Tremain Ivey Advisory
Agricultural Consultants

Planning Proposal
207 Broulee Road, Broulee

Agricultural Consulting Report to:

Brightlands Living Pty Ltd

Prepared for: Edward Fernon

9 February 2023

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Attachments

1 Proposal

It is understood that Brightlands Living are investigating the lodgement of a planning proposal for 207 Broulee Road, Broulee to create an agrihood on a 126.7 hectare project site (Figure 1). The project would consist of housing in clusters of 40-50 with large communal open areas (Figure 2).

It is proposed that approximately 100 hectares be rezoned from Primary Production (RU1) to Environmental Living (C4) and approximately 5 hectares would be rezoned to Environmental Conservation (C2). The remaining part of the project site which is currently zoned Environmental Conservation (C2) would be unchanged (Figures 3 and 4).

There would be approximately 14 hectares across the site for agriculture production including 7.7 hectares of farming land around the main house for livestock so that it is separated from the wetland and conservation zones. Approximately 6.5 hectares would be allocated for vegetable and fruit growing.

In addition, a café and restaurant are to be provided on site utilising the produce from the land. Furthermore, the developers are looking to provide a discovery centre adjoining the restaurant. This building will provide a learning centre so that the residents, local school children and potentially TAFE participants can learn the fundamentals of horticulture.

Agrihoods are relatively new to Australia but are more common in the USA. There are examples of agrihood communities in the USA providing paddock to plate offerings at www.agrihoodliving.com.

The proponents have modelled the subject development on the Witchcliffe Ecovillage in Western Australia (www.ecovillage.net.au).

