,200m from the existing site activities and 430m and 550m from the existing silage activities. There are no known complaints that have been received relating to the existing operation from these Dwellings.

The proposed operation will increase the separation distance between silage activities but will decrease the general site activity separation distance with the loose housing facility being the nearest activity to these receptors. The dwellings are all located well outside of the calculated separation distance measured between the receptor property boundary or domestic area boundary and the closest edge of the activity boundary.

No consultation has been undertaken with these receptors through this process.

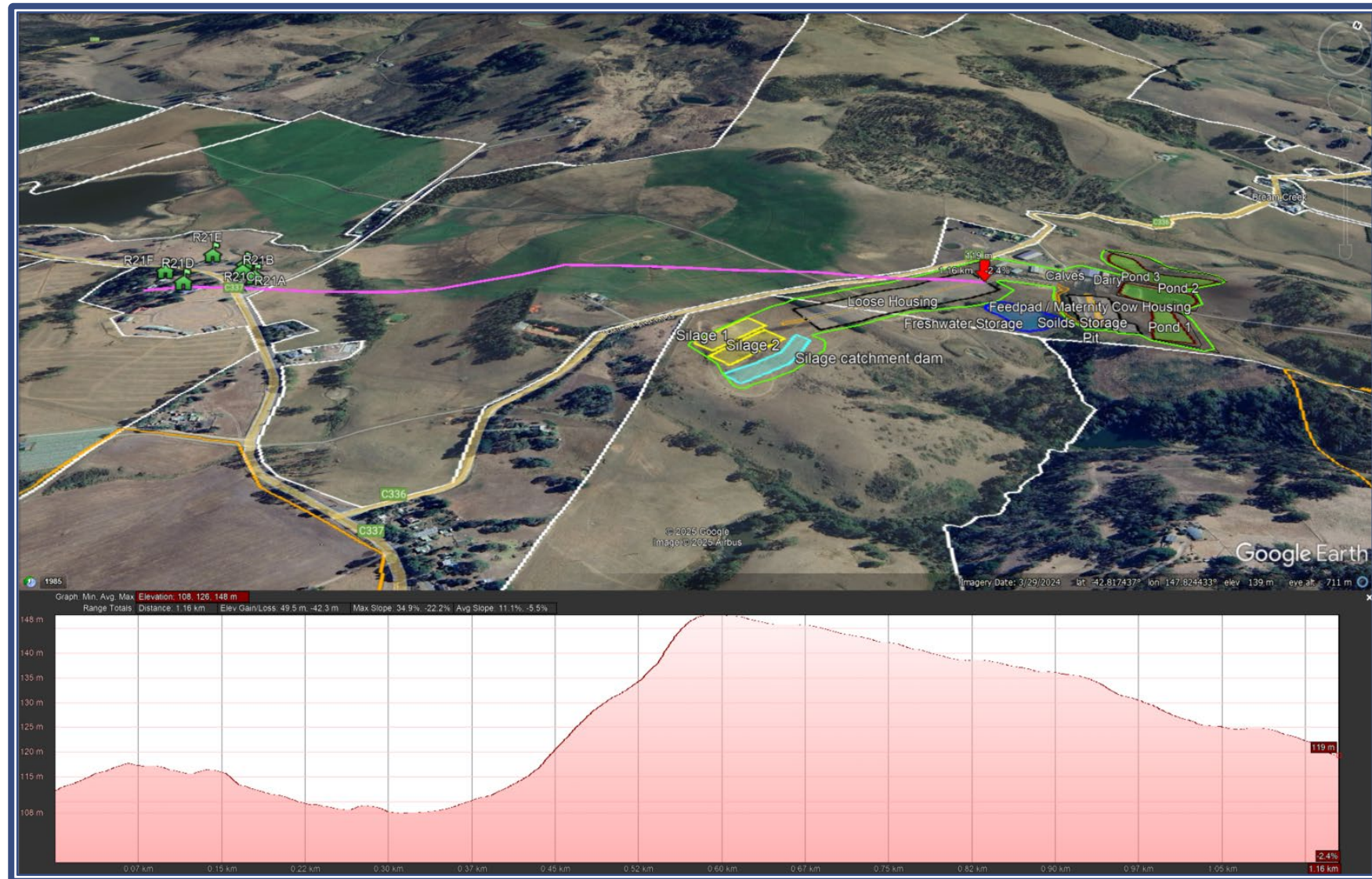


Figure 4-19 - Image showing the R21 receptors in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R22 – 39 Browns Rd, Copping (Lot 1/25045)

The following assessment relates to the site identified as Receptor R22.

Table 4-55 – R22 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 0.4ha lifestyle property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant hill
4	Terrain	All other situations	Large hill between receptor and site
Conditions	Direction from activity	West southwest	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	745m (loose housing)	
	Distance to nearest housing	770m (loose housing)	
	Distance to nearest effluent	1,080m (Pit & Pond 1)	
	Distance to nearest commodities	760m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptor.

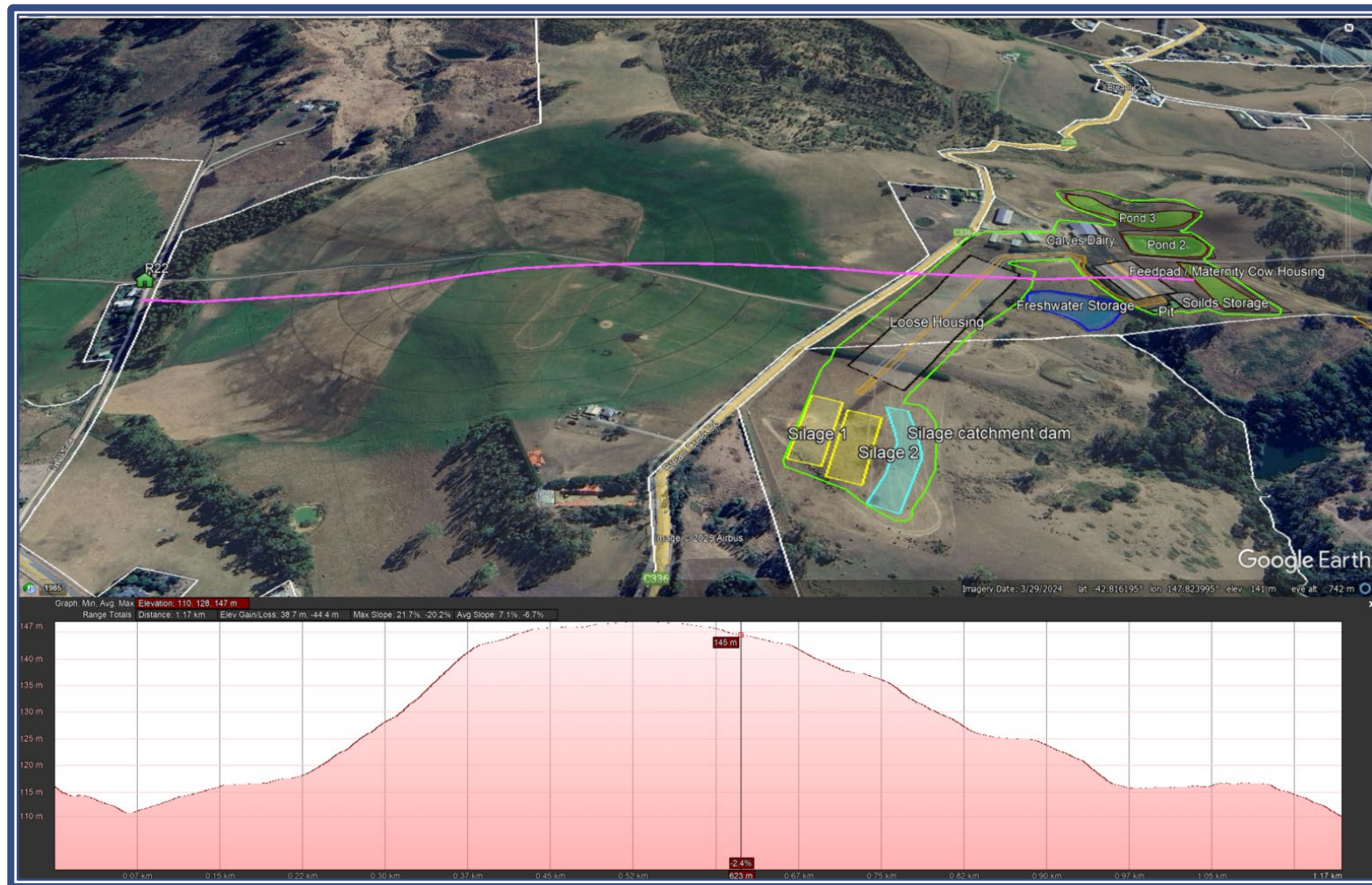
Table 4-56 – R22 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

The receptor is located approx. 1055m from the existing site activities (feedpad) and 622m from the existing silage area. There are no known complaints that have been received relating to the existing operation from this dwelling.

The proposed operation will increase the separation distance between silage activities but will decrease the general site activity separation distance with the loose housing facility being the nearest activity to these receptors. This dwelling is located well outside of the calculated separation distance measured between the receptor property boundary and the closest edge of the activity boundary.

No consultation has been undertaken with this receptor through this process.



Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

R23 – 70 Browns Rd, Copping (Lot 1/100657)

The following assessment relates to the site identified as Receptor R23.

Table 4-57 – R23 Site Conditions

S	Assessment	Result	Comment
2	Receptor Type	Farm dwelling	Single dwelling located within the Rural Zone
	Property Zone	Rural	Approx 1.15ha lifestyle property located within the farming zone.
3	Surface Roughness	Significant hills and valleys	Significant hill
4	Terrain	All other situations	Applied factor of flat however receptor is slightly elevated to site.
Conditions	Direction from activity	South-southwest	Measured from the property boundary at the nearest point to the complex using Google Earth.
	Distance to property boundary	0m	
	Distance to activity boundary	850m (loose housing)	
	Distance to nearest housing	895m (loose housing)	
	Distance to nearest effluent	1,045m (Pond 2)	
	Distance to nearest commodities	895m	

The terrain factor has been determined using elevation and topographic data for the area between the several points on the site and the property boundary of the dwelling. As none of the predefined terrain categories accurately reflect the site conditions, the default category of 'All other situations' has been applied. The surface roughness factor has been determined based on the presence of the notable hills and valleys, reflecting the natural topographic variation between the site and the receptor.

Table 4-58 – R23 Separation distance calculation and results

Assessment Tool	# cows	Converted	S1	S2	S3	S4	S5	Distance (m)	Result
Multi-species assessment tool	1,000	$X 1.059 = 1,059/9 = 117.7$	0.91	20	0.68	1.0	1.0	250 (238)	Complies

The receptor is located approx. 995m from the existing site activities (dairy) and 855m from the existing silage area. There are no known complaints that have been received relating to the existing operation from this dwelling.

The proposed operation will increase the separation distance between silage activities but will decrease the general site activity separation distance with the loose housing facility being the nearest activity to these receptors. This dwelling is located well outside of the calculated separation distance measured between the receptor property boundary and the closest edge of the activity boundary.

No consultation has been undertaken with this receptor through this process.

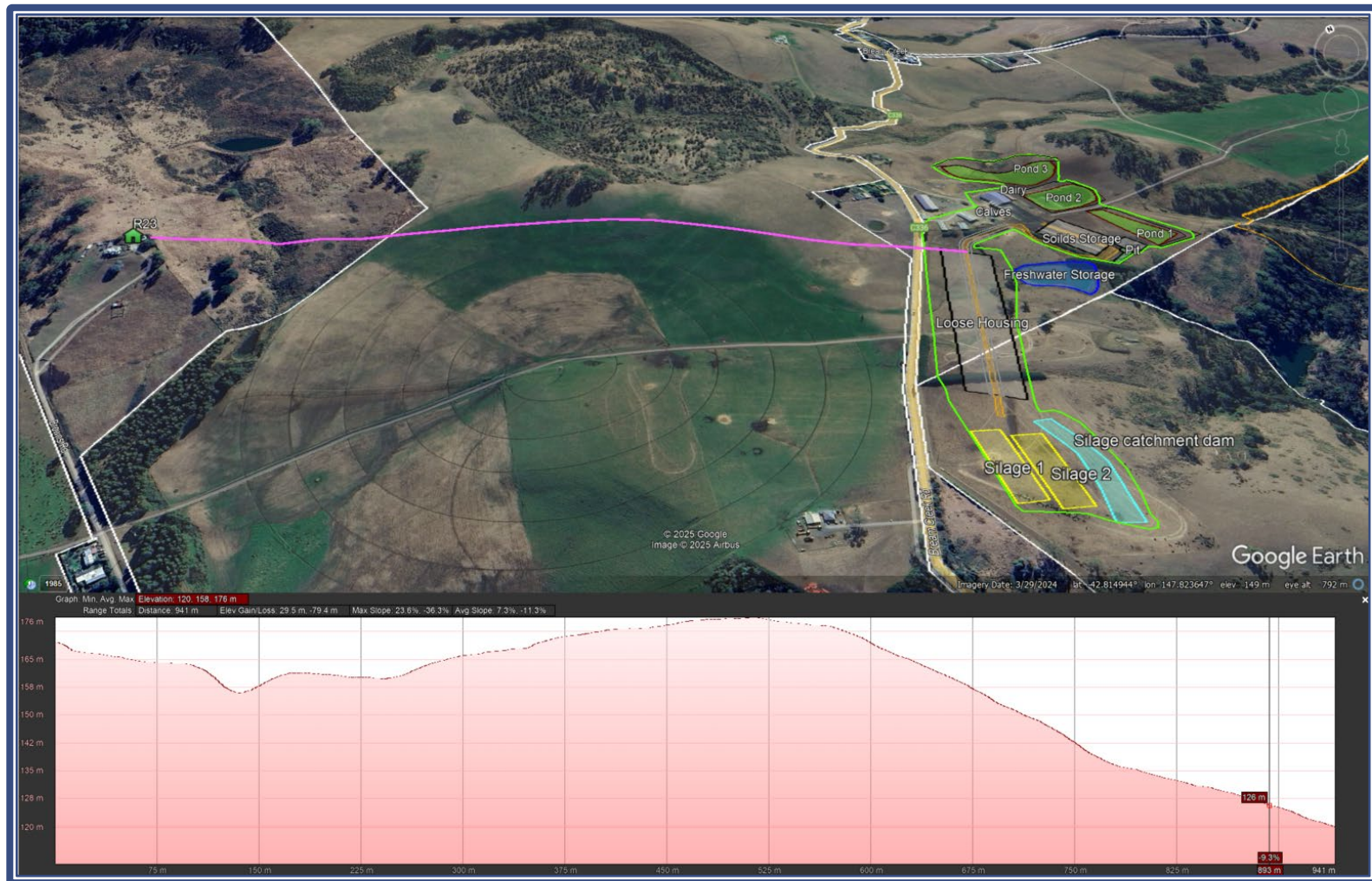


Figure 4-21 - Image showing the R23 receptor in relation to the site (Source: Google Earth)

Note: Orientation of image has been altered to align with elevation cross section. Red arrow defines the location on the elevation cross section of the approx. location of the edge of the activity area. The elevation line shows both the complex and the separation distance to receptor.

4.3. SUMMARY

The following table summarises the receptors addressed, the existing separation distance and the revised separation distance as a result of the proposed development.

