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M & V Dunbabin

**Agricultural Assessment and  
proposed rural zoning of the Bangor  
property, 519 Blackman Road,  
Dunalley.**

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30/7/2021



*Pinion Advisory was formed in July 2020 by the merger of three Australian consulting firms – Macquarie Franklin, Rural Directions and Sunraysia Agriculture.*

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## 1 Executive summary

This report has been prepared on behalf of the proponents, Matt & Vanessa Dunbabin, and covers the Bangor property at Dunalley.

It is proposed that the Bangor property be zoned as rural under the Tasmanian Planning Scheme.

The Bangor property covers approximately 6,300 hectares of land of which 840 hectares (13.5%) of land is cleared and developed for agricultural land use activity, with the balance of the property covered by native forest and bushland.

Agricultural land use activity on the property includes:

- Sheep for wool production
- Sheep for prime lamb production
- Vineyard (4 hectare) and cellar door

The native forest and bushland areas of the property has a negligible level of agricultural productivity due to the very low level of land capability level which severely limits all potential agricultural land use activities. Some areas of the native forest and bushland areas are used periodically for short durations of low intensity grazing and are not considered integral and/or required to support the pastoral use on the entirety of the property as a whole.

A significant portion (75%) of this land is covered by conservation covenants and private timber reserves. These covenants and reserves preserve the flora and fauna which is present and prevents this land from being used and/or developed for agricultural land use activity.

The rural zoning of the Bangor property is commensurate with the proposed Tasman Council recommendation that all agricultural land Forestier Peninsula be zoned as rural.

The proposed rural zoning of Bangor recognises the current and future potential limitations associated with agricultural land use activity on the property and takes into consideration:

1. The severe land use limitations associated with the majority of the property
2. How the agriculturally suitable land is fragmented across the property and is not present in a single contiguous parcel
3. 75% of the property is covered by conservation covenants and private timber reserves.

Bangor has a complex landscape and land use activity pattern, and rural zoning clearly is the most appropriate and suitable zoning for the property under the Tasmanian Planning Scheme and is commensurate with the proposed rural zoning recommendation by the Tasman Council.

## 2 Purpose

This report has been undertaken on behalf of Matt and Vanessa Dunbabin (the proponents) in order to support the rural zoning of the of the Bangor property under the Tasmanian Planning Scheme.

### 2.1 Land Capability

The currently recognised reference for identifying land capability is based on the class definitions and methodology described in the Land Classification Handbook, Second Edition, C.J Grose, 1999, Department of Primary Industries, Water and Environment, Tasmania.

Most agricultural land in Tasmania has been classified by the Department of Primary Industries and Water at a scale of 1:100,000, according to its ability to withstand degradation. A scale of 1 to 7 has been developed with Class 1 being the most resilient to degradation processes and Class 7 the least. Class 1, 2 and 3 is collectively termed “prime agricultural land”.

For planning purposes, a scale of 1:100,000 is often unsuitable and a re-assessment is required at a scale of 1:25,000 or 1:10,000. Factors influencing capability include elevation, slope, climate, soil type, rooting depth, salinity, rockiness and susceptibility to wind, water erosion and flooding.

In providing the opinion enclosed here, it is to be noted that Jason Lynch possess a B.AppSc(hort), is a member of Australian Institute of Agriculture, Certified Practising Agricultural and has over 20 years’ experience in the agricultural industry in Tasmania. Jason is skilled to undertake agricultural and development assessments as well as land capability studies. He has previously been engaged by property owners, independent planners, surveyors and Councils to undertake assessments within the Brighton, Burnie, Central Coast, Central Highlands, Circular Head, Clarence, Devonport, George Town, Glamorgan Spring Bay, Huonville, Kentish, King Island, Kingston, Latrobe, Launceston, Meander Valley, Northern Midlands, Southern Midlands and Waratah-Wynyard municipalities. Most of these studies have involved the assessment of land for development purposes for potential conflict with Council Planning Schemes.

The proponents, property owners Matt and Vanessa Dunbabin, have over 20 years experience managing Bangor, and are intimately familiar with the agricultural potential of their property. Both Matt and Vanessa have tertiary degrees, and PhDs in Agricultural science and so are well qualified to provide the information contained within this submission.

### 3 Property location

The Bangor property covers the northern part of the Forestier Peninsula and includes eight property titles. (Refer Table 1 and Appendix A Figure 3).

**Table 1 Property details**

Title Address	Title Reference	Total Hectares* (Approx)	Vegetation present				
			Pastureland (ha)	Forest and woodland (ha)	Conservation covenant present	Private Timber reserve present	Other
Bangor, 519 Blackman Road, Dunalley	153439/1	82	45	27ha	Yes		Vineyard (4 ha)
	165986/1	1,200	187	1,013	Yes	Yes	
	225383/1	14.3	10	4.3			
	218402/1	0.7					Residential use only
	81225/1	0.4					Residential use only
	169808/5	747	42	705	Yes	Yes	
	155378/1	3,089	531	2,558	Yes	Yes	
	153437/1	1,189	25	1,165	Yes	Yes	
<b>Total</b>		<b>6,322</b>	<b>840</b>	<b>5,478</b>			<b>4</b>

\*subject to survey

The Bangor property is dominated by hilly and rolling ground featuring moderate/steep sloping land, with areas of open plain and gently sloping ground adjacent too and nearby the coastal fringe. The highest point on the property is Mount Forestier, with a peak elevation of 317m. A topographic map of the property is shown in Appendix