Figure 1 – Location of Property

Figure 2 – Master Plan – The Farm, Broulee

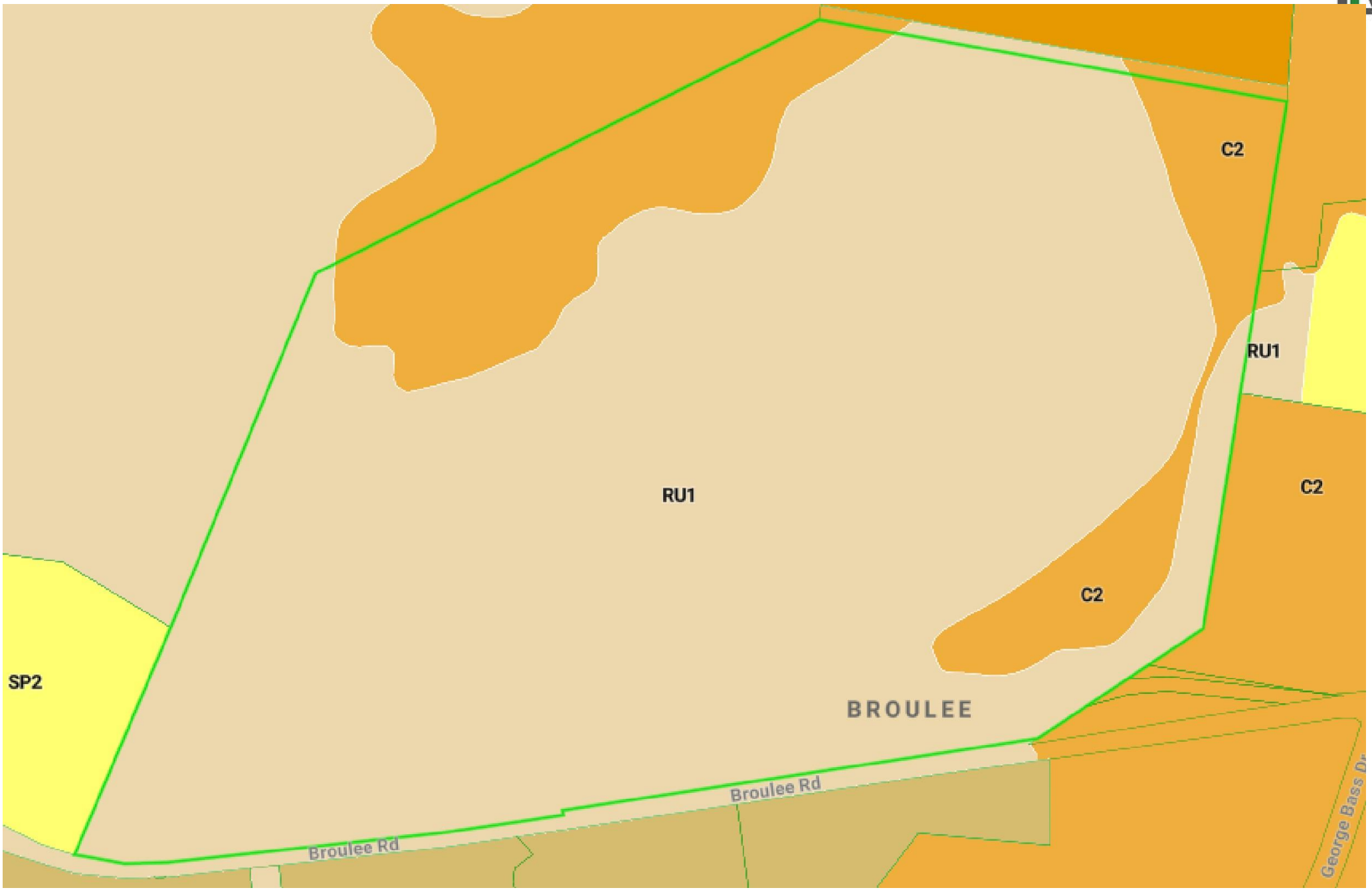

Figure 3 – Current Land Zoning

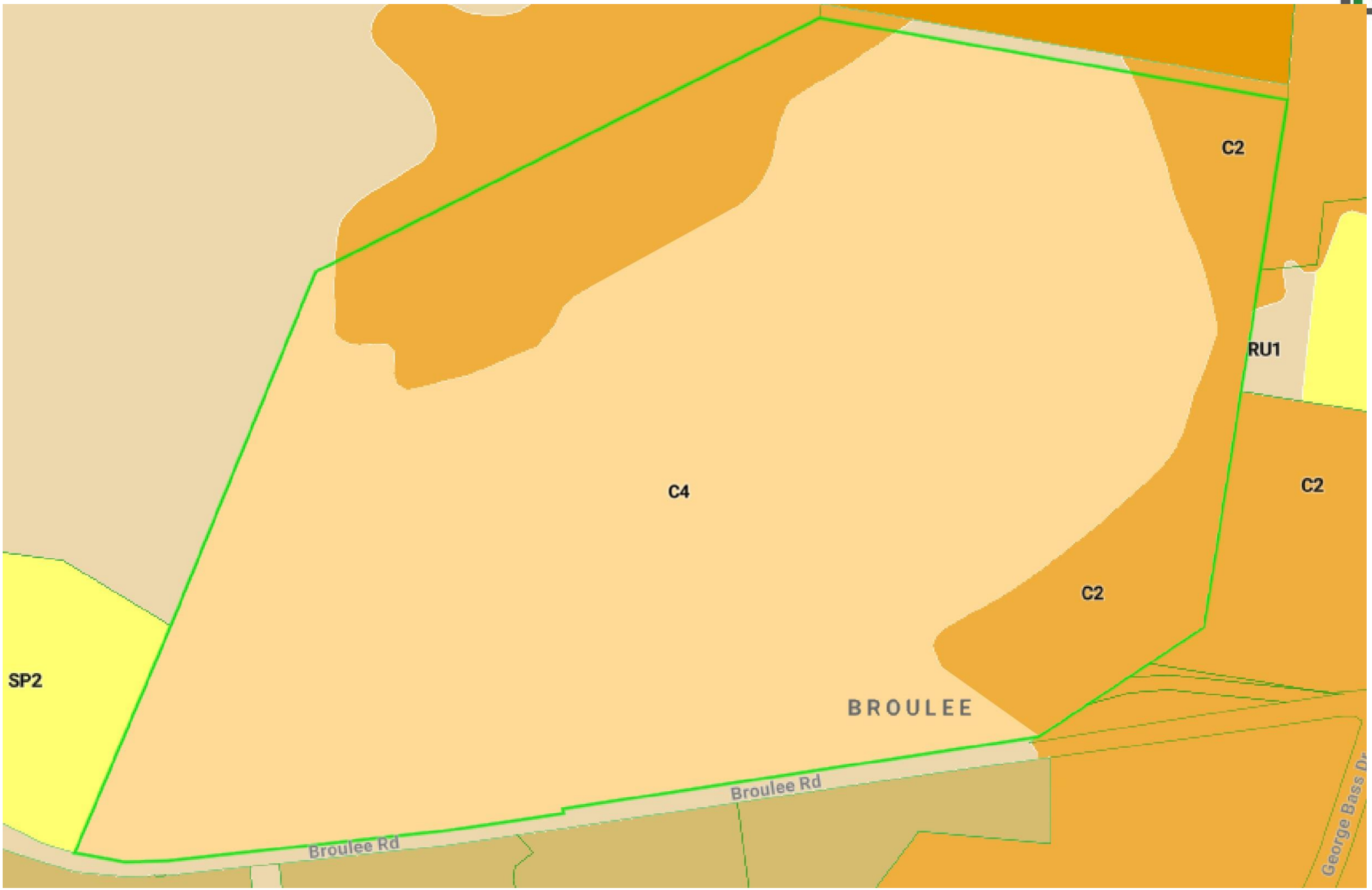

Figure 4 – Proposed Land Zoning

2 Current Agricultural Land Use

We are advised that the project site is currently used for the grazing of cattle, but is not particularly suitable for this purpose, as follows:

1. EcoLogical Australia have provided a biodiversity report outlining significant degradation to the wetlands from cattle.

2. Council have recognised areas on the property for environmental conservation and have requested an additional biodiversity corridor. As a part of this conservation, Council has requested that livestock be removed from these areas.

2.1 Land & Soil Capability

Our analysis indicates that 17% of the project area is mapped as class 8 (extremely low capability land) under the land and soil capability assessment scheme (Office of Environment and Heritage 2012) and would have little or no agricultural value. This area coincides with wetlands on the project site (Figure 5).

Another 3% of the project area is mapped as class 6 (low capability land) and would have limited grazing productivity.

The remainder consists of class 5 (moderate–low capability land – 38%) and class 4 (moderate capability land – 43%). While this land is not highly productive, it is generally suited to cattle grazing.