Table 4-59 - Summary of receptor distances and calculations

Receptor	Existing Distance	Closest activity	Proposed distance	Closest activity	Calculated separation distance	Complies?
Copping	1,400	Silage	1,580		476 (500)	Yes
Marion Bay	2,360	Pond 1	2,310		476 (500)	Yes
R1	110 122	Dairy Pond 2	130	Pond 3	350	Alternate
R2	Owned					
R3	Owned					
R4A	505	Dairy	415	Pond 3	350	Yes
R4B	525	Dairy	430	Pond 3	350	Yes
R4C	575	Dairy	480	Pond 3	350	Yes
R4D	615	Dairy	525	Pond 3	350	Yes
R4E	620	Dairy	530	Pond 3	350	Yes
R4F	715	Dairy	625	Pond 3	350	Yes
R5A	790	Dairy	700	Pond 3	238 (250)	Yes
R5B	960	Dairy	865	Pond 3	238 (250)	Yes
R6A	770	Pond	680	Pond 3	350	Yes
R6B	815	Pond	720	Pond 3	350	Yes
R6C	890	Pond	800	Pond 3	350	Yes
R6D	930	Pond	845	Pond 3	350	Yes
D6E	965	Pond	875	Pond 3	350	Yes
R6F	970	Pond	880	Pond 3	350	Yes
R7	500	Pond	415	Pond 3	350	Yes
R8	Owned					
R9A	1470	Pond	1430	Pond 2	476	Yes
R9B	1600	Pond	1605	Pond 2	476	Yes
R9C	1695	Pond	1670	Pond 2	476	Yes
R10	1885	Pond	1845	Pond 1	270	Yes
R11A	1545	Solids Storage	1458	Pond 1	238 (250)	Yes
R11B	1340	Solids Storage	1,270	Pond 1	238 (250)	Yes
R11C	1220	Solids Storage	1160	Pond 1	238 (250)	Yes
R11D & E	1105	Solids Storage	1040	Pond 1	238 (250)	Yes
R11F	870	Solids Storage	831	Pond 1	238 (250)	Yes
R11G	1130	Solids Storage	1084	Pond 1	238 (250)	Yes
R11H	1190	Solids Storage	1092	Pond 1	238 (250)	Yes
R11I	995	Solids Storage	955	Pond 1	238 (250)	Yes
R12	455	Solids Storage	455	Pit/Pond 1 Commodities	238 (250)	Yes
R13	887	Solids Storage	840	Commodities storage Pond	238 (250)	Yes
R14	995	Solids Storage	770	Commodities storage Pond	238 (250)	Yes
R15	1230	TSS	830	Commodities storage Pond	238 (250)	Yes
R16A	830	TSS	465	Commodities storage Pond	238 (250)	Yes
R16B	850	TSS	420	Commodities storage Pond	238 (250)	Yes

Receptor	Existing Distance	Closest activity	Proposed distance	Closest activity	Calculated separation distance	Complies?
R16C	805	TSS	400	Commodities storage Pond	238 (250)	Yes
R17	160 690	Silage TSS	225	Commodities storage pond	238 (250)	Existing distance reduced
R18	Owned					
R19A	Owned					
R19B	340 1020	Silage TSS	520	Silage Stack	238 (250)	Yes
R20A	185 895	Silage TSS	390	Silage Stack	238 (250)	Yes
R20B	260 960	Silage TSS	465	Silage Stack	238 (250)	Yes
R21A	430 1080	Silage TSS	635	Silage Stack	238 (250)	Yes
R21B	460 1110	Silage TSS	660	Silage Stack	238 (250)	Yes
R21C	485 1130	Silage TSS	655	Silage Stack	238 (250)	Yes
R21D	440 1142	Silage TSS	645	Silage Stack	238 (250)	Yes
R21E	500 1130	Silage TSS	695	Silage Stack	238 (250)	Yes
R21F	552 1200	Silage TSS	755	Silage Stack	238 (250)	Yes
R22	1055	Feedpad	760	Loose Housing	238 (250)	Yes
R23	995	TSS	895	Silage Stack	238 (250)	Yes

The above table demonstrates the existing distance of receptors from the site activities and the proposed distance with most receptors experiencing some minor decrease from activities and others increasing distance from some activities such as silage and decreasing from activities such as cow occupation areas. All receptors except two are located outside of the calculated separation distance for the proposed operation and on the basis that the operation is managed in accordance with the assumptions used in this assessment, are unexpected to be impacted except in adverse and occasional climatic conditions.

It must be highlighted that this assessment does not consider the distances from other activities that occur and generate odour within the current operation such as cow access tracks, road crossings, heavy cow occupation areas within paddocks – of which most receptors would be impacted by currently and no longer impacted by in the future operations.

4.4. CONCLUSION

This odour impact assessment has been completed using a multi-source evidence base, including desktop review of publicly available data, site-specific surveys and plans, satellite imagery, and local topographic and land-use knowledge. Key input was also drawn from the project applicant and supporting consultants. This information informed the delineation of the odour-generating activity boundary and the identification and classification of all sensitive receptors within the local area.

The most appropriate and relevant assessment methodology for this proposal has been identified as *the Animal Production Separation Distance Guidelines*, being a Victorian developed method soon to be formally adopted into their Planning Scheme. This methodology specifically accounts for modern intensive dairy systems, including bedded pack housing, effluent management infrastructure, and dairy cow waste production profiles. It offers a more accurate and context-appropriate approach than legacy tools such as the *National Guidelines for Beef Cattle Feedlots in Australia*, which are not suited to enclosed or semi-enclosed dairy housing systems.

All identified receptors meet or exceed the required separation distances under the *Animal Production Guidelines*, with the exception of receptors R1 and R17. R1 is located at an equivalent distance from both existing and proposed

operations and has provided support for the proposal, with no objection. R17 currently experiences some exposure from existing silage activities, but the proposed changes will increase the separation distance. Importantly, conservative S-factor inputs were applied across all receptors—particularly R1 and R17—further supporting the robustness of the conclusions.

Provided the site is operated in line with the proposed design and management practices, the risk of offsite odour impacts is considered low under typical conditions. As with any intensive animal production system, isolated short-term odour events may still occur due to abnormal weather or unforeseen operational issues. These must be managed promptly through the site's monitoring, communication, and complaints response protocols to minimise impact and maintain community confidence

5. ODOUR MANAGEMENT, CONTROL & MONITORING

5.1. MANAGEMENT

The management of odour is a continuous cyclic process as presented below in **Figure 5-1**. This section aims to provide a framework whereby the operation licensee and manager can identify, manage and therefore minimise the risk of atypical odour emissions within the operation.

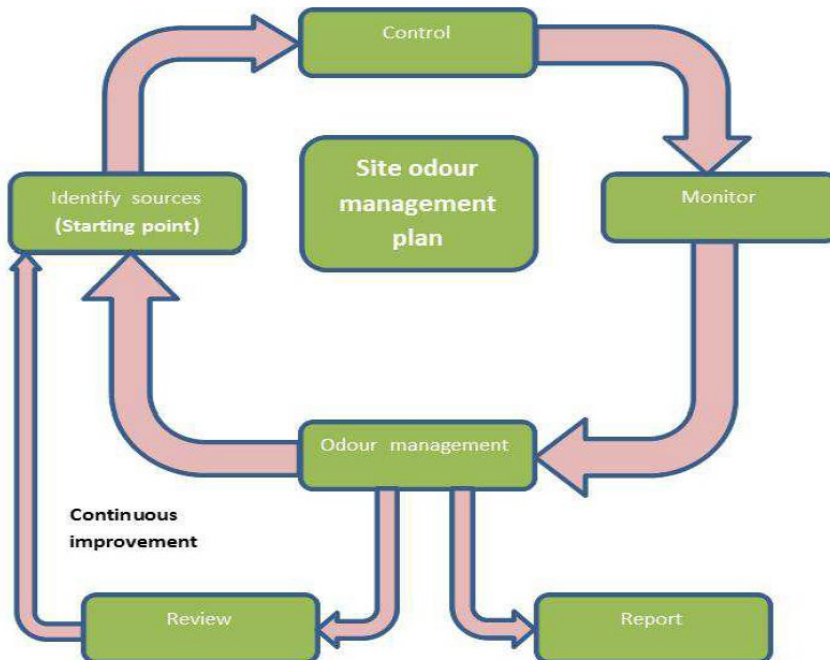


Figure 5-1 - Odour Management Cycle

The key components that enable the above process to occur are:

- ✓ Plans and Maps,
- ✓ Designs,
- ✓ Responsibilities,
- ✓ Sensitive receptors,
- ✓ Sources,
- ✓ Control,
- ✓ Monitoring,
- ✓ Reporting, and
- ✓ Review.

5.2. CONTROL

The most appropriate hierarchy of odour control is presented in **Figure 5-2**. The prevention of odour releases is the preferred method rather than control. This method requires good management as well as maintenance and housekeeping procedures. Where it is not practicable to prevent the odour releases, they must be minimised to a level that will not cause odour nuisance.

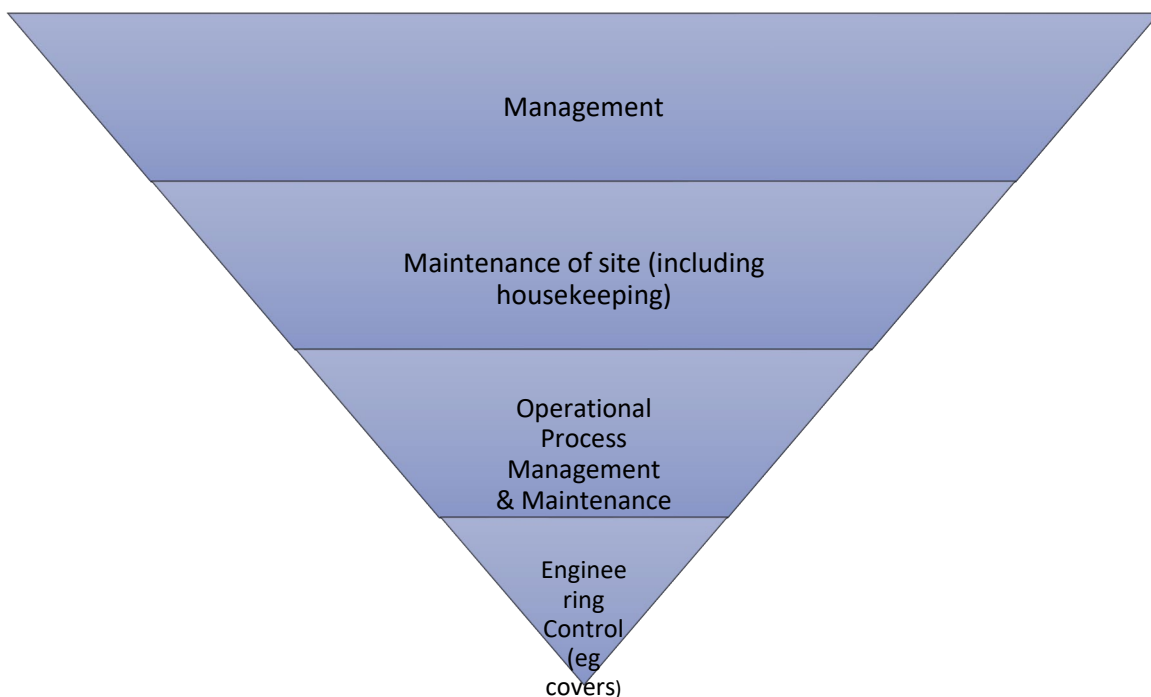


Figure 5-2 - Preferred Hierarchy of Odour Controls

5.3. MONITORING

5.3.1. Weather Station

The site does not have a dedicated weather station located within the property. The nearest weather recording station is the Hobart Weather site (site 094008) which records temperature, humidity, wind and rainfall. Should issues with odour generation at the site emerge, a site dedicated weather station should be installed that records wind direction, speed and gust strength. Humidity, temperature and rainfall are also key elements to include in a weather station.

5.3.2. Records

Records of any odour complaints made will be kept within the operation and will be reviewed as required with this document.

5.4. ODOUR OBSERVATIONS

Should an odour complaint be made relating to the site, the following odour observations will be undertaken.

The observation method uses a standardised scale to record intensity. To ensure a standardised response, the odour descriptors shown in **Table 5-1** should be utilised. In utilising this scale, an odour with an intensity of 3 or higher would be a detectable odour with a recognisable (i.e. the type of odour is known) character.

Observations should be made every 10 seconds for at least five (5) minutes. Each observation involves the recorder breathing in through their nose normally and recording the odour intensity. Breathing in does not require the person to inhale large amounts of air, but just breathe normally to avoid biasing the observation.

Table 5-1 - Odour Intensity Scale

Perceived odour strength	Intensity level rating	Interpretation
Extremely strong	6	In normal circumstances, this should be very rare in a field situation. For an offensive type of odour, the reaction would be to immediately mitigate against further exposure. This remains the dominant thought and motivation until the exposure level is reduced. The odour cannot be tolerated.
Very strong	5	The odour character is clearly recognisable. For an offensive type of odour, exposure to this level is considered unpleasant/undesirable to the point that action to mitigate against further exposure is considered or taken.

Perceived odour strength	Intensity level rating	Interpretation
Strong	4	The odour character is clearly recognisable. For an offensive type of odour, exposure to this level would be considered unpleasant/undesirable.
Distinct	3	The odour character is clearly recognisable. Note that this must still apply even if in a different context or situation - for example, not knowing or expecting what type of odour may be present. The odour is tolerable – even for an offensive odour.
Weak	2	The assessor is reasonably sure that odour is present but not 100% sure of the odour character.
Very weak	1	The odour character is not recognisable. There is probably some doubt whether the odour is actually present. A useful strategy where the odour is borderline between “not perceptible” and “very weak” is to alternate such observations between 0 and 1.
Not perceptible	0	No odour.

Should additional monitoring be required by any regulator, testing must be performed in line with their requirements.

5.4.1. Assessment Process

The process for manual recording is as follows:

- Staff member undertaking recording must have “re-calibrated” their sense of smell prior to undertaking the assessment. This includes moving offsite for at least 1 hour and having a shower and wearing fresh clothes. Wherever possible, the assessment must take place prior to entry to the dairy complex.
- Staff are to go to general location of complaint or downwind in the same direction as close as possible in a straight line to the complainant’s location (no entry to private property without permission) and record the following:
 - Date,
 - Time,
 - Immediate odour intensity upon arrival (**Table 5-1**),
 - Wind Direction at the location and estimate of wind speed based on **Table 5-2** or portable wind speed sensor,
 - Where odour detected, the activities undertaken at the premises at the time of assessment will be recorded and weather station data from the weather station downloaded, and
 - Odour intensity using the descriptors in **Table 5-1** will then be recorded every 10 seconds for at least five minutes.
- Information from this form will then be entered into the Odour Assessment Register.
- The information in the register will then be reviewed to identify if there is an activity and/or wind direction/speed at which odour is consistently creating an issue. Following the identification of any activity or wind element, contingency measures will be undertaken where possible to ensure that specific activities do not occur in the related climatic conditions.