2.2 Climate

Moruya Heads Bureau of Meteorology station (approximately 7 km from the subject property) recorded an average annual rainfall of 954 mm between 1875 and 2022 (Bureau of Meteorology 2022). The rainfall is summer dominant, with the highest rainfall recorded between January and March, averaging 100 mm per month.

The nearby Moruya Airport station recorded a lower average annual rainfall of 828 mm, however this was over a much shorter period from 1999 to 2022. This was 77% higher than the average rainfall in the driest months between July and September.

Mean maximum temperatures at Moruya Heads are relatively mild ranging from 16.2°C in July to 23.9°C in January. Mean minimum temperatures range from 5.9°C in July to 16.3°C in February.

An average of only 2 days per year below 2°C are recorded. This is the air temperature that a frost is likely to occur. These are most likely in July and August.

2.3 Stocking Rate

Given the land, soil and climate characteristics, the likely stocking rate of the land and soil capability class 4 and 5 land is estimated at 10 to 17 DSE[1] per hectare, depending on the quality of the pasture. The assessment is based on the project area being unimproved to moderate quality improved pastures. Highly improved pastures are capable of carrying significantly more livestock.

On this basis, class 4 and 5 land of the project area is likely to be capable of carrying approximately 60 to 100 cows, based on DSE rating of a self-replacing herd producing weaners of 16.5 DSE per cow. The low capability class 6 and 8 land is disregarded for the purposes of this estimate.

2.4 Productivity

According to Australian Bureau of Agricultural and Resource Economics ('ABARE') farm survey data (ABARES 2022), sales income on coastal NSW farms has averaged approximately $740 per cow between 2010 and 2021 (Attachment 1). On this basis, the annual gross income from an enterprise of 60 to 100 cows is expected to be approximately $44,400 to $74,000 per annum.

Gross margin budgets produced by NSW Department of Primary Industry ('DPI') indicate lower gross sale income for costal cattle enterprises producing weaners in 2019 ranging from $253 per cow for unimproved pastures to $568 per cow for improved pastures (DPI 2019 - Attachment 2). On this basis, the annual gross income from an enterprise of 60 to 100 cows is expected to be approximately $15,200 to $56,800 per annum. This illustrates the wide range in productivity of coastal cattle enterprise and the large impact of pasture quality on income levels.

However, the expected income after expenses is expected to be considerably lower. For example, the gross margin budgets in Attachment 2 indicate expected variable enterprise costs (such as livestock health, bull purchase, pasture maintenance and selling costs) amounting to 32% of expected gross income for an enterprise on unimproved pasture, and 38% of income for an enterprise on improved pasture.

On this basis, the annual gross margin from an enterprise of 60 to 100 cows is expected to be approximately $10,300 to $45,900 per annum.

The gross margin budgets only account for variable costs directly associated with the cattle enterprise. Other overhead or fixed costs (such as labour, freight, rates, insurance, motor vehicle, power, property maintenance and administrative costs) will also be incurred which will reduce the overall profit of the enterprise further. For example, the average farm cash income[2] on coastal NSW farms has averaged $20,135 per annum between 2010 and 2021 (Attachment 1). The average farm size over this

[1] DSE - Dry sheep equivalent (DSE) is a measure used to compare the pasture production and feed requirements of different types of livestock. The basic unit of one DSE is the average amount of feed required to sustain a 50kg dry sheep such as a wether (an adult non pregnant and non-lactating sheep).

[2] Farm cash income is the difference between total cash receipts and total cash costs.

period was 580 hectares running 141 cows. The smaller size of the project area would lead to significantly lower farm income.

On this basis, a cattle enterprise on the project area is not considered to be commercially viable in that it is unable to provide an income consistent with the typical income of a person working full time. The cattle enterprise could only support a part-time work on a commercial basis.

3 Proposed Land Use

3.1 Residual Beef Cattle Enterprise

We understand that it is proposed to retain 7.7 hectares as rural land to be used for livestock grazing.

On the basis set out in Section 2, the residual livestock enterprise is likely to produce a gross income of $1,200 to $5,900 per annum from beef cattle. Gross margins after the deduction of variable enterprise costs are expected to be $800 to $3,600 per annum.

Due to the small size of the residual enterprise, it would not be expected to generate any profit or 'farm cash income' as defined in Section 2.4.

3.2 Horticulture

Approximately 6.5 hectares would be allocated for vegetable and fruit growing. This area would be suited to growing many types of fruit and vegetables. The main limitation would be those crops that prefer a cooler and/or drier climate. This would rule out crops such as apples, cherries and some nut trees.

Typical commercial production levels from horticulture are generally in the range of $10,000 to $30,000 per hectare for vegetables. A series of gross margin budgets published by the DPI in 2013 set out the following levels of expected gross income per hectare (DPI 2013):

Asparagus	$26,400
Beetroot	$6,300
Cabbage	$15,000
Capsicum	$31,500
Carrots	$8,500
Garlic	$27,604
Lettuce	$24,200
Onion	$25,000
Potato summer	$15,300
Potato winter	$14,000
Potato processing	$9,800
Butternut pumpkin	$14,400
Jarrahdale pumpkin	$12,000
Rockmelon	$23,400
Sweet corn (fresh)	$23,650
Sweet corn (processing)	$5,250
Tomato (fresh)	$67,500
Tomato (processing)	$7,800
Watermelon	$18,000
Zucchini	$20,800

The ABARES report ‘Vegetable industry” indicates that the average gross vegetable receipts of outdoor vegetable growing farms was $1,024,800 over 46 hectares, equal to approximately $25,900 per hectare (Attachment 3 - ABARES 2022).

The income from fruit crops can be higher than vegetables in some cases, although others are expected to produce similar income levels. Citrus gross margin budgets published by the DPI in 2018 estimated expected gross income mostly $6,600 and $14,000 per hectare for oranges, but with some higher value mandarins generating up to $40,000 per hectare (DPI 2018).

The Rural Industries Research and Development Corporation (‘RIRDC’) published expected gross incomes for various tree crops (RIRDC 2017) including peaches and nectarines ($37,188 per hectare) and plums and apricots ($42,907 per hectare).

Some high value crops are capable of generating larger incomes. For example, a DPI publication entitled ‘Blueberry establishment and production costs’ estimated expected gross sales income at over $300,000 per hectare (DPI 2015).

At an average production of $25,000 per hectare, the expected gross income would be $162,500 per annum. Premium prices above those assumed in the various budgets referenced may be achievable through organic production, or direct sales to consumers or other end users such as restaurants.

3.3 Conclusion

The proposed grazing and horticultural areas have the potential to generate substantially higher agricultural income than the current cattle enterprise.

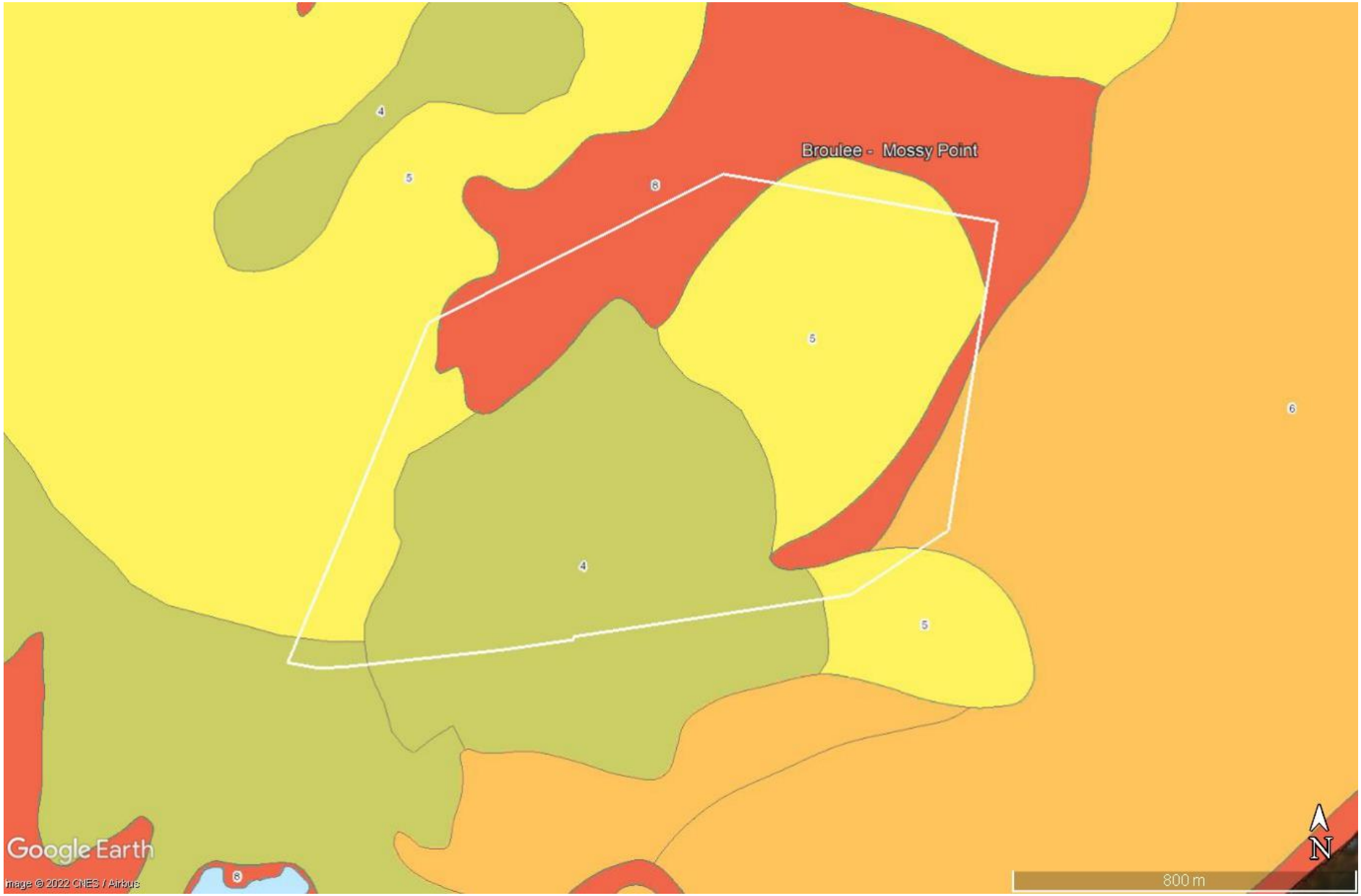

Figure 5 – Land and Soil Capability

4 Rural Lands Strategy

I have been asked to respond to the directions in sections 5.7.2.1, 5.7.2.2 and 5.7.2.3 and 5.7.3 of the Eurobodalla Shire Council 'Rural Lands Strategy (volume 1)'.