Table 5-2 - Beaufort Wind Descriptors

Force	Wind Speed m/s	Appearance	Descriptor
0	<0.3	Smoke rises vertically, no observable wind	Calm
1	0.3-1.5	Direction of wind shown by smoke drift	Light Air
2	1.5-3.3	Wind felt on face, leaves rustle	Light
3	3.2-5.5	Leaves and small twigs in constant motion	Gentle
4	5.5-8.0	Raises dust and loose paper, small branches are moved	Moderate
5	>8.0	Small trees in leaf begin to sway	Fresh breeze or stronger

A copy of this form and the register of assessments is included in the Appendices.

5.4.2. Ad Hoc Observations

Where a staff or family member makes odour observations while travelling to the property or site that are not associated with complaints, the observation can simply be recorded as the location, date, time and whether odour was detected, and if it was, what intensity. If no odour is detected, no odour should be recorded (i.e. intensity 0).

6. SITE ODOUR OBJECTIVES

The objective of this assessment and plan is to ensure that the site operates without leading to nuisance odour impacts on surrounding sensitive locations.

The key benchmark will be to ***minimise offsite odour nuisance at sensitive receptors as defined by relevant State Legislation.***

7. RESPONSIBILITIES

The operator and site manager or delegate have responsibility for:

- ✓ Implementation of the OMP,
- ✓ Conformance with the OMP,
- ✓ Training staff with regard to the OMP,
- ✓ Recording and reporting of incidents as required,
- ✓ Updating the plan, and
- ✓ Ensuring corrective actions are taken.

Responsibilities for odour control for staff in addition to the site manager are highlighted in the following sections and as updated from time to time to utilise the experience and staff resources.

Table 7-1 - Responsibilities and Management Checks

No.	Area	Activity	Description	Interval	Requirement	Checks	Responsibility	Records
1. Accommodation & Feeding								
1.1	Housing Facilities	Cleaning	Flood wash of alleys	Twice daily or as required	Alleys are to be maintained in clean condition to ensure animal welfare standards are maintained	- Alleys are clean and safe with low odour levels - Recycled floodwash water quality is to be monitored for quality and odour. Where odour increases, freshwater must be introduced to the system.	All staff	NA
1.3	Effluent treatment, bedding	Bedding removal	Transport of bedding materials and manure.	Manure/bedding removed from housing facilities and temporary stored on site must only occur on dedicated impermeable area and re-used on farm.	No manure spillage to occur during transport.	- Loads not to exceed vehicle capacity. - Preferably undertaken in the morning hours. - Manure and bedding is to be either stored on dedicated area adjoining the effluent ponds or delivered to site just prior to use on paddock. - Bedding and storage is only to occur for short periods of time following removal.	All Staff	Bedding Monitoring
1.4		Bedding monitoring	Moisture and Temperature of bedding	Twice weekly	Bedding is to be maintained at between 43 – 60°C at 15-30cm below pack and moisture between 40-60% (no water in squeeze test)	- Moisture levels in the pack are consistent and not too wet or dry - Temperature levels in the pack are consistent and not too wet or dry. - Wet bedding is incorporated with new dry bedding if possible. - Where significant impact to bedding has occurred bedding is removed and stored in manure storage area and new bedding added.	All staff	Bedding monitoring
1.5	Feed alley	Feed Residue	Spoilt or wet feed removed from feed alley	Daily	Spoilt or wet feed to be removed from feed table prior to next feed.	- Material to be removed from housing facility areas. - Feeding equipment to be maintained to minimise spillage.	All staff	Nutrition records
1.5	Water troughs	NA	Check for leaking troughs.	Daily	All water trough and water leaks to be repaired as soon as practical. If large bedding areas become wet, the bedding must be replaced immediately.	- Check troughs not overflowing and trough overflow system working correctly. - Leaks in pipelines to be repaired as soon as possible. - No wet areas	All Staff	NA
2. Drainage								
2.1	Drains/ laneway	Monitoring	Monitor drains for vegetation, erosion, sediment and potholes or wet areas.	Weekly	Drains to maintain a smooth uniform free draining surface.	- Drains are checked for vegetation, erosion, sedimentation and potholes or low areas. Issues reported for repair. - Should manure or sludge be removed from drains and be unable to be incorporated to paddock areas, it may be temporarily stored on the dedicated solids and bedding storage areas until suitable time for application is available.	All staff	NA
2.2	Drains/ laneways	Maintenance	Cleaning and Maintenance	Where required	Drains to remain free of sediment and blockages.	- Following run-off events, the level of settled sediments in drains and structures is checked. Excess sediment is allowed to dry where possible prior to removal. - Sediment is to be removed and transported to the manure storage pad. - Potholes in earthen lanes or low areas are backfilled and compacted to produce a durable surface. - Drains/laneways are maintained free of vegetation and blockages.	All staff	NA
3. Effluent Pond								
3.1	Pond	Maintenance	Maintenance of pond system	As identified in effluent management plan	Pond to maintain adequate storage space and limit build-up of sludge.	- Ponds are to be cleaned as required during November to March period. Walls and floor of earthen external system are to be checked for integrity at time of cleaning.	Maintenance	NA
3.2	Pond	Cleaning of sediment/ sludge from pond floor	Ponds are designed to allow deposition of sediment / sludge	As identified by effluent management plan	Sludge levels on pond floor not to utilise entire storage design capacity.	- Sediment and sludge from floor collected when pond cleaned and removed for use on site immediately and in conjunction with application requirements.	Manager	Paddock application records
4. Manure Management and Storage								
4.1	Solids removal /manag ement	Maintenance temporary storage area between sheds.	Used bedding and solids removed from drains, may be temporarily stored on the concrete pad between sheds.	As required.	- Area for temporary use only. - Small volumes of storage for limited times may be stored within this area only. - Where sludge or manure removed from drains, it may be incorporated into used bedding prior to application to land.	- Manure storage area for winter storage and temporary use only. - When in use, drainage must be connected to effluent ponds. - Structures to be checked to ensure they are operating as designed and not blocked.	Manager / Maintenance	NA



Site Objectives and Responsibilities

5. Manure Utilisation								
5.1	Manure & effluent utilisation area	Manure & effluent application area selection	Selection of area for application of effluent and manure.	Planning	Effluent/manure not applied in environmental sensitive area. Application areas not overloaded with nutrients. Sensitive receivers not affected by effluent/ manure application.	- Selected effluent and manure utilisation areas must meet the following criteria: • Area must not exceed annual allocation of manure applied. • Soil tests have been undertaken in conjunction with application and not show elevated nutrient levels. • Area must not adjoin sensitive receivers. • Separation distanced must be maintained.	Farm Manager/ Agronomist	-Soil tests & Agronomy advice

8. COMPLAINTS MANAGEMENT

The complaints management process will be followed in line with the dedicated Feedback and Complaints Management Plan.

9. DOCUMENT IMPLEMENTATION AND REVIEW

The implementation of this plan is the combined responsibility of the operator and manager, assisted by all personnel. The OMP will be stored at the site in a location accessible to all staff. All staff must be made aware of the plan and be aware that it is available to them.

9.1. RECORD KEEPING

The operator will maintain a record of the following documents for a minimum of five years. These include:

- ✓ Complaint Form,
- ✓ Register of all complaints received,
- ✓ Manual Odour Assessment Form,
- ✓ Register of all Odour Assessments, (Manual and Outsourced),
- ✓ Maintenance record identifying the on-going and emergency maintenance tasks undertaken,
- ✓ Record of any odour monitoring results (daily, weekly, monthly etc.), and
- ✓ Records of staff training.

10. CONTINUOUS IMPROVEMENT

To ensure this plan and the management activities on the site are kept current, this plan and its structure and requirements will undergo review as follows:

- Regular operational review to check for relevance and opportunities for improvement,
- Whenever any major change to the design or management of the operation occurs,
- Whenever any opportunity to make improvements arises, for example if such opportunities are discovered during complaints investigations, maintenance work or from any major incident, failure, success and the like; and,
- In response to any useful public or others' suggestions.

The review may range from a simple correction, through to a detailed formal review of each element of the plan. Any review must be documented and controlled by ascribing a revised document version number and date on the Document Information Record.

11. APPENDICES

APPENDIX 1 – SITE PLAN

APPENDIX 2 – COMPLAINTS MANAGEMENT RECORDS

End of Document



COMPLAINT REPORT REGISTER

COMPLAINT REPORT REGISTER

[illegible]



Sorell Council

Development Application: Development
Application - 106 Bream Creek Road, Bream
Creek - P1.pdf
Plans Reference:P1
Date Received:27/10/2025

Stroud Dairies

Complaint Report Form

Date complaint received: _____ **Date/Time of Complaint:** _____

Complaint advised via: Complaints phone line ☐ Phone Direct to Manager ☐ Text to Manager ☐ EPA/ Council ☐

Complaint received by: _____

Name of Complainant (if given): _____

Contact Details of Complainant (if given): _____

Details of Complaint: _____

Follow up Action: Nil required / requested: ☐ Review (next page) ☐ Assessment - See assessment form ☐ Feedback to EPA/Council ☐

Follow up Contact with Complainant (if any): _____

Review of complaint

Weather data relative to the complaint has been reviewed and attached? Yes ☐

Does the wind direction coincide with the complaint period? Yes ☐ No ☐

Has there been recent rainfall? Yes ☐ No ☐ Date: _____

What activities were occurring at the time of the complaint?

Daily milking activities ☐
Daily bedding management ☐
Manure is stored on site? ☐
Other: ☐

Bedding removal ☐
Pond 1 cleaning ☐
Effluent application ☐

Facility _____

Specify: _____

Where any abnormal activities occurring at the time of the complaint? Yes ☐ No ☐

If so, what? _____

Where any elements of the Odour Management Plan no being complied with? Yes ☐ No ☐

If so, which element? Number: _____ Activity: _____

What is the reason for non-compliance? _____

Was an additional odour assessment undertaken? (separate form) Yes ☐ No ☐

If yes: what is the result of the odour assessment? _____

Are there follow up actions from this assessment? Yes ☐ No ☐

If Yes, what? _____

This complaint has been assessed by: _____

This complaint and assessment has been recorded in the register Yes ☐ No ☐

Stroud Dairies

Odour Assessment

Date: _____ Location: _____

Wind direction: _____ Wind Speed:¹ _____ Complaint Location or Downwind of complaint location

Odour Intensity at arrival:² _____ *See overpage

Time start: _____ Time complete: _____

Intensity Level ²	Minute 1						Minute 2						Minute 3						Minute 4						Minute 5						Minute 6					
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360
6																																				
5																																				
4																																				
3																																				
2																																				
1																																				
0																																				

Activities being undertaken at the site at time of observation: _____

Assessment Undertaken by: _____ who has "re-calibrated" their sense of smell prior to undertaking this assessment.

I have been offsite for at least an hour, showered and changed into fresh clothes prior to undertaking this assessment.

Signed: _____ Date entered into register: _____

1 **OMP Table 6.2 - Beaufort Wind Descriptors**

Force	Wind Speed	Appearance	Descriptor
-------	------------	------------	------------

0	<0.3	Smoke rises vertically, no observable wind	Calm
1	0.3-1.5	Direction of wind shown by smoke drift	Light Air
2	1.5-3.3	Wind felt on face, leaves rustle	Light Air
3	3.2-5.5	Leaves and small twigs in constant motion	Gentle
4	5.5-8.0	Raises dust and loose paper, small branches are moved	Moderate
5	>8.0	Small leaves in trees begin to sway	Fresh breeze or stronger



2 OMP Table 6-1 Odour intensity scale from VDI 3940 (1993 and Pitt (2014))

Perceived odour strength	Intensity level rating	Interpretation
Extremely strong	6	In normal circumstances, this should be very rare in a field situation. For an offensive type of odour, the reaction would be to immediately mitigate against further exposure. This remains the dominant thought and motivation until the exposure level is reduced. The odour cannot be tolerated.
Very Strong	5	The odour character is clearly recognisable. For an offensive type of odour, exposure to this level is considered unpleasant/undesirable to the point that action to mitigate against further exposure is considered or taken.
Strong	4	The odour character is clearly recognisable. For an offensive type of odour, exposure to this level would be considered unpleasant/undesirable.
Distinct	3	The odour character is clearly recognisable. Note that this must still apply even in a different context or situation - for example, not knowing or expecting what type of odour may be present. The odour is tolerable - even for an offensive odour.
Weak	2	The assessor is reasonably sure that odour is present but not 100% sure of the odour character.
Very weak	1	The odour character is not recognisable. There is probably some doubt whether the odour is actually present. A useful strategy where the odour is borderline between "not perceptible" and "very weak" is to alternate such observations between 0 and 1.
Not perceptible	0	No odour



Development Application: Development
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Stroud Dairies

Odour Assessment Register

[illegible]



Plans Reference:P1
Date Received:27/10/2025

Stroud Dairies

Spoilt Feed Collection Record

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Appendix 10

Complaints Management Plan

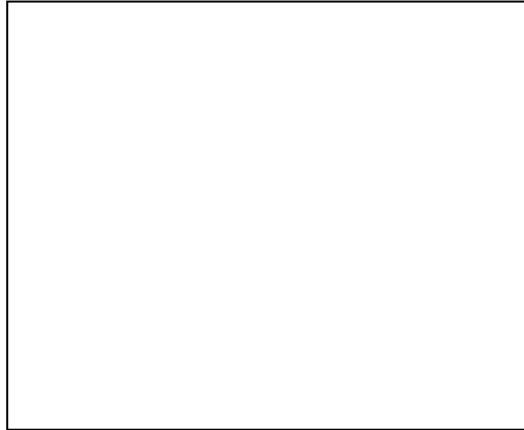




Sorell Council

Development Application: Development
Application - 106 Bream Creek Road, Bream
Creek - P1.pdf

Plans Reference: P1
Date Received: 27/10/2025



Feedback & Complaints Management Plan

Stroud Daires

106 Bream Creek Road, Bream Creek Tasmania



Plan developed by Progressive Rural Solutions in consultation with Stroud Dairies Pty Ltd





Document Information Record

Project Details

Property	Stroud Daries
Address/Details	106 Bream Creek Road, Bream Creek, Tasmania
Property Owner	Stroud Daries
Site Manager	Mr Jack Bignell

	Sorell Council
Development Application: Development Application - 106 Bream Creek Road, Bream Creek - P1.pdf	
Plans Reference:P1	
Date Received:27/10/2025	

Document Control

Document Title	Complaints Management Plan for Stroud Dairies, 106 Bream Creek Road, Bream Creek		
File Name:	J373 – C&FMP – V1R3		
Revision:	V1R3		
Author	Rebecca Moodie	Position:	Consultant
Signature:		Date:	26/10/2025
Reviewed by:	Clare Fitzpatrick	Position:	Director
Signature:		Date:	26/10/2025
Approved by:	Jack Bignell	Position:	Project
Signature:	Per email	Date:	Manager

Original Plan Revision history

Version	Issue date	Reason for issue	Author	Reviewed by	Approved by
V1R1	17/09/2025	Initial Document	Rebecca Moodie	NA	NA
V1R2	14/10/2025	Draft	Clare Fitzpatrick	Rebecca Moodie	Jack Bignell
V1R3	26/10/2025	FINAL	Clare Fitzpatrick	Rebecca Moodie	Jack Bignell

Distribution

Version	Recipient	Lodgement	Copies
V1R2	Client for review	Electronic	1
V1R3	Sorell Shire Council	Electronic	1
V1R3	Tasmanian Dairy Industry Association	Electronic	1
V1R3	Client and Site Manager for Operation	Electronic & Hard	1

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Related Documents

Type	Author	Name	Date
Environmental Impact Assessment	Progressive Rural Solutions	J373--EIS-V1R5	26/10/2025
Geotechnical Investigation	GeoTon Pty Ltd Geotechnical Consultants	Geotechnical Investigation-Stroud Dairies	10/02/2025
Effluent Management Plan	South East Soil and Water	Effluent Management Plan for Stroud Dairies Loos Housing Barn V4	26/10/2025
Odour Assessment and Management Plan	Progressive Rural Solutions	J373-OMP-V1R5	26/10/2025

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- Adapt, publish or rent.





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1. SITE DETAILS AND CONTACTS

1.1. SITE DETAILS

Property Details				
Property Address	106 Bream Creek Rd Bream Creek, Tasmania			
Lot/DP	2	1	1	2
Local Council	35297	35298	100903	106067

Operation Details
SUMMARY OF THE OPERATION The operation is a 1000 milking herd with a loose housing (compost bedded pack) system which includes the full-time use of a single productive cow housing facility (open shed) and a roofed maternity housing facility for young/dry cow management. The property is an aggregation of contiguous properties purchased by the Bignell family over the last 65 years and includes extensive areas historically utilised for grazing which will now support the growth of the feed for the facility. This includes the incorporation of the beneficial effluent captured and re-used reducing synthetic fertiliser use and incorporating a cyclic system within the farming operation. 'Stroud Dairies' as a property is addressed as 106 Bream Creek Rd, Bream Creek Tasmania, and is located south of the town of Bream Creek in the Hobart region of Tasmania.

Site Contacts	
Property Owner(s):	Stroud Pty Limited J.M Bignell Pty Ltd Chubcak Pty Ltd
ABN	24 008 226 433
ACN	008 226 433
Operating Organisation	Stroud Dairies Pty Ltd
Main Contact	Jack Bignell
Address	198 Burnt Hill Rd Bream Creek TAS 7175
Phone:	0427698177
Email:	jackbignell@breamcreekdairy.com.au
Site/Dairy/ Manager(s)	Jack Bignell
Phone:	0427698177
Email:	jackbignell@breamcreekdairy.com.au
Environmental Manager	Jack Bignell
Phone:	0427698177
Email:	jackbignell@breamcreekdairy.com.au

1.2. IMPORTANT CONTACTS

Contant Name	Position	Phone	Email
Jack Bignell	Owner (representative)	0427698177	jackbignell@breamcreekdairy.com.au
	Project Manager		
	Property Manager		





1.3. EMERGENCY CONTACTS

Incident Type	Contact Name	Contact Details
Effluent System		
Effluent/Spreading incident	EPA Tasmania	Incident Response Hotline on 1800 005 171 , email: incidentresponse@epa.tas.gov.au.
Waterways Contamination	EPA Tasmania	Incident Response Hotline on 1800 005 171 , email: incidentresponse@epa.tas.gov.au.
	Dept. of Natural Resources and Environment Tasmania	Phone: 1300 368 550 Email: water.enquiries@nre.tas.gov.au
Disease and Significant Mortality		
Emergency disease	Emergency Animal Disease Hotline	1800 675 888
	Vet - Ian Lean Down Scibus	0408 280 802 02 4655 8501 Email: office@scibus.com.au
Fire		
Fire	Fire Emergency	000
	Local Fire Station	000 Sorell.brigade@fire.tas.gov.au
Other		
Pollutant	EPA Tasmania	Incident Response Hotline on 1800 005 171 , email: incidentresponse@epa.tas.gov.au.

1.4. LICENCES AND APPROVALS

Operating Licences	
Dairy Farmer Licence	SOR177

Approvals and Permits	Reference	Approved Works/Activity
Development Application/Planning Permit	TBA	
Construction Certificate/Building Certificate	TBA	
Occupation Certificate	TBA	

1.5. RELEVANT OPERATION STANDARDS, CODES AND PERMITS

The operation is managed to meet the following guidelines and codes of practices where appropriate:

- Planning Permit/Development Approval and conditions as approved by the Sorell Shire Council,
- *Australian Animal Welfare Standards and Guidelines for Cattle*, Edition 1, Animal Health Australia, January 2016,
- *National Guidelines for Beef Cattle Feedlots in Australia* – Third edition, MLA, June 2013 (where appropriate),
- *Feedlot covered housing systems – Best practice design and management manual*, MLA 2023
- *National Guidelines for Beef Cattle Feedlots in Australia*, 3rd edition, MLA 2012
- *Effluent and Manure Management Database for the Dairy Industry*, Dairy Australia, December 2008.
- Quality Assurance Systems as audited and required by milk supplier annually.
- Relevant water licences and approvals held by the operation.





1.6. SITE MAP

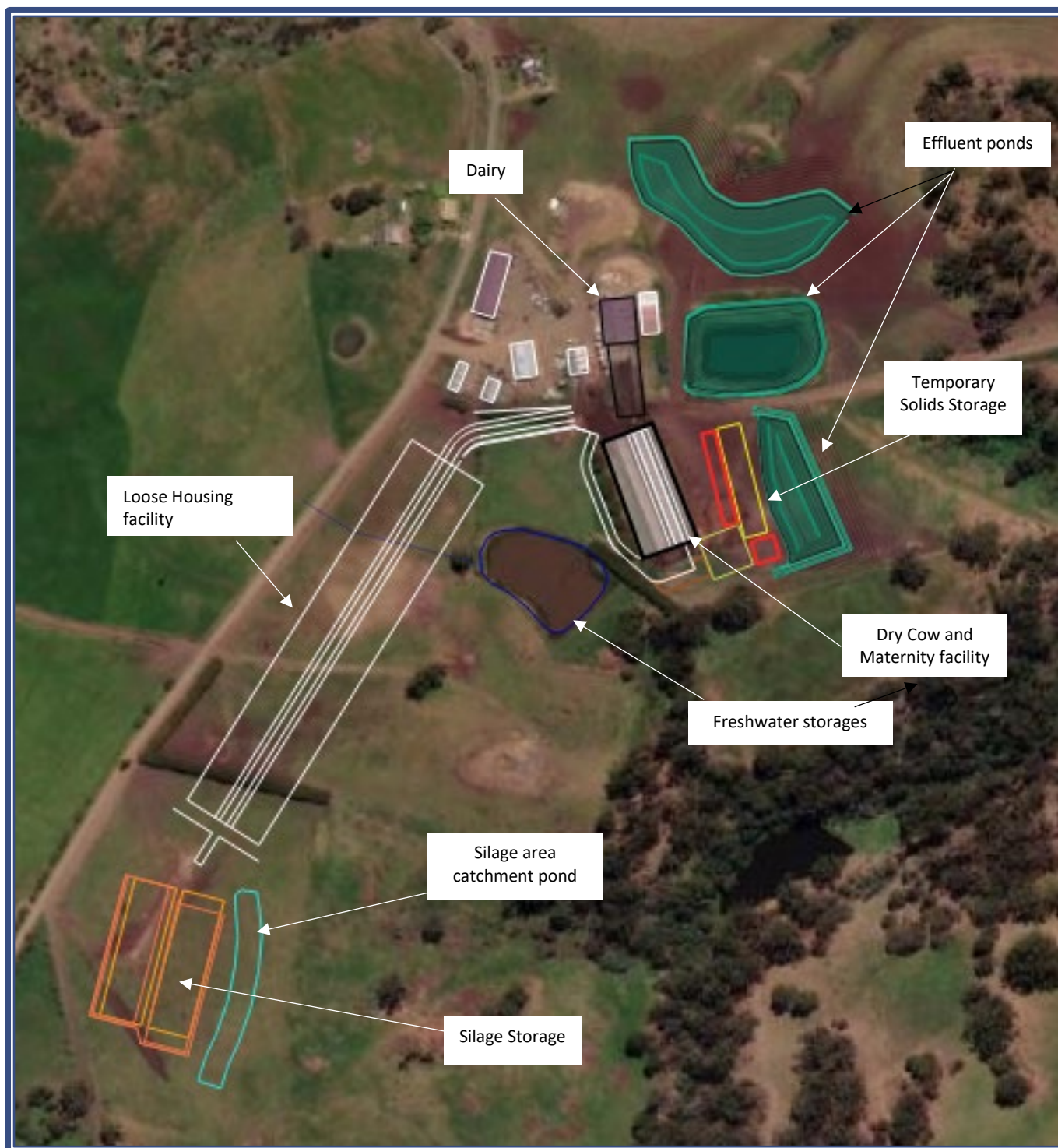


Figure 1-1 – SITE OPERATION OVERVIEW WITH ELEMENTS

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2. INTRODUCTION

2.1. PURPOSE

The purpose of this Feedback & Complaints Management Plan (F&CMP) is to describe effective management to ensure all feedback and complaints are acknowledged and managed with the aim of continuous improvement and best practice operations. This document provides clear strategy to record and manage all complaints and actions associated with them.

The implementation of this Complaints Management Plan (F&CMP) is the responsibility of the nominated Operation Manager identified in section 1.1 of this plan.

2.2. DOCUMENT OBJECTIVES

The objectives of the F&CMP are to identify practices and procedures to ensure the effective management of all feedback to foster a belief in continuous improvement.

The objective of having a feedback & complaints recording & reporting framework is to:

- Provide an avenue for public feedback or complaints associated with the operation to be lodged, recorded and addressed.
- Record feedback complaints and incidents to facilitate the ability to undertake a review.
- Ensure relevant records are maintained and allow for continuous improvement.

2.3. OPERATION OBJECTIVES

The objectives of this operation are to:

- **Improve animal welfare and productivity** by providing cows with a cleaner, more comfortable environment that extends herd longevity and supports consistent milk output.
- **Be an employer of choice** through safer, more comfortable working conditions and opportunities for skill development and career growth.
- **Lower environmental impacts** by minimising feed and water waste, reducing reliance on synthetic fertilisers, and maximising the value of effluent as a nutrient resource.
- **Build resilience to seasonal variability** by protecting milk production and farm performance from adverse weather conditions such as storms, wet winters, and droughts.
- **Optimise resource use and efficiency** to increase the value of feed, fertiliser, and labour inputs while improving daily operational performance.
- **Deliver community benefits** by reducing traffic risks and disruptions from cows crossing roads, presenting a tidier farm frontage, and protecting local waterways through better land management

2.4. OPERATION OVERVIEW

The operation is a 1000 milking herd with a loose housing (compost bedded pack) system which includes the full-time use of a single productive cow housing facility (open shed) and a roofed maternity housing facility for young/dry cow management.

The property is an aggregation of contiguous properties purchased by the Bignell family over the last 65 years and includes extensive areas historically utilised for grazing which will now support the growth of the feed for the facility. This includes the incorporation of the beneficial effluent captured and re-used reducing synthetic fertiliser use and incorporating a cyclic system within the farming operation.

'Stroud Dairies' as a property is addressed as 106 Bream Creek Rd, Bream Creek Tasmania, and is located south of the town of Bream Creek in the Hobart region of Tasmania.





3. HOW TO PROVIDE FEEDBACK OR MAKE A COMPLAINT

The organisation welcomes feedback and complaints in relation to the operation activities to ensure it remains accurate, relevant, and fit for purpose.

Who can provide feedback or make a complaint?	Any stakeholder, including staff, clients, community members, or regulatory authorities.	
When feedback or complaints can be made:	At any time, following release of this document, or during any stage of its application or review cycle.	
How feedback or complaints can be submitted:	In writing via email to:	jackbignell@breamcreekdairy.com.au
	By post to:	143 Bream Creek Rd Bream Creek Tasmania 7175
	Verbally by phone to:	0427 698 177

All feedback and complaints will be acknowledged within 3 business days and recorded in accordance with the organisation's feedback and complaints management procedure. Where required, a response outlining any actions to be taken will be provided within 7 business days, or as otherwise agreed with the person providing the feedback or complaint.

3.1. SOURCE

3.1.1. INTERNAL

Feedback or complaints may come from within the operation from staff or the owners through daily activities. Where this occurs the site manager is to be made aware. Feedback from within the operation offers the ability to continuously improve, can identify areas to update activities and standard operating procedures while ensuring a safe and rewarding workplace for everyone. They also offer the opportunity to ensure all team members are valued and empowered to contribute to the success of the operation.

3.1.2. EXTERNAL

Complaint

Complaints may come from surrounding neighbours or sensitive receptors who may be perceived to be impacted by the activities of the operation. These may be received from:

- Observation of potential impact from internal staff or operations,
- Direct contact from the complainant,
- Notification from council of a complaint, or
- Notification from the EPA or similar agency who have received notice of a complaint.

Surveillance or Compliance Visit

Where there are operational licences or approvals with conditions that require specific standards or management practices, it is likely that there may be compliance or surveillance visits by an external agency. Where feedback or non-conformance/compliance is identified the procedures in this plan may be applied appropriately.

3.2. RECEIVING COMPLAINTS

3.2.1. DIRECT CONTACT

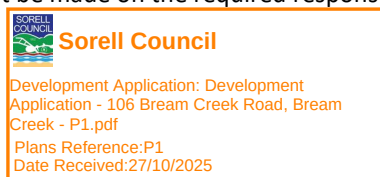
Feedback and complaints are preferred to be via direct contact in the first instance with the intention to resolve or action the complaint without the need to engage a third party. Complaints received in this manner as close to the impact time as possible provide the best analysis opportunities as the operational activities and climatic conditions are readily recalled.

Direct contact may come via a phone call, letter or email. Details are to be recorded as per **Section 4** of this plan.

3.2.2. INDIRECT CONTACT

Where notification from an external agency such as local council or another agency, such as the EPA, is received, it should be noted that these may come with defined processes for response or actions required to be undertaken.

Details are to be recorded as per **Section 4** of this plan and careful notes must be made on the required response and timeframes. .





4. FEEDBACK & COMPLAINTS RECORDING & REPORTING

4.1. RECORD KEEPING

All feedback or complaints received will be recorded and the following information requested from the party who has made contact:

1. Personal information of the complainant – ideally their name and contact details (contacts made without personal information will still be recorded and investigated),
2. Nature of complaint or feedback,
3. Time or day of complaint or feedback,
4. Location of complaint or feedback related activity (to the nearest crossroad, if party prefers not to give their exact location),
5. Where complaint relates to odour or noise, the climatic conditions at the time of the complaint.

All incidents and complaints are to be investigated and where required a response provided which includes details of any investigation, assessment or actions undertaken.

4.2. OCCURANCE AND NOTIFICATION

Feedback/complaints will be reported either directly by staff or through an action from the EPA, Council or Relevant Authority. On report of an incident, the following will be notified for investigation:

- Owners representative,
- Manager, and
- Where relevant - Authorities, depending on the nature of the incident.



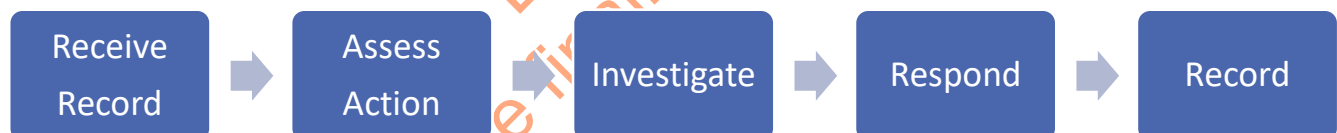
4.3. REPORTING

This recording and reporting system contains the following elements:

- ✓ Receive and record the complaint or record of incident or feedback,
- ✓ Act appropriately depending on the nature of the report, outcome of investigations and action taken, and
- ✓ Where necessary provide feedback to complainants and/or the EPA/Council/Relevant Authority following investigation.