4.1 Rural Economic Directions

Section 5.7.2.1 'Rural Economic Directions' has four stated aims which are dealt with separately below:

1. *Aim to retain and grow the current levels of part-time farmers but accept few full-time family commercial agricultural operations may survive the coming 20 years given the land price pressures.*

   The project would grow the levels of part time farmers due to the continuation of some grazing and introduction of horticultural enterprises.

   The current cattle enterprise cannot be considered to be a "full-time family commercial agricultural operation" refer Section 3.3. However, the project provides a means of relieving land price pressures while maintaining agricultural production.

2. *Provided expansion of hobby scale and small part-time farms does not fragment or constrain larger holdings and providing services can cope with the increased traffic, power and internet demands, continued growth of hobby farming is a supportable goal with economic benefits from buoyant farm supply services to building services.*

   The project would support growth of small-scale farming.

   It would provide substantial economic benefits to farm supply businesses through the demand for structural goods such as agricultural fencing and irrigation supplies during the development of the residual cattle enterprise and the horticultural areas. The businesses will also benefit from the supply of ongoing inputs to the enterprises including farming equipment, animal health products, fodder, fertiliser, pest control, packing containers, seed and seedlings.

   The project would not "fragment or constrain" commercial holdings as the current enterprise is not considered to be a full-time commercial proposition (Section 3.3).

3. *Encourage growth in appropriate small-scale non-rural businesses in the rural areas as an option for income for part-time farmers.*

   Non-rural businesses are not within the scope of this agricultural report.

4. *Foster value adding for agricultural produce and access to national and international markets.*

   The project would foster value adding by supplying farm produce directly to restaurants and consumers rather than through wholesale channels. Some small-scale processing of produce (for example the production of preserves, condiments or jams) may also be undertaken.

4.2 Rural Social Directions

Section 5.7.2.2 ‘Rural Social Directions’ sets out four directions which are considered separately below:

1. *Eurobodalla is fortunate in that it does not face the rural decline of some inland councils.*

   The project would further strengthen the economy of the Council and increase agricultural production.

2. *There is demand and capacity to grow the numbers of hobby farmers, retain and grow part-time farmers and keep or expand the associated community viability that comes from retaining an adequate population across the rural areas.*

   The project would grow the numbers of small-scale farmers through access for residents to horticultural and grazing land and resources. It would increase the community viability by increasing the population in rural areas.

3. *The landscape beauty, biodiversity and overall healthy function of agriculture are appreciated not only by residents of the rural areas but by urban and visiting people as well. The wider function of the rural areas is vital to the wellbeing of residents and visitors alike.*

   The project would enhance the healthy function of agriculture by increasing the diversity of agricultural production on the site from a single enterprise (cattle) to a wide range of horticultural crops plus some residual grazing.

   Landscape beauty and biodiversity are not within the scope of this agricultural report.

4. *While employment in the traditional beef and dairy areas may not grow, there are prospects of employment growth in the new food and value adding agricultural endeavours.*

   The project would increase part-time employment in agricultural endeavours, mainly through the cultivation and marketing of high-value horticultural products.

4.3 Rural Environmental Directions

Section 5.7.2.3 ‘Rural Environmental Directions’ sets out four directions which are addressed below:

1. *The tourism industry relies heavily on the natural values and scenic qualities of the rural lands of Eurobodalla.*

   Tourism is not within the scope of this agricultural report.

2. *Some natural habitats and species rely on conservation measures continuing on private rural lands for their ultimate survival.*

3. *There are reciprocal benefits for conserving landscapes and wildlife from pest control to conserving native grasses to support agriculture and gene banks for research and new products. There are bush food products and some new settlers prepared to pay a premium for well conserved and managed rural lands.*

4. *But rural land holders also raise concerns that there is some expectation they conserve biodiversity and landscapes without recognition or benefit for the constraints placed on their agricultural operations. There is a need for balance and for some flexibility. It is important land owners be recognised and treated equitably for conserving the natural values on private lands in the Shire for the wider public*

good. But it is also important such assets not deteriorate significantly over the 20-year vision of this Strategy.

Conservation is not within the scope of this agricultural report. However, existing grasses and other pasture vegetation will be retained on the residual grazing area. The removal of grazing animals from of the wetlands would enhance the environmental value of the project site.

4.4 Supply of Living Opportunities

Section 5.7.3 discusses the 'Supply of Living Opportunities in the General Rural Area'. The text of this section and my response is as set out below:

1. *Given there has been no potential for subdivision in the general rural areas since 1987, the supply of vacant rural ownerships where a dwelling is permissible continues to diminish. DP9 research estimated that less than 300 such properties remain across the Shire where there are some practical prospects of obtaining consent for a dwelling house.*
2. *The recommendations to set new lot sizes based on a landscape approach will see a small increase in supply – particularly in…small lot farms of 40 or less hectares.*

The project would provide living opportunities in a semi-rural setting with a significant agricultural aspect.

5 References

ABARES, 2022. *Farm data portal – Regional farm data*. Available at: https://www.agriculture.gov.au/abares/data/farm-data-portal#data-download. Accessed 8 November 2022.

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Bureau of Meteorology, 2022. *Climate data online*.
Available at http://www.bom.gov.au/climate/data/. Accessed 8 November 2022.

DPI, 2013. *Gross margin budgets – 2013*. Produced in association with Horticulture Australia and Australian Centre for International Agricultural Research.

DPI, 2015. *Blueberry establishment and production costs.* September 2015, Primefact 133, fourth edition.

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DPI, 2019. *Beef gross margins – April 2019*. Available at: https://www.dpi.nsw.gov.au/agriculture/budgets/livestock. Accessed 8 November 2022.

Office of Environment and Heritage, 2012. *The land and soil capability assessment scheme. Second approximation. October 2012.*

RIRDC, 2017. *Regional Economic Multiplier Impacts, Potential Pollinator Deficits across Crops.* 3 February 2017. RIRDC Publication No 17/001

6 Curriculum Vitae – Peter Tremain

NAME:	Peter Leslie TREMAIN "Boongala", Suntop Road, Wellington, NSW
DATE OF BIRTH:	2 August 1961
POSITION:	Senior Consultant - Tremain Ivey Advisory Agricultural and Management Consultants, Business Analysts
TERTIARY QUALIFICATIONS:	Bachelor of Rural Science (Hons) 1986. University of New England Awarded University Medal for academic achievement
PROFESSIONAL AFFILIATIONS:	Member - Ag Institute Australia Member - Australian Association of Agricultural Consultants
PROFESSIONAL EXPERIENCE:	1986 - Present: Agricultural Consultant, Wellington 1979 -1982: Full time Farm Manager - Mixed farm in central western NSW. 1989 – 2005: Part time Farm Manager - Merino sheep farm near Wellington NSW.
SPECIAL EXPERTISE:	• Analysis of farming systems and small businesses. • Application of management techniques to decision making. • Use of computer techniques in business analysis. • Regional economic strategy planning. • Data analysis, interpretation and presentation. • Application of computerised modelling techniques. • Crop and pasture agronomy. • Applied agricultural and economic research.

SELECTED PROJECTS:

Farm & Small Business Management

- Provision of advice to farmer clients relating to financial matters and general farm management requirements.
- Economic analysis of a leading Poll Hereford stud and a 250-cow dairy. Included property inspection and analysis of financial data.
- Detailed analysis of financial and physical performance of one of Australia's leading merino studs. This included constructing a computer model to extrapolate the effects of selection procedures on income, production and genetic gain.
- Appraisal of proposed property purchases assessing both productivity and economic viability.
- Detailed examination of financial and production performance of businesses involved in horticulture, flower production and the nursery industries.
- Economic assessments of businesses involved in timber, essential oil and agroforestry industries.
- Analysis of the financial and physical performance of various fruit, berry and nut growing orchards and plantations, as well as vineyards and vegetable growing enterprises.
- Completed a detailed analysis of profitability and liquidity trends for primary producers within the Wellington Shire.
- Various feasibility studies, cost benefit analyses and business plans for projects including a food manufacturing business, the cut flower industry in western NSW, aquaculture in the Brewarrina Shire, and the production of bushfood products in Bourke.

Economic Loss Assessment

- Detailed assessment of economic loss and the effects of fire on rangeland, crops and pasture at throughout most of NSW. Assessment involved the collection of relevant financial and physical data through property inspections and on-farm interviews, and collating, interpreting and analysing the data collected.
- Detailed assessment of economic loss suffered by various NSW landowners and small businesses resulting from either personal injury, spray damage or professional negligence. Assessment is usually based on a property visit, interview of the manager and analysis of historical, financial and physical data.
    - Various Livestock Industries
    - Vegetable Growing
    - Nursery Operations
    - Fruit Orchards
    - Dryland Winter Crops
    - Dryland Summer Crops
    - Irrigated Crops
    - Non-agricultural Small Businesses
- Attendance at court hearings relating to loss assessment and advice to legal counsel.
- Advice regarding labour and management costs various agricultural and horticultural enterprises.
- Analysis of budgets, equity calculations and farm business performance for litigation regarding rural lending practices.
- Estimate of the effects that Chlorfluazuron (Helix) contamination had on cattle herds and related enterprises in NSW and Queensland. Coordinated the provision of agriculturally related material to the NSW Government, a defendant in a class action brought by over 400 applicants.

Attachment 1

ABARES Farm Surveys Data

NSW Coastal Zone

Year	Beef cows at 30 June (no.)	Beef cattle receipts ($)	Sales per cow ($)	Farm cash income ($)	Area operated at 30 June (ha)	Average Stocking (cows per hectare)
2010	138	$118,579	$859.27	$8,040	875	0.16
2011	118	$108,762	$921.71	$4,823	588	0.20
2012	148	$108,606	$733.82	$11,858	561	0.26
2013	143	$68,804	$481.15	-$24,103	572	0.25
2014	145	$79,904	$551.06	$8,229	678	0.21
2015	144	$96,537	$670.40	$31,584	544	0.26
2016	158	$155,339	$983.16	$56,203	576	0.27
2017	166	$119,970	$722.71	$37,551	497	0.33
2018	159	$90,995	$572.30	$15,839	800	0.20
2019	131	$77,779	$593.73	$13,003	599	0.22
2020	123	$110,711	$900.09	$28,188	341	0.36
2021	120	$106,658	$888.82	$50,409	329	0.36