4.4. COMPLAINT REVIEW AND ASSESSMENT PROCESS

The following process will be followed in line with receipt of a complaint relating to the operation.



4.4.1. STEP ONE: RECEIVE AND RECORD THE COMPLAINT

All complaints will be recorded in line with the record keeping requirements detailed above. The following information will be included in the report:

- Personal information of the reporter – ideally their personal name and contact details,
- Nature of complaint,
- Time of complaint,
- Location of complaint (to the nearest crossroad, if complainant prefers not to give their exact location),
- Description of complaint (if odour or noise complaint, character and strength),
- How long the complaint activity being submitted has been present,
- Other pertinent information (e.g. climatic conditions, time of the day, other operational activities being undertaken).

If the complaint is received from the EPA/Council/Relevant Authority, then the details provided by that relevant Authority will be recorded.

4.4.2. STEP TWO: ASSESS, DETERMINE ACTION AND ALLOCATE

Following an incident or the receipt of a complaint, the matter will be formally recorded and assessed, with appropriate actions assigned to the relevant party for investigation. As part of this process, the seriousness and complexity of the issue will be considered, and responsibility for the investigation allocated to the most suitable staff member.



4.4.3. STEP THREE: INVESTIGATE

During the investigation step, all relevant facts, documents, and information will be gathered to ensure a clear and accurate understanding of the issue relating to the complaint. This may involve consulting with staff, contractors, or external stakeholders who have knowledge of, or involvement in, the matter. In addition, the investigation will consider the organisation's policies and procedures, contractual obligations, and applicable regulatory requirements to ensure that the response is consistent, fair, and compliant.

For complaints received on the day of the alleged impact, the investigation will be started as soon as practicable and as close to the complaint time as possible. For a historical complaint, the investigation will begin as soon as practicable. The aim of the investigations will be as follows:

- ✓ **Day of Complaint:** To determine type and strength (intensity) of impact in the area or the severity of any other environmental impact, and that from the operation if present and to identify activities leading to the impact and to determine, based on this and available meteorological data, whether the operation was likely the source of the alleged impact.
- ✓ **Historical Complaint:** To identify activities leading to the impact and to determine based on this and meteorological data whether the operation was likely the source of the alleged impact.

Odour, noise or amenity

Where the complaint is related to odour, noise or other amenity a review will be undertaken of the associated management plans such as the Odour Management Plan, Environmental Management Plans or Environmental Impact reports (SEE/EIS). These will assist with responses and or actions.

4.4.3.1. DAY OF COMPLAINT: ODOUR

The process is as follows:

- ✓ Complaint information is forwarded to the operation manager at the time of complaint for the matter to be investigated,
- ✓ If the location of the complainant is known, a trained staff assessor will travel offsite, shower and put on fresh clothes. This will be performed to allow the assessor to avoid issues with desensitisation.
- ✓ The staff assessor will then travel to the area around the complainant's location and perform an odour survey in line with the process detailed in the **Odour Management Plan**. The key odour intensity will be 3 and the frequency of observations at and above this value. The character of the odour should be recorded over time, and it should be noted whether the odour is consistent with dairy complex area odour or not. If non-dairy odour is detected, this should still be recorded and noted as not being dairy complex system odour, and where possible the odour should be described in generic terms (i.e. manure, wastewater, compost, dead animal, etc).
- ✓ Where possible this survey should be repeated at the complainant's location or at least in the direct line between the premises and the complainant's location. **Note:** unauthorised entry to private property must not occur.
- ✓ The staff assessor should return to the premises and download the weather station data and determine if the winds leading up to the time of the complaint and those during the odour survey process show that the locations are downwind of the dairy complex.
- ✓ If dairy complex system odour is detected by the field monitoring and wind direction data shows that the location was downwind of the premises, steps will be taken in line with the OMP to reduce odour emissions to an acceptable level. Should the source of the odour be found to be from another site/location, this shall be recorded in the complaint management system.

4.4.3.2. HISTORICAL COMPLAINT: ODOUR

The process is as follows:

- ✓ Complaint information is forwarded to the operation manager for the matter to be investigated.
- ✓ The complainant's location should be known. If not, the complaint must be recorded with the further action beyond noting the activities performed on site on that day.
- ✓ If the complainant's location is known, the processes performed on site on the days leading up to the complaint must be noted.

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- ✓ The available weather station data must be downloaded and investigated to determine the frequency of the time that the complainant's location was downwind of the dairy complex area ¹.
- ✓ If the wind direction indicates that the complainant was downwind of the premises on the day, this should be recorded along with rainfall data and corrective actions made. Should the source of the odour be found to be from another site/location, this shall be recorded in the complaint management system.

4.4.4. STEP FOUR: RESPOND TO THE FEEDBACK OR COMPLAINT

Once the complaint has been investigated and assessed, a formal response will be provided, if it has been requested. Where required, the relevant Authority will also be advised of the formal response.

This response will be provided within five business days of the complaint being made and will include:

- ✓ Time and date of the complaint/incident,
- ✓ Where known, the location of the complaint/incident,
- ✓ Details of the investigation undertaken by the general manager or trained staff as a result of the complaint/incident
- ✓ Outcomes of the assessment of the complaint/incident.

Where the complaint relates to odour, the following will also be recorded:

- ✓ The wind strength and direction in the period leading up to the complaint (whilst considering wind speed) or if time not known, the day of the complaint.
- ✓ Overview of activities undertaken at the premises in the period leading up to the complaint (including rainfall in the preceding week) or on the day of complaint lodgement.

4.4.5. STEP FIVE: RECORD AND REPORT THE INCIDENT/COMPLAINT

Complaint data will be compiled in the relevant register to record the quantity and nature of complaint. The register will detail:

- Number of complaints recorded,
- Number of unique people/equipment/locations/complainants where possible to identify,
- Nature of complaints,
- Outcomes of complaints, and
- If complaint was resolved in compliance with this plan.

Reports and records will be held for a period of five years after the complaint is made.



¹ Care should be taken to ensure weather station wind roses generated, identify which option of wind direction is chosen i.e. wind blowing to, or wind blowing from. If 'blowing from', the direction shown is the opposite to where the odour would go. If set to 'blowing to', the roses will point towards where the odour would go.



5. TRAINING, REVIEW & CONTINUOUS IMPROVEMENT

5.1. TRAINING

All staff and contractors are required to understand their obligations in relation to protecting the environment. This will include:

- Informing employees of the operation's potential impacts on the environment and how they can prevent or minimise these impacts,
- Providing details on the sensitivity receptors both on and off site,
- Ensuring that management staff are aware of this document and the location of emergency numbers, and
- The process to follow in the event of an incident.

Where changes are made to this EMP, training should be repeated where relevant. Records of staff trained will be maintained in **Appendix 3** of this document with these records are to be made available to relevant authorities on request.

5.2. REVIEW

This plan will be reviewed and where necessary revised:

- Annually,
- In response to issues raised by any authorities,
- Where any change to the site or surrounds occurs eg. New residence or regularly occupied area, and
- In response to any incident which results in a failure to meet any of the commitments of this Plan.

Document control is a fundamental aspect of an environmental management system. Document control for the EMP Document Control Table found at the front of this document. Where changes are made to this EMP records of changes will be maintained in **Appendix 5** of this document with these records are to be made available to relevant authorities on request.

5.3. CONTINUOUS IMPROVEMENT

To ensure this plan and the management on the site is kept current, this plan and its structure and requirements will undergo review as follows:

- Review in line with requirements above,
- Whenever any major change to the design or management of the operation occurs,
- Whenever any opportunity to make improvements arises, for example if such opportunities are discovered during complaints investigations, maintenance work or from any major incident, failure, success and the like; and,
- In response to any relevant industry information.

The review may range from a simple correction, through to a detailed formal review of each element of the plan. Any review must be documented and controlled by ascribing a revised document version number and date on the Document Information Record.





6. APPENDICIES

APPENDIX 1 – STAMPED SITE PLANS

To be added once approvals has been received

DRAFT PLAN
To be finalised post approval





APPENDIX 2 – APPROVAL CONDITIONS

To be added once approvals has been received

DRAFT PLAN
To be finalised post approval



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APPENDIX 3 – STAFF TRAINING REGISTER

Staff employed on a regular or full time basis will all be trained in this document and its processes.

Date	Staff Member	Trainer	Brief description of Training Task

DRAFT PLAN
To be finalised post approval

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APPENDIX 4 – FEEDBACK OR COMPLAINT REPORT FORM TEMPLATE

Date / time of report: Date __ / __ / ____ Time __ : __ hours

Type of Report: Feedback / Complaint

Details of the person providing the Feedback/Complaint:

Name _____

Contact number _____

Organisation _____

Details:

Date of report/feedback: _____ Time _____

Description _____

Wind Direction/Weather conditions/Other important observations _____

Site information _____

Action taken:

Has there been failure of critical infrastructure? Yes / No

If Yes, describe: _____

Expected resolution? Date __ / __ / ____ Time __ : __ hours

Response Provided: Date __ / __ / ____ Time __ : __ hours

Person taking complaint record: _____



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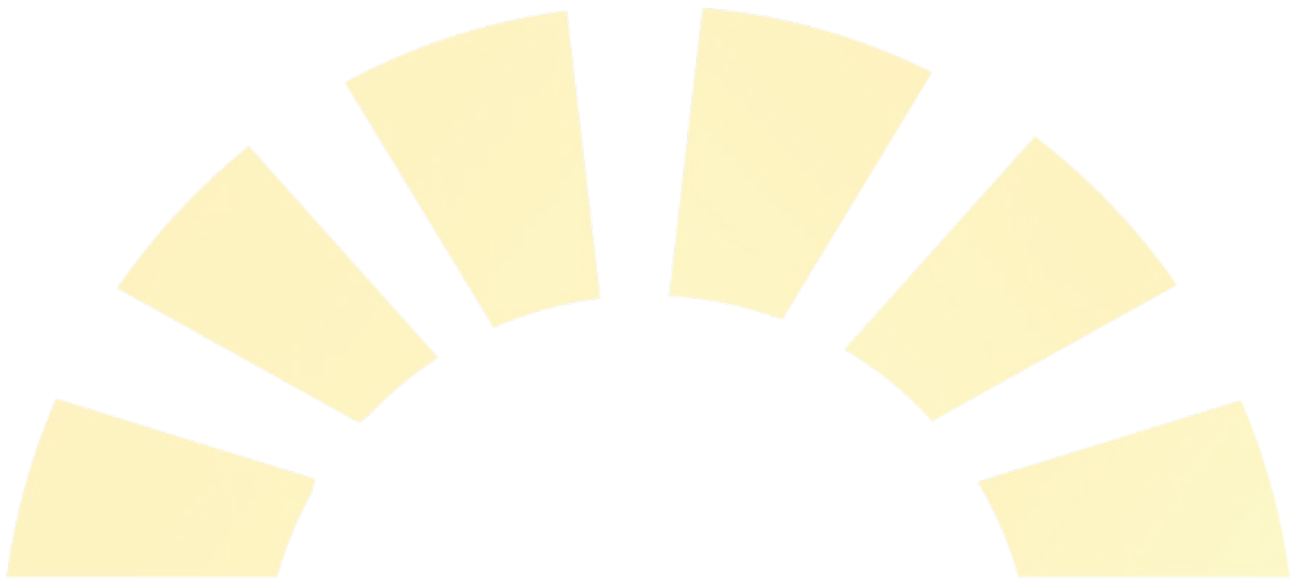
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APPENDIX 5 – COMPLAINTS REGISTER

Date/Time	Staff Member received complain	Nature of complain	Actions Undertake in response to complaint	Any changes to procedures in response to complaint	Date response provided

DRAFT PLAN
To be finalised post approval



Tier 3 Odour and Amenity Assessment

for the operation of a 1,000 productive cow intensive dairy (loose housing)
system at Bream Creek, Tasmania

August 2026



Progressive Rural Solutions

www.prsLtd.com.au



Document Information Record

Project Details

Client name:	Owner – Stroud Dairies
Project:	Construction and operation of a 1,000 cow intensive dairy (loose housing) system at Bream Creek, Tasmania
Project No:	373-0

Document Control

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File Name:	J373 – Tier3Assessment – V1R4.1		
Revision:	V1R4.1		
Author	Rebecca Moodie	Position:	Consultant
Signature:	<i>R Moodie</i>	Date:	22/09/2026
Reviewed by:	Clare Fitzpatrick	Position:	Director
Signature:	<i>Clare Fitzpatrick</i>	Date:	22/09/2026
Approved by:	Mr Jack Bignell	Position:	Dairy Manager
Signature:	Via email	Date:	22/09/2026

Revision History

Version	Issue date	Reason for issue	Author	Reviewed by	Approved by
V1R1	31/08/2026	Initial Document	Clare Fitzpatrick	NA	NA
V1R2	18/09/2026	Draft	Clare Fitzpatrick	Rebecca Moodie	Clare Fitzpatrick
V1R3	21/09/2026	Review by client	Clare Fitzpatrick	Jack Bignell	Jack Bignell
V1R4.1	22/09/2026	FINAL	Clare Fitzpatrick	-	-

Distribution

Version	Recipient	Lodgement	Copies
V1R3	Client review	Electronic	1
V1R4.1	Sorrell Council	Electronic	1

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Related Documents

Title	Version	Author	Name	Date
Title	Version	Author	Document Reference	Date
Environmental Impact Statement	V1R4	Progressive Rural Solutions	J373-EIS-V1R4	26/10/2025
S-Factor Odour Assessment and Management Plan	V1R5	Progressive Rural Solutions	J373-OAR-V1R5	September 2025
Effluent Management Plan for Stroud Dairies Loose Housing Barn	V4	South East Soil and Water	—	24/10/2025
Feedback and Complaints Management Plan	V1R3	Progressive Rural Solutions	J373-F&CMP-V1R3	16/10/2025
Peer Review of the PRS S-Factor Odour Assessment and Management Plan	Final	Air Environment Consulting Pty Ltd	0207.2606	30/06/2026
Summary of EPA Understanding of the Odour Impact Assessment Approach	—	Environment Protection Authority Tasmania	EPA advice	Undated

Related Plans

Plan Number	Revision	Plan Title	Prepared by	Date
Plan Number	Revision	Plan Title	Prepared by	Date
50001-E-IS-674	2	Layout Plan	NJC Irrigation Solutions	12/09/2025

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1. INTRODUCTION

1.1. ORGANISATION

Progressive Rural Solutions has prepared this Tier 3 Odour and Amenity Assessment on behalf of Stroud Dairies for the proposed development of a loose housing dairy system at 106 Bream Creek Road, Bream Creek, Tasmania.

Progressive Rural Solutions provides planning, environmental and water-management services to agricultural industries, with particular experience in intensive animal production, dairy development, effluent management and the assessment and management of odour and other potential amenity impacts. Progressive Rural Solutions also prepared the submitted S-Factor Odour Assessment and Management Plan for the proposed development.

1.2. PURPOSE

The purpose of this report is to provide the additional site-specific assessment recommended by Air Environment Consulting following its independent technical review of the submitted S-Factor Odour Assessment and Management Plan. The independent review supported the dairy-specific separation-distance methodology, the calculations reviewed and the proposed odour-management framework. Further assessment was recommended for receptors R1 and R17 because the measured source-to-receptor distances are less than the separation distances calculated through the Tier 2 assessment.

This report therefore provides a Tier 3 Environmental Risk Assessment of the potential odour and broader amenity impacts at R1 and R17. It considers:

- the existing dairy operation and established relationship with each receptor;
- the changes arising from the proposed development;
- the location, nature and management of relevant odour sources;
- the available operating and complaint history;
- consultation relevant to the affected receptors;
- the design and operational controls contained in the application;
- the submitted odour, effluent and complaints-management measures; and
- the applicable requirements of the Tasmanian Planning Scheme Attenuation Code.

The report does not replace or recalculate the submitted Tier 2 assessment. The proposed site layout and source-to-receptor distances remain unchanged. The purpose of the Tier 3 assessment is to determine whether the available site-specific evidence demonstrates that the proposed development can operate at the assessed distances without causing an unreasonable odour impact or unreasonable loss of amenity at R1 or R17.

1.3. REPORT FORMAT

This report is structured to:

1. describe the background to the assessment and the matters identified through the EPA advice, applicant response and independent technical review;
2. explain the Tier 3 assessment framework and the site-specific method adopted;
3. compare the existing dairy operation with the proposed loose housing development;
4. assess the relevant odour sources, pathways, controls and residual risks for R1 and R17;
5. assess the proposal against the applicable performance criteria of the Attenuation Code;
6. identify the operational, complaint-response and verification measures that will apply to the development; and
7. provide receptor-specific findings and an overall conclusion.

This report should be read together with the submitted Environmental Impact Statement, S-Factor Odour Assessment and Management Plan, Effluent Management Plan, Feedback and Complaints Management Plan.

2. BACKGROUND AND ASSESSMENT REQUIREMENT

2.1. PROPOSED DEVELOPMENT

Stroud Dairies proposes to develop a loose housing dairy system at 106 Bream Creek Road, Bream Creek. The site currently operates as a pasture-based dairy with a maximum productive herd of approximately 780 cows, supported by an existing dairy, concrete feedpad, yards, silage storage, effluent collection and storage infrastructure and surrounding grazing and fodder-production areas.

The proposed development will transition the productive milking herd to a predominantly housed system designed for up to 1,000 cows. The proposal includes:

- construction of an open-sided, naturally ventilated loose housing barn;
- conversion and continued use of existing dairy infrastructure;
- changes to the use of the existing feedpad and surrounding paddocks;
- expanded feed and silage storage;
- a bedded-pack management system;
- expanded solids separation, manure and spent-bedding management;
- a three-stage effluent storage and recycling system; and
- continued beneficial application of effluent, sludge and manure to agricultural land.

The proposal will change the location, intensity and management of several activities that may contribute to odour. It will also reduce or relocate some activities currently occurring near the existing dairy, surrounding paddocks and Bream Creek Road.

2.2. SUBMITTED ODOUR ASSESSMENT AND MANAGEMENT PLAN

Progressive Rural Solutions prepared an S-Factor Odour Assessment and Management Plan to support the development application. The assessment identified sensitive receptors surrounding the site and calculated the applicable separation distances using the dairy-specific methodology contained in the Victorian Department of Energy, Environment and Climate Action's *Animal Production Separation Distance Requirements – Consultation Draft*, May 2023.

The assessment considered the proposed herd size, design and management of the loose housing system, receptor type, intervening terrain and vegetation and the adopted wind-frequency factor. It also established management, monitoring, responsibility and complaint-response measures for the proposed operation.

The Tier 2 assessment identified that most surrounding sensitive receptors were located beyond their calculated separation distances. Two external receptors were identified within the calculated distances:

- R1 at 115 Bream Creek Road (Property ID: 5959974 – 26872/1); and
- R17 at 20 Bream Creek Road (Property ID: 5959931 – 113099/1).

The submitted assessment therefore included further discussion of the existing operations, receptor circumstances, proposed operational changes and management controls relevant to those receptors.

2.3. EPA ADVICE AND APPLICANT RESPONSE

The application and supporting odour assessment were referred to the Tasmanian Environment Protection Authority for advice. The EPA identified concerns regarding the proposed separation from R1 and R17 and considered that further site-specific assessment was required. Its advice included a recommendation for atmospheric dispersion modelling.

Progressive Rural Solutions subsequently provided a written response addressing the assessment methodology, separation-distance calculations, receptor classifications, management measures and the practical limitations of applying dispersion modelling to the proposal.

The EPA advice appears to describe the receptor factor used in the submitted assessment differently from the factor actually applied in the dairy-specific calculation. The submitted calculation and methodology were subsequently examined in detail through Council's independent technical review.

The EPA advice and the applicant's response form part of the background to this assessment. The final assessment requirement is informed by the subsequent independent review commissioned by Council.

2.4. INDEPENDENT TECHNICAL REVIEW

Sorell Council engaged Air Environment Consulting to undertake an independent technical review of the submitted S-Factor Odour Assessment and Management Plan and the applicant's response to the EPA advice.

The independent review concluded that:

- the dairy-specific assessment methodology was appropriate;
- the calculations examined were correct;
- the default wind-frequency factor was appropriate given the limitations of the available regional meteorological information;
- the proposed management measures were consistent with good industry practice; and
- the submitted assessment provided a sound technical basis for Council's consideration of the proposal.

The review did not identify a need for further assessment of the receptors located beyond their calculated Tier 2 separation distances. Further site-specific assessment was recommended for R1 and R17 because the actual source-to-receptor distances are less than the calculated Tier 2 separation distances. The review reported:

Receptor	Relevant proposed separation	Calculated Tier 2 separation
R1 – 115 Bream Creek Road	Approximately 130m	350m
R17 – 20 Bream Creek Road	Approximately 210m	250m

The distances relate to the relevant sources adopted in the independent review. Individual distances to the existing dairy, proposed housing, Pond 3, silage storage, commodities storage and other sources are considered separately in the receptor assessments contained in this report.

Air Environment recommended that a Tier 3 Environmental Risk Assessment be prepared in accordance with the Victorian guidance to demonstrate that potential amenity impacts at R1 and R17 can be appropriately managed at the reduced separation distances.

The review identified that the assessment could draw upon multiple lines of evidence, including operating history, complaints, experience at comparable facilities, field observations and atmospheric dispersion modelling where considered necessary. It also identified an alternative whereby Council could undertake an informal risk assessment based on its knowledge of the existing dairy, its management practices, the proposed Odour Management Plan and the complaint history for the site.

2.5. MATTERS REQUIRING FURTHER ASSESSMENT

The independent review did not conclude that the reduced separation distances would result in unacceptable odour impacts. Rather, the Tier 2 shortfalls mean that further site-specific evidence is required before Council determines whether the potential amenity risks are acceptable.

The matters requiring further assessment are therefore:

- the existing operational relationship between the dairy and R1;
- the way the proposed development will change the activities and odour sources affecting R1;
- the cumulative influence of the existing dairy, proposed housing, Pond 3, feed and silage activities and associated manure and effluent management;
- the relocation of the principal silage storage further from R17;
- the contribution of the proposed silage, runoff storage, housing and other retained or proposed sources to R17;
- the relevance of the operating and complaint history;
- the effectiveness of the submitted design and management controls;
- the arrangements for operational verification, complaint investigation and corrective action; and
- whether the proposal satisfies the applicable performance criteria of the Tasmanian Planning Scheme Attenuation Code.

This report addresses those matters through separate assessments of R1 and R17, supported by the existing and proposed Effluent Management Plans, the Environmental Impact Statement, project plans, consultation information and the submitted operational management framework.

3. TIER 3 ASSESSMENT FRAMEWORK

3.1. DEECA ASSESSMENT FRAMEWORK

The submitted odour assessment applied the separation distance methodology contained in the Victorian Department of Energy, Environment and Climate Action (DEECA) publication *Animal Production Separation Distance Requirements – Consultation Draft*, May 2023.

The DEECA framework provides a tiered approach to assessing the separation between animal production activities and sensitive land uses:

- **Tier 1** applies standard separation distances based on the type and scale of the activity.
- **Tier 2** allows the standard distance to be adjusted using site-specific factors, including animal numbers, receptor density, terrain, vegetation and prevailing winds.
- **Tier 3** provides for a more detailed, site-specific environmental risk assessment where the applicable Tier 2 separation distance cannot be achieved.

The DEECA document is Victorian guidance and does not have direct statutory application in Tasmania. It has nevertheless been adopted as a suitable technical framework for this assessment because it provides a structured method for assessing odour risk from animal production activities specific to the project submitted to Council.

The independent technical review undertaken by Air Environment confirmed that the Tier 2 methodology and calculations used in the submitted Odour Assessment and Management Plan were appropriate. The review recommended further Tier 3 assessment for receptors R1 and R17 because the calculated Tier 2 separation distances were not achieved at those locations.

3.2. PURPOSE OF THE TIER 3 ASSESSMENT

The purpose of a Tier 3 assessment is to determine whether the risk of unreasonable odour impact can be appropriately managed at a separation distance less than that calculated under Tier 2. A Tier 2 separation distance is a screening and planning tool. Where the calculated distance is not achieved, this identifies the need for further assessment; it does not, by itself, establish that an unacceptable odour impact will occur.

Tier 3 therefore requires a closer examination of the circumstances applying to the individual site, odour source and receptor. This includes consideration of:

- the nature and scale of the existing and proposed operations;
- the location and characteristics of the relevant odour sources;
- the actual relationship between each source and receptor;
- the existing operating and complaint history;
- changes between the existing and proposed operations;
- local terrain and potential odour pathways;
- proposed design and operational controls;
- management of abnormal or upset conditions; and
- the measures available to verify performance and respond to any complaint.

There is no single prescribed form for a Tier 3 assessment. The assessment is instead supported by multiple, relevant lines of site-specific evidence. The type and extent of evidence required will depend on the nature of the proposal, the degree of separation distance shortfall and the information already available for the site.

3.3. EVIDENCE CONSIDERED

The DEECA guidance identifies a range of information that may contribute to a Tier 3 assessment. This can include operating and complaint history, field odour observations, experience from comparable facilities, community consultation and atmospheric dispersion modelling.

Not every form of evidence will be relevant or necessary for every proposal. The evidence should be selected having regard to the individual site and should, when considered together, provide a reasonable basis for assessing the likelihood and consequence of off-site odour.

The following information has been considered in this assessment:

- the submitted Environmental Impact Statement;
- the submitted Odour Assessment and Management Plan;
- the existing and proposed Effluent Management Plans;
- the proposed development plans and operational information;

- the existing dairy and feedpad operating history;
- available information regarding previous complaints;
- consultation undertaken with the owner of receptor R1;
- the proposed odour prevention and management controls;
- the Complaints Management Plan;
- the independent technical review prepared by Air Environment;
- the *Goulburn Broken Catchment Management Authority Dairy Cattle Feedpad Guidelines* as an indicative assessment of the existing feedpad near R1; and
- the proposed operational verification and corrective action measures.

These sources provide several separate but related lines of evidence, including existing site performance, the nature of the proposed operational changes, receptor-specific circumstances, engineering controls and ongoing management arrangements.

3.4. ASSESSMENT METHOD ADOPTED

This Tier 3 assessment uses a source–pathway–receptor approach.

For each receptor, the assessment considers:

1. **Source** – the activity or infrastructure with the potential to generate odour, including its scale, duration and operating characteristics.
2. **Pathway** – the distance, terrain, prevailing wind conditions and other factors affecting the potential movement of odour from the source.
3. **Receptor** – the location and sensitivity of the residence, together with the existing relationship between the receptor and the dairy operation.
4. **Controls** – the design, operational and management measures that prevent or reduce odour generation and release.
5. **Verification** – the measures that will be used to identify, investigate and correct any unacceptable odour impact during operation.

The assessment also compares the existing and proposed operations. This is important because the site is not a new dairy development in a previously unaffected area. It is an established dairy operation, and the proposal will alter the location, design and management of a number of existing activities.

The comparison considers whether the development will:

- introduce a new odour source;
- increase the scale or duration of an existing source;
- relocate an existing source closer to or further from a receptor;
- improve the containment or management of manure and effluent;
- reduce reliance on activities currently undertaken near a receptor; or
- introduce additional controls that are not part of the existing operation.

The assessment of the R1 and R17 receptors is presented separately because the relevant sources and site circumstances differ. The R1 assessment principally relates to the dairy, proposed housing and effluent management infrastructure. The R17 assessment relates principally to silage storage and management.

The Attenuation Code assessment is provided separately. It is relevant supporting information but does not replace the receptor-specific Tier 3 assessment.

3.5. SCOPE AND LIMITATIONS

This assessment has been prepared using the available site plans, operational information, management documents, complaint history and consultation information. No project-specific atmospheric dispersion modelling or pre-development field odour survey has been undertaken. The independent technical review identified modelling as one form of evidence that could be considered if necessary, rather than as the only available basis for a Tier 3 assessment.

A field survey of the current operation would describe conditions associated with the existing pasture-based dairy. It would not directly measure or predict odour from the proposed loose housing system and associated infrastructure. Similarly, the usefulness of comparison with another dairy would depend on that facility having sufficiently similar housing, manure handling, climatic, terrain and receptor conditions.

The Goulburn Broken Catchment Management Authority and Murray Dairy feedpad methodology has been applied as an indicative assessment of the existing feedpad near R1. The assessment is based on an assumed feedpad occupancy of

four hours per cow per day because the time spent specifically on the feedpad has not been separately recorded. The resulting distance is used to characterise the existing source-to-receptor relationship. It is not a statutory Tasmanian separation requirement and is not relied upon as evidence that the proposed development will necessarily be acceptable.

Information regarding consultation with the owner of R1 is based on the consultation undertaken and reported by the proponent. No formal agreement or memorandum of understanding with the receptor is currently proposed. The consultation history is therefore treated as one component of the assessment and not as a substitute for appropriate odour controls.

The absence of previous odour complaints is also treated as relevant contextual evidence rather than proof that odour has never occurred. It is considered together with the established operating history, proposed changes, separation distances and management measures.

Within these limitations, the available information provides a suitable basis for a site-specific assessment of R1 and R17. The following sections examine the existing and proposed operations and then assess each receptor individually.

4. EXISTING AND PROPOSED OPERATIONS

4.1. EXISTING DAIRY OPERATION

Stroud Dairies currently operates an established pasture-based dairy at 106 Bream Creek Road, Bream Creek. The existing operation accommodates a maximum herd of approximately 780 Friesian dairy cows. Cows are predominantly grazed on pasture and return to the dairy twice daily for milking. The median time spent by cows within the dairy yard area is approximately three hours per cow per day.

An existing concrete feedpad of approximately 3,200m² is located adjacent to the dairy. Approximately 30% of the cows' diet is provided on the feedpad, with the remainder obtained through grazing. The feedpad is dry-scraped each morning. The collected manure and feed residue are transferred into the farm's manure and effluent management system. The time spent specifically on the feedpad has not been separately recorded and should not be assumed to be the same as the total time spent within the dairy and yard area.