Attachment 2

Gross Margin Budgets

Department of Primary Industries

BEEF CATTLE GROSS MARGIN BUDGET

Farm enterprise Budget Series: April 2019

Enterprise: **Coastal weaners unimproved pasture**

Enterprise Unit: **100 cows**

				Standard Budget	Your Budget
INCOME:					
32	7 month - steer weaners @	$355 /hd		$11,347	
13	7 month - heifer weaners @	$270 /hd		$3,510	
0.6	CFA Bull @	$1,534 /hd		$920	
11	CFA cows @	$679 /hd		$7,472	
3	Other culls @	$679 /hd		$2,038	
	A. Total Income:			**$25,287**	
VARIABLE COSTS:					
Replacements	1 Bull @	$3,500 /hd		$3,500	
Livestock and vet costs: see section titled beef health costs for details.				$2,052	
Fodder crops / hay / grain				$0	
Drought feeding costs.				$0	
Pasture maintenence (254 Ha unimproved)				$0	
Livestock selling cost (see assumptions on next page)				$2,665	
	B. Total Variable Costs:			**$8,217**	
	GROSS MARGIN (A-B)			**$17,070**	
	GROSS MARGIN/COW			**$170.70**	
	GROSS MARGIN/DSE*			**$16.83**	
	GROSS MARGIN/HA			**$67.20**	

Change in gross margin ($/cow) for change in price &/or the weight of sale stock

(Note: Table assumes that the price and weight of other stock changes in the same proportion as steers. As an example if steer sale price falls to 187c/kg and steer weight to 160 kg, gross margin would fall $132 per cow. This assumes that price and weight of all other sale stock falls by the same percentage.

Liveweight (kgs) of Stock sold		Steer sale price cents/kg live				
		177	**187**	**197**	**207**	**217**
Steer wt.						
-40 kgs	**140**	96	106	116	126	136
-20 kgs	**160**	121	132	143	155	166
0	**180**	146	158	171	183	196
+20 kgs	**200**	171	184	198	212	225
+40 kgs	**220**	196	210	225	240	255

GM $ per Cow

An increase of 5% in weaning percentage increases gross margin per cow by $13.47

Assumptions **Coastal weaners unimproved pasture**

Enterprise unit is 100 cows weighing on average 400 kg
Weaning rate: 64%

Sales

Steers sold at 7 months	180 kg	@197c/kg	live weight
Heifers sold at 7 months	150 kg	@180c/kg	live weight
19 heifers retained for replacement.			
Cull cows cast for age at 10 years	195 kg	@348c/kg	dressed weight
0% of empty cows culled at weaning	"	"	"
3% cows culled for other reasons	"	"	"
Bulls run at 3% & sold after 5 years use	385 kg	@398c/kg	dressed weight

Selling costs include: Commission 4.0%; yard dues $8/hd; MLA levy $5/hd, average freight cost to saleyards $12.00, NLIS tags @ $3.60

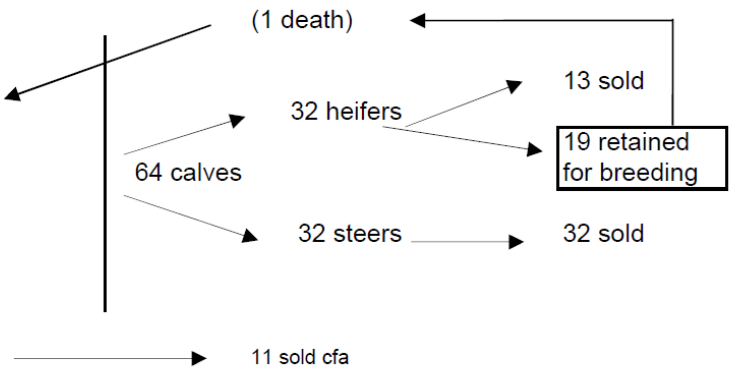
Cows: age at first calf : 36 months

Mortality rate of adult stock: 4%

The average feed requirement of a cow + followers is rated at 1.94 LSU or 13.39 dse's*. This is an average figure and will vary during the year. Note that replacement heifers are assumed joined in the second year and this adds to the dse rating of this enterprise.

Age structure

Age	Number
3	18
4	17
5	15
6	14
7	13
8	12
9	11
Total Joined	**100**
10	11



Marketing Information:

Mixed sex weaners sold in Autumn.
Stores are purchased for growing out or finishing on grass.

Production Information:

Calving dates and age/weight at sale time will vary according to local climatic conditions, pasture species and degree of timber. Note in this enterprise that there is no pregnancy testing assumed. Weaner weights from native pastures only. Expected weights from Mid-North Coast or from the Hunter may be up to 30kg higher.