The existing dairy operation includes:

- the dairy and associated yards;
- the concrete feedpad;
- silage and feed storage areas;
- manure collection and handling areas;
- the existing effluent collection and treatment system; and
- land application areas used for the beneficial reuse of treated effluent and nutrients.

The dairy has operated in this location for an extended period. Its operating history therefore provides relevant background when considering the existing odour environment and the relationship between the dairy and surrounding residences.

4.2. PROPOSED DEVELOPMENT

The proposed development will change the dairy from a predominantly pasture-based system to a full-time loose housing system accommodating up to 1,000 cows. Under the proposed system, cows will spend approximately:

- 18 hours per day within the bedded loose housing area; and
- six hours per day associated with milking and feeding activities.

The development includes:

- open-sided, naturally ventilated loose housing;
- bedded loafing areas;
- dedicated feeding areas;
- revised manure and bedding collection arrangements;
- enhanced solids separation;
- a three-stage effluent treatment and storage system;
- revised silage and feed storage arrangements; and
- continued beneficial reuse of treated effluent and nutrients on the surrounding farm.

The open-sided housing has been designed to provide natural ventilation and maintain dry bedding conditions. The proposed operating system will allow manure, bedding, feed residues and effluent to be collected and managed in a more controlled manner than under the existing pasture-based operation. The proposal does not involve any change to the development layout or source-to-receptor distances previously assessed in the submitted Odour Assessment and Management Plan.

4.3. PROPOSED EFFLUENT MANAGEMENT SYSTEM

The proposed development includes an upgraded effluent management system designed for the 1,000-cow operation.

The system incorporates:

- collection of wastewater from the dairy, yards and associated controlled areas;
- separation and recovery of manure solids;
- staged treatment through the proposed pond system;
- storage capacity allowing for rainfall, wastewater generation and operational freeboard;
- reuse of treated effluent through irrigation; and
- operational inspection and maintenance requirements.

Pond 3 will provide approximately 29.3ML of storage while maintaining 0.6m of freeboard. The combined operational storage provided by Ponds 2 and 3 is approximately 44.3ML. This exceeds the calculated storage requirement of approximately 33.01ML.

The design and operation of the system are addressed in detail in the Effluent Management Plan. The additional treatment and storage capacity will provide improved control over effluent and reduce the likelihood of uncontrolled or poorly timed management activities.

The proposed solids-separation process will also allow recovered manure and bedding material to be managed separately from the liquid effluent stream. This is relevant to odour management because it reduces the quantity of readily degradable solids entering the treatment ponds and allows the separated material to be managed in a controlled manner.

4.4. EXISTING AND PROPOSED ODOUR SOURCES

The principal existing and proposed odour sources are summarised in **Table 4-1**.

Table 4-1 -Existing and proposed odour sources

Odour source	Existing operation	Proposed operation
Dairy and yards	Up to 780 cows milked twice daily. Cows spend a median of approximately three hours per day within the dairy yard area.	Up to 1,000 cows milked through the dairy, with animal movement coordinated with the housed system.
Feedpad and feeding	Approximately 30% of the diet supplied on an existing 3,200m ² concrete feedpad. Feedpad dry-scraped daily.	Feeding undertaken as part of the purpose-designed housed system, with more controlled collection of manure and feed residues.
Cow housing	No full-time housing. Cows predominantly maintained on pasture.	Open-sided, naturally ventilated housing with managed bedding and manure removal.
Manure and bedding	Manure and feed residues collected from the dairy and feedpad and managed through the existing system.	Dedicated collection, solids separation and controlled management of recovered manure and bedding.
Effluent treatment	Existing dairy effluent collection, treatment and reuse system.	Upgraded three-stage system with approximately 44.3ML of combined operational storage in Ponds 2 and 3.
Silage storage	Silage stored and used as part of the existing feeding system.	Silage retained as a feed source, with the principal storage area located further from R17 than the existing silage storage.
Effluent irrigation	Treated effluent beneficially reused on the farm.	Continued beneficial reuse under the proposed Effluent Management Plan, with increased treatment and storage capacity.

4.5. CHANGES RELEVANT TO ODOUR RISK

The increase from 780 to 1,000 cows will increase the total quantity of manure and effluent generated by the dairy operation. Cow numbers alone, however, do not describe the resulting odour risk. The way in which manure, bedding, feed residues and effluent are collected, treated, stored and reused is also relevant.

The proposed development will move the operation to a more controlled system incorporating:

- purpose-designed housing and feeding areas;
- managed bedding;
- routine collection of manure and feed residues;
- separation of solids from the liquid effluent stream;
- additional effluent treatment and storage capacity;
- defined inspection and maintenance requirements;
- controls for silage and feed management; and
- documented procedures for responding to complaints or abnormal operating conditions.

These changes do not remove the potential for odour, they do, however, provide a clearer and more controlled management framework than applies to the existing pasture-based operation and feedpad. The following sections consider whether the proposed design and management measures are sufficient to manage the site-specific odour risk at R1 and R17.

5. TIER 3 ASSESSMENT - R1

5.1. RECEPTOR CONTEXT

Receptor R1 is the residence at 115 Bream Creek Road, Property ID:5959974, 26872/1. It is the closest sensitive receptor to the existing dairy and a number of the proposed development components. The submitted Tier 2 assessment adopted a separation distance of approximately 130m between R1 and the nearest relevant proposed odour source. The calculated Tier 2 separation distance was 350m. The available separation therefore does not satisfy the Tier 2 screening distance, and a more detailed site-specific assessment is required.

The source-to-receptor distances have not changed since the submitted Odour Assessment and Management Plan. The approximate distances relevant to this assessment are summarised in **Table 5-1**.

Table 5-1 -Approximate source-to-receptor distances for R1

Source	Approximate distance to R1
Existing dairy and associated operational area	110 m
Proposed loose housing	150 m
Proposed Pond 3	130 m



Figure 5-1 - R1 and relevant existing and proposed odour sources

Figure 5-1 identifies R1 in relation to the existing dairy and feedpad, proposed loose housing and Pond 3. The distances shown are source-to-receptor distances used for the odour assessment and should not be confused with the activity-site boundary measurement required by the Attenuation Code.

These distances should be read with the submitted development plans. They represent the physical separation between the identified infrastructure and receptor but do not, by themselves, determine the likelihood or severity of odour impact.

5.2. EXISTING OPERATING HISTORY

R1 is located near an established dairy operation rather than a new activity proposed within an otherwise unaffected setting. The existing dairy accommodates up to approximately 780 cows. Cows are milked twice daily and spend a median of approximately three hours per day within the dairy yard area. The existing 3,200m² concrete feedpad is also located near the dairy and provides approximately 30% of the cows' diet. The feedpad is dry-scraped each morning, with manure and feed residues collected for management through the farm system.

No odour complaint from R1 has been identified through the available operating history. This does not prove that odour has never been detectable at the residence. It does, however, indicate that the existing dairy and feedpad have operated near R1 without an identified history of odour causing sufficient concern to result in a complaint.

Occasional concerns associated with the existing operation have instead related to noise and mixer-wagon activity around the dairy and property entrance. These are separate from odour and will be addressed through the proposed development layout and revised operating arrangements. The existing operating history is therefore a relevant, although not conclusive, line of evidence in assessing the proposed development.

5.3. EXISTING FEEDPAD GUIDELINE ASSESSMENT

The Goulburn Broken Catchment Management Authority *Dairy Cattle Feedpad Guidelines for the Goulburn Broken Catchment* provide a method for calculating an indicative separation distance for dairy feedpads. The guideline has been applied to the existing feedpad to provide additional context for the established relationship between the dairy operation and R1. It has not been used to assess the proposed loose housing system or replace the DEECA Tier 2 and Tier 3 assessment framework.

The calculation adopts:

- 780 cows using the existing dairy operation;
- an average liveweight of approximately 650 kg, corresponding to a liveweight conversion factor of 1.12;
- an estimated feedpad occupancy of four hours per cow per day;
- the existing paved feedpad, which provides more than 10 m² per time-adjusted dairy cow unit;
- a feedpad that is dry-scraped daily, which is more frequent than the adopted at-least-weekly cleaning category;
- S2 = 1;
- S3 = 1; and
- S4 = 1.

The feedpad occupancy of four hours per day is an estimate. The time spent specifically on the feedpad has not been separately recorded and should not be confused with the total time spent within the dairy and yard area.

Table 5-2 -Existing feedpad indicative separation calculation

Calculation input	Adopted value
Existing herd	780 cows
Liveweight conversion factor	1.12
Liveweight-adjusted dairy cow units	$780 \times 1.12 = 873.6$ DCU
Estimated feedpad occupancy	4 hours/day
Daily occupancy adjustment	$4 \div 24 = 0.1667$
Time-adjusted dairy cow units	$873.6 \times 0.1667 = 145.6$ DCU
Existing feedpad area	Approximately 3,200 m ²
Feedpad area per adjusted DCU	Min 10.0m ² /DCU
S1 – paved feedpad and cleaning category	31
S2	1
S3	1
S4	1
Combined separation factor	31
Square root of adjusted DCU	$\sqrt{145.6} = 12.066$
Indicative separation distance	$31 \times 12.066 = 374.1$ m

The calculated indicative separation distance for the existing feedpad is therefore approximately 374m. The existing dairy and associated operational area are approximately 110m from R1. The exact distance from the feedpad boundary should be read from the accompanying source and receptor plan. On the available information, the existing feedpad does not achieve the indicative GBCMA separation distance.

This does not represent statutory non-compliance and does not establish that unreasonable odour currently occurs at R1. It demonstrates that the existing feedpad has operated within its indicative guideline distance. No previous odour complaint from R1 has been identified through the available operating history. These matters provide relevant context for comparing the established operation with the proposed development.

5.4. CONSULTATION

The proponent has consulted directly with the owner of R1 about the proposed development. This has included reviewing the site plans and renders, explaining how day-to-day activity around the existing dairy would change, and discussing the appearance and operation of the proposed third effluent pond.

According to the proponent's written account, the owner of R1 responded positively to the anticipated reduction in mixer wagon traffic, cow movements and activity near the existing dairy. He also raised questions about the proposed pond, which the proponent discussed with him and followed up with additional renders. At the conclusion of both discussions, he indicated that he was happy with the proposal, provided his interests continued to be considered (Bignell, written communication, 19 August 2026).

This consultation provides useful context for the assessment of R1. It demonstrates that the nearby resident has been informed about the proposed changes and has an established means of discussing any concerns with the dairy operator. The assessment of potential odour impacts remains based on the proposed design, operating practices and odour management measures.

5.5. CHANGE FROM THE EXISTING OPERATION

The proposed development will increase the maximum herd from approximately 780 to 1,000 cows and will result in cows spending a greater proportion of the day within the developed dairy area. This has the potential to increase the quantity and concentration of manure, bedding and effluent requiring management.

This increase must be considered together with the change in the way these materials will be handled.

The proposal introduces:

- purpose-designed loose housing;
- managed bedding areas;
- dedicated feeding arrangements;
- routine collection of manure, bedding and feed residues;
- enhanced separation of solids from liquid effluent;
- a three-stage effluent treatment system;
- increased effluent storage capacity;
- defined inspection and maintenance requirements; and
- operational procedures for managing abnormal conditions and complaints.

Activities associated with the existing mixer wagon and dairy entrance, which have previously been the subject of rare amenity concerns, will also be relocated or substantially reduced through the proposed arrangements. The development will therefore increase the scale of the dairy while also replacing a number of existing activities with a more structured collection, treatment and management system.

5.6. SOURCE-PATHWAY-RECEPTOR ASSESSMENT

DAIRY AND LOOSE HOUSING

The proposed loose housing will accommodate cows for approximately 18 hours per day. Potential odour sources include fresh manure, urine, soiled bedding, feed residues and areas that remain wet or are not cleaned adequately.

The proposed housing is open-sided and naturally ventilated. Natural ventilation will assist in maintaining dry bedding and avoiding the accumulation of warm, humid conditions within the structure. It will also result in diffuse air movement through the housing rather than odour being discharged through a single ventilation outlet. The principal controls will be the maintenance of dry bedding, routine removal of manure and spoiled feed, prompt attention to wet areas and appropriate management of recovered material.

Odour risk will increase if bedding becomes excessively wet, manure is allowed to accumulate or feed residues are not removed. These matters must therefore form part of the routine inspection and corrective action program all of which is detailed in the application reports.

EFFLUENT TREATMENT AND STORAGE

Pond 3 will be approximately 130m from R1 and represents the nearest relevant proposed source adopted in the Tier 2 assessment. The proposed effluent system provides staged treatment, solids separation and storage capacity exceeding the calculated operational requirement. The separation of manure solids before liquid enters the pond system will reduce the organic loading on the treatment ponds and assist in maintaining effective pond performance.

The combined operational capacity of Ponds 2 and 3 is approximately 44.3ML compared with a calculated requirement of approximately 33.01ML. Pond 3 will maintain 0.6 m of freeboard. The additional capacity is relevant because it reduces

the likelihood of emergency pumping, overloading or poorly timed effluent management. These are conditions that can increase odour risk.

Potential higher-risk circumstances include:

- excessive solids entering the pond system;
- overloading or short-circuiting of the treatment process;
- low storage capacity resulting from poor water-level management;
- disturbance of anaerobic material;
- pump or equipment failure; and
- prolonged abnormal weather conditions.

Routine inspection, maintenance of freeboard, removal of accumulated solids and prompt corrective action will be required to manage these risks which are also included in the detailed site management plans included in the application.

MANURE, BEDDING AND FEED RESIDUES

Separated manure, used bedding and feed residues may generate odour if stored wet, allowed to become anaerobic or retained for extended periods in an uncontrolled location. Recovered material must be managed on a firm and controlled area, kept as dry as practicable and removed or reused at appropriate intervals. Any temporary stockpile should be managed to avoid ponding, saturation and prolonged anaerobic conditions.

EFFLUENT REUSE

Treated effluent will continue to be beneficially reused on the farm. Irrigation can create short-term odour if effluent is poorly treated, applied under unsuitable weather conditions or allowed to pond.

Reuse should therefore be undertaken in accordance with the Effluent Management Plan. Irrigation should avoid conditions likely to direct odour toward R1 and should not result in surface ponding or runoff.

5.7. WEATHER AND ODOUR PATHWAY

The submitted Tier 2 assessment applied the default wind factor. The independent technical review accepted the use of that factor. This Tier 3 assessment does not rely on a claim that prevailing winds will always carry odour away from R1. Wind direction and atmospheric conditions will vary, and there will be occasions when air movement is from the dairy toward the residence.

The assessment instead recognises that the close separation requires odour to be controlled at the source. Weather conditions remain relevant to daily management, particularly when:

- irrigating treated effluent;
- handling accumulated solids;
- removing or disturbing manure and bedding;
- managing silage or spoiled feed; and
- undertaking maintenance that may temporarily expose odorous material.

Where practicable, these activities should be deferred when weather conditions are likely to carry odour directly toward R1 which aligns with the submitted application documents and management plans.

5.8. MANAGEMENT AND VERIFICATION

The following measures, previously proposed, are required to manage and verify odour performance at R1:

- routine inspection of the housing, bedding and feeding areas;
- prompt correction of wet bedding, manure accumulation or spoiled feed;
- inspection and maintenance of the solids-separation system;
- monitoring of pond condition, levels, freeboard and visible performance;
- controlled storage and timely reuse of recovered manure and bedding;
- weather-based management of higher-risk activities;
- recording and investigation of abnormal odour events;
- direct communication with the owner or occupier of R1 where a potentially significant event occurs;
- acknowledgement of any complaint within three business days;
- provision of a formal response within five business days, or another timeframe agreed with the complainant; and
- implementation and recording of corrective action where the dairy is identified as the likely source.

These measures have previously been incorporated into the Odour Management Plan and are proposed to be implemented for the life of the development.

5.9. R1 ASSESSMENT CONCLUSION

R1 is located within the calculated Tier 2 separation distance, and the potential for odour at the residence cannot be excluded. The site-specific evidence relevant to R1 is:

- the receptor is located near an established dairy and feedpad;
- the existing feedpad does not achieve its calculated indicative GBCMA separation distance of approximately 374m, demonstrating that the established operation already occurs within the relevant guideline distance;
- no previous odour complaint from R1 has been identified through the available operating history, although this is not treated as proof that odour has never been detectable;
- the concerns previously raised relate principally to noise and mixer-wagon activity rather than odour;
- the proponent has undertaken direct consultation with the receptor;
- the proposed system provides more structured manure, bedding and effluent management;
- solids separation and additional treatment capacity will improve control of the effluent stream;
- the proposed storage capacity exceeds the calculated requirement;
- abnormal operating conditions have been identified and can be addressed through defined corrective actions; and
- an operational complaints and verification process will remain in place.

The increase in cow numbers and time spent within the developed area means that ongoing management will be important. The Tier 2 shortfall should therefore not be dismissed, however, the existing feedpad already operates within its indicative GBCMA separation distance without an identified history of odour complaints from R1. When this operating history, the proposed infrastructure, improved manure and effluent controls and the verification measures are considered together, the available evidence supports the conclusion that the risk of unreasonable odour impact at R1 can be appropriately managed.

This conclusion is conditional on the proposed system being constructed and operated in accordance with the Effluent Management Plan, Odour Management Plan and the additional verification and corrective action measures set out in this report.

6. TIER 3 ASSESSMENT – RECEPTOR R17

6.1. RECEPTOR AND SEPARATION DISTANCE

Receptor R17 is the residence at 20 Bream Creek Road, Property ID:5959931, 113099/1. The Tier 2 shortfall identified for this receptor relates to the proposed silage storage area. The independent technical review adopted a separation distance of approximately 210m between R17 and the proposed silage storage, compared with the calculated Tier 2 separation distance of 250m.

Silage is already stored and used as part of the existing dairy operation. The existing silage activity is approximately 160 m from R17. The proposal will therefore relocate the principal silage storage approximately 50 m further from the residence. The submitted documents contain references to both 210m and 225m for the proposed silage and commodities areas. For the purpose of this assessment, the more conservative separation distance of 210m adopted by the independent technical reviewer has been used.

6.2. SITE-SPECIFIC ASSESSMENT

The proposal does not introduce silage as a new odour source. It relocates an established activity further from R17 and increases the source-to-receptor separation. No specific history of silage-related odour complaints from R17 has been identified. While this does not mean that silage odour has never been detectable, it provides relevant context when considered with the increased separation proposed.

Silage odour will principally be managed through routine storage and housekeeping controls, including:

- appropriate compaction and sealing of stored silage;
- limiting the area of exposed silage during feed-out;
- routine removal of loose or spoiled material;
- diversion of clean stormwater away from the storage;
- collection of leachate and contaminated runoff;
- prevention of ponding around the storage area; and
- investigation and corrective action in response to any complaint.

The silage area should be included in the routine inspections required under the Odour Management Plan.

6.3. CONCLUSION

The proposed silage storage will remain approximately 40m within the calculated Tier 2 separation distance, however, the proposal will move the activity approximately 50m further from R17 than the existing silage storage.

The proposal therefore represents an improvement in the existing source-to-receptor relationship. When this increased separation, the established operating context and the proposed management controls are considered together, the risk of unreasonable silage odour impact at R17 is considered capable of being appropriately managed.

7. ATTENUATION CODE ASSESSMENT

7.1. APPLICATION OF THE CODE

The Tasmanian Planning Scheme Attenuation Code applies to activities listed in Tables C9.1 and C9.2 that have the potential to cause emissions affecting a sensitive use. Table C9.1 identifies a Level 1 “Milking shed (dairy)” as an activity with the potential to generate odour, noise and dust and assigns an attenuation distance of 300 m. Receptor R1 is located within 300 m of the dairy activity. The acceptable solution under clause C9.5.1 A1 is therefore not achieved, and the proposal must be considered against performance criterion C9.5.1 P1.

The Code defines an attenuation distance as the shortest distance from the boundary of the site on which the listed activity is located. The distances used in the Tier 3 assessment are source-to-receptor distances and serve a different purpose. The two assessment approaches should therefore not be treated as equivalent calculations.

The silage storage relevant to R17 is not separately assessed under the Attenuation Code. Table C9.1 excludes works associated with silage for use on agricultural land from the listed composting works activity. R17 has nevertheless been assessed in Section 6 because it was identified in the independent odour review.

7.2. ASSESSMENT AGAINST CLAUSE C9.5.1 P1

Clause C9.5.1 P1 requires an activity listed in Table C9.1 not to cause an unreasonable loss of amenity or unreasonable impacts on the health and safety of an existing sensitive use. The matters relevant to the odour component of this criterion are addressed in **Table 7-1**.

Table 7-1 - Assessment against C9.5.1 P1

Performance consideration	Assessment
Operational characteristics	The site contains an established dairy operating near R1. The existing dairy will remain operational. The proposal will transition the productive milking herd from a predominantly pasture-based system to purpose-designed loose housing with controlled feeding, managed bedding, solids separation and an upgraded effluent management system. The existing feedpad will continue in a changed and reduced operational role.
Scale and intensity	The maximum herd will increase from approximately 780 to 1,000 cows, and cows will spend more time within the developed dairy area. This increases the volume of manure and effluent requiring management but will occur within infrastructure designed for the proposed operating scale.
Degree of hazard or pollution	The principal odour sources are manure, used bedding, feed residues and effluent. These materials are typical of a dairy operation and can be managed through routine collection, solids separation, treatment, storage and reuse.
Hours of operation	The dairy will operate throughout the day, with more concentrated activity during milking, feeding and cleaning. Odour-generating material will therefore require ongoing management rather than controls limited to particular operating hours.
Nature of likely emissions	Potential emissions include odour, noise and dust. This report addresses the odour component. Noise and other amenity matters are addressed through the broader application documentation and proposed operating arrangements.
Existing emissions	R1 is already exposed to activity from the dairy, yards and feedpad. No odour complaint from R1 has been identified through the available operating history. Concerns previously raised have principally related to noise and mixer-wagon activity.
Measures to manage emissions	Controls include naturally ventilated housing, maintenance of dry bedding, routine manure and feed removal, solids separation, staged effluent treatment, additional storage capacity, inspection, maintenance, complaint investigation and corrective action procedures.

7.3. ASSESSMENT CONCLUSION

R1 is located within the attenuation distances identified for the potentially relevant dairy and intensive animal husbandry activities. The acceptable solution under clause C9.5.1 A1 is therefore not achieved and is not relied upon. The proposal must instead demonstrate under clause C9.5.1 P1 that the activity will not cause an unreasonable loss of amenity or unreasonable impacts on the health and safety of the existing sensitive use.

The assessment in **Section 5** establishes that:

- R1 is already located near an operating dairy and feedpad;

- the existing feedpad already operates within its calculated indicative GBCMA separation distance without an identified history of odour complaints from R1;
- no previous odour complaint from R1 has been identified;
- the proposal incorporates purpose-designed manure and effluent management infrastructure;
- the effluent storage capacity exceeds the calculated operational requirement;
- defined operational, inspection and corrective action measures will apply; and
- any complaint will be recorded, investigated and responded to through the Complaints Management Plan.

On the basis of the existing operating history, proposed design and ongoing management controls, the odour component of clause C9.5.1 P1 is considered capable of being satisfied.

8. ODOUR MANAGEMENT AND VERIFICATION

8.1. MANAGEMENT FRAMEWORK

The submitted Odour Assessment and Management Plan provides the primary framework for managing odour from the development. The development layout and source-to-receptor distances have not changed since that Plan was prepared. A complete replacement of the Plan is therefore not required and the Odour Management Plan, Effluent Management Plan and the Complaints Management Plan should be read together.

8.2. OPERATIONAL CONTROLS

Odour will principally be managed by preventing manure, bedding, feed residues and effluent from remaining in wet or uncontrolled conditions. The key operational controls as described in the application and operation documents include:

- maintaining bedding in a dry and serviceable condition;
- routinely removing accumulated manure and feed residues;
- promptly addressing wet or heavily soiled areas;
- maintaining the solids-separation system;
- preventing excessive solids from entering the effluent ponds;
- maintaining pond operating levels and required freeboard;
- inspecting pumps, drains and effluent infrastructure;
- managing separated solids on a firm and controlled area;
- preventing contaminated runoff or leachate from leaving controlled areas;
- maintaining silage covers, seals and drainage;
- removing spoiled silage and loose feed residues;
- considering weather conditions before undertaking higher-risk activities; and
- maintaining suitable records of inspections, incidents and corrective actions.

8.3. ABNORMAL AND UPSET CONDITIONS

Short-term odour risk may increase during equipment failure, prolonged wet weather or other abnormal operating conditions. Potential events include:

- failure of manure collection or solids-separation equipment;
- excessive wetting or fouling of bedding;
- accumulation of manure or spoiled feed;
- pump or drainage failure;
- reduced effluent storage capacity;
- excessive solids loading or poor pond performance;
- damage to silage covers;
- silage spoilage or leachate ponding; and
- emergency disturbance or removal of accumulated organic material.

Where an abnormal condition is identified, as described in the application documents, the operator will:

1. identify and, where practicable, isolate the source;
2. implement immediate measures to reduce further odour generation;
3. repair failed equipment or arrange temporary alternative management;
4. consider weather conditions before disturbing odorous material;
5. inspect potentially affected areas and sensitive receptors where appropriate;
6. record the event, cause and action taken; and
7. review the relevant operating procedure where further preventive action is required.

Where an incident has the potential to affect a nearby receptor, early communication should be undertaken where practicable.

8.4. COMPLAINTS MANAGEMENT

Any odour complaint will be managed in accordance with the Complaints Management Plan.

The complaint record should include:

- the complainant's details, where provided;
- the date and time of the reported impact;
- the location and nature of the odour;
- the weather and wind conditions;
- dairy activities occurring at the time;

- the condition of relevant housing, silage and effluent areas;
- the likely source identified through the investigation;
- immediate and longer-term corrective actions; and
- follow-up communication with the complainant.

A complaint will be acknowledged within three business days. Where a formal response is requested, it will be provided within five business days, or within another timeframe agreed with the complainant where further investigation is required.

The receipt of a complaint does not, by itself, establish that the dairy is the source. Each complaint should be assessed against site activities, weather conditions and other potential sources. Where the dairy is identified as the likely source, reasonable corrective action should be implemented and recorded.

8.5. VERIFICATION AND REVIEW

Compliance with the calculated separation distance is not the only measure of odour performance. The effectiveness of the proposed controls must also be verified during operation.

Verification will include:

- routine operational inspections;
- recording abnormal events and equipment failures;
- review of complaints and investigation findings;
- confirmation that required corrective actions have been completed;
- review of recurring issues or trends; and
- periodic review of the Odour Management Plan.

The management framework should be reviewed following:

- a substantiated odour complaint;
- a significant failure of the effluent or manure management system;
- a material change to cow numbers or operating methods;
- a change to the approved development layout;
- repeated identification of the same odour source; or
- a request from the planning authority or relevant regulator.

Where the review identifies that the existing controls are not effective, additional measures should be implemented. These may include changes to cleaning frequency, bedding management, manure removal, silage handling, effluent-system operation or the timing of higher-risk activities.

This verification and review process provides a practical means of confirming the conclusions of the Tier 3 assessment once the development is operating.

9. CONCLUSION

This report provides the additional site-specific assessment recommended by the independent technical review for receptors R1 and R17. The submitted Tier 2 assessment remains unchanged and the development layout and source-to-receptor distances have not been altered. This report considers whether the risk of unreasonable odour impact can be appropriately managed where the calculated Tier 2 separation distances are not achieved.

The Tier 3 assessment has considered multiple lines of site-specific evidence, including:

- the established dairy operation and existing odour environment;
- the indicative GBCMA assessment of the existing feedpad;
- the available complaint history;
- consultation with the owner of R1;
- the existing and proposed source-to-receptor relationships;
- the proposed loose housing and feeding arrangements;
- the upgraded manure and effluent management system;
- increased effluent treatment and storage capacity;
- silage relocation and management;
- proposed operational controls;
- abnormal and upset condition management; and
- complaint investigation, verification and corrective action procedures.

For R1, the assessment recognises that the proposed development will increase the maximum herd from approximately 780 to 1,000 cows and concentrate more activity within the developed dairy area. R1 is already located near the established dairy and feedpad. The existing feedpad does not achieve its calculated indicative GBCMA separation distance of approximately 374m. No previous odour complaint from R1 has been identified through the available operating history, although this is not treated as proof that odour has never been detectable.

The proposed development will introduce purpose-designed housing, managed bedding, solids separation, staged effluent treatment and storage capacity exceeding the calculated operational requirement. Subject to these systems being appropriately operated and maintained, the available evidence supports the conclusion that the risk of unreasonable odour impact at R1 can be managed.

For R17, the proposal will relocate the principal silage storage from approximately 160m to approximately 210m from the residence. This increases the existing separation by approximately 50m. The proposal therefore improves the source-to-receptor relationship, and the remaining risk can be managed through routine silage storage, drainage and housekeeping controls.

R1 is located within the attenuation distances identified under Table C9.1 for the potentially relevant dairy activities. The acceptable solution under clause C9.5.1 A1 is not achieved, however, the existing operating history, nature of the proposed development and measures available to manage emissions provide a reasonable basis for satisfying the odour component of performance criterion C9.5.1 P1.

No project-specific dispersion modelling or pre-development field odour survey has been undertaken. The assessment instead relies on several complementary and site-specific lines of evidence. The limitations of that evidence have been identified and are addressed through ongoing operational verification, complaint investigation and corrective action.

The existing Odour Assessment and Management Plan does not require replacement because the development layout and assessed source-to-receptor distances have not changed. On the basis of the information available, it is concluded that the proposed development can operate without causing an unreasonable odour impact at R1 or R17, subject to:

- construction and operation in accordance with the approved development plans;
- implementation of the Effluent Management Plan;
- implementation of the Odour Assessment and Management Plan;
- implementation of the Feedback and Complaints Management Plan;
- ongoing inspection and maintenance of the housing, bedding, manure, silage and effluent infrastructure; and
- prompt investigation and corrective action where an odour issue is identified.

The Tier 2 separation shortfalls have therefore been considered through a proportionate, site-specific Tier 3 assessment. The available evidence provides a reasonable basis for Council to determine that the potential odour risks can be appropriately managed.

10. REFERENCES

10.1. REGULATORY AND TECHNICAL GUIDANCE

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