NSW GOVERNMENT | Department of Primary Industries

BEEF CATTLE GROSS MARGIN BUDGET

Farm enterprise Budget Series: April 2019

Enterprise: **Coastal weaners improved pasture**

Enterprise Unit: **100 cows**

INCOME:			**Standard Budget**	**Your Budget**
42	steer weaners @	$630.88 /hd	$26,497	
19	heifers weaners @	$424.65 /hd	$8,068	
0.6	CFA Bull @	$1,760.00 /hd	$1,056	
7	CFA cows @	$963.20 /hd	$6,742	
15	Other culls @	$963.20 /hd	$14,448	
	A. Total Income:		**$56,812**	

VARIABLE COSTS:				
Replacements	1 Bull @	$3,500 /hd	$3,500	
Livestock and vet costs: see section titled beef health costs for details.			$2,426	
Fodder crops / hay / grain			$0	
Drought feeding costs.			$0	
Pasture maintenence (173 Ha of improved pastures)			$10,813	
Livestock selling cost (see assumptions on next page)			$4,584	
	B. Total Variable Costs:		**$21,323**	

	GM including pasture cost	GM excluding pasture cost
GROSS MARGIN (A-B)	**$35,489**	**$46,301**
GROSS MARGIN/COW	**$354.89**	**$463.01**
GROSS MARGIN/DSE*	**$25.68**	**$33.50**
GROSS MARGIN/HA	**$205.14**	**$267.64**

Change in gross margin ($/cow) for change in price &/or the weight of sale stock

(Note: Table assumes that the price and weight of other stock changes in the same proportion as steers. As an example if steer sale price falls to 242c/kg and steer weight to 230 kg, gross margin would fall to $291 per cow. This assumes that price and weight of all other sale stock falls by the same percentage.

Liveweight (kg's) of Stock sold		**Steer sale price cents/kg live**				
		232	**242**	**252**	**262**	**272**
Steer wt.						
-40 kgs	**210**	229	248	267	285	304
-20 kgs	**230**	270	291	311	331	351
0	**250**	311	333	**355**	377	399
+20 kgs	**270**	352	376	399	422	446
+40 kgs	**290**	393	418	443	468	493

GM $ per Cow

An increase of 5% in weaning percentage increases gross margin per cow by $23.78

Assumptions **Coastal weaners improved pasture**

Enterprise unit is 100 cows weighing on average 475 kg
Weaning rate: 84% , conception rate 90%

Sales

Steers sold at 8 months	250 kg	@252c/kg	live weight
Heifers sold at 8 months	220 kg	@193c/kg	live weight
23 heifers retained for replacement.			
Cull cows cast for age at 10 years	240 kg	@401c/kg	dressed weight
100% of empty cows culled at weaning	"	"	"
3% cows culled for other reasons	"	"	"
Bulls run at 3% & sold after 5 years use	440 kg	@400c/kg	dressed weight

Selling costs include: Commission 4%, yard dues $8/hd, MLA levy $5/hd, average freight cost to saleyards $12/hd, NLIS tag @ $3.60 for all sale cattle.

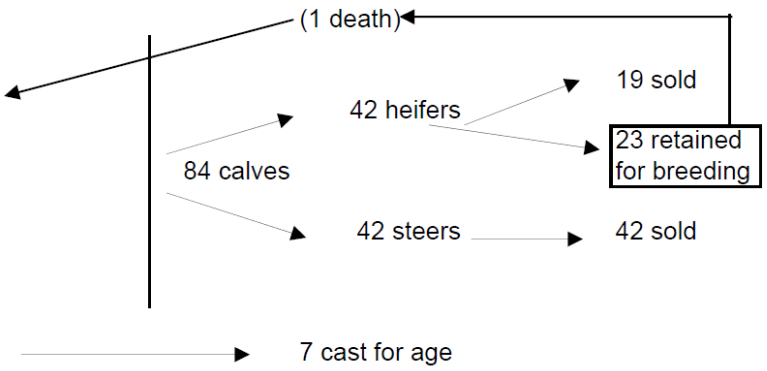
Cows: age at first calf : 36 months

Mortality rate of adult stock: 2%

The average feed requirement of a cow + followers is rated at 2.39 LSU or16.49 dse's*. This is an average figure and will vary during the year. Note that replacement heifers are assumed joined in the second year and this adds to the dse rating of this enterprise.

Age structure

Age	Number
3	22
4	19
5	16
6	14
7	12
8	10
9	7
Total Joined	**100**
10	7



Marketing Information:

Mixed sex store weaners sold in Autumn for further backgrounding prior to feedlot entry with some at suitable liveweights for feeder steer/heifer for pasture or grain finishing.
Price for cull heifers varies according to breed.

Production Information:

Pasture maintenance cost will vary depending on stage of improvement, pasture degradation, rainfall and soil type.

Attachment 3

ABARES Vegetable Industry Data

Table 35 Selected estimates, by vegetable growing environment, vegetable growing farms, 2017–18 average per farm

Selected estimates	Unit	Hydroponics	Under cover	Outdoor
Total area operated	ha	23	14	192
Area planted to vegetables	ha	6	8	46
Total vegetable receipts	$	1,625,300	478,300	1,024,800
Total cash receipts	$	1,687,000	492,000	1,189,800
Total cash costs	$	1,151,400	342,000	977,700
Farm cash income	$	535,600	150,100	212,200
Total capital at 30 June	$	3,448,000	1,894,500	4,810,100
Price received for vegetables	$/t	3,900	1,400	700
Rate of return (excluding capital appreciation)	%	13.5	3.4	2.7
Farm cash income per hectare of vegetables planted	$/ha	93,300	19,100	4,600

Note: Based on preliminary estimates.

Source: ABARES Australian vegetable-growing farms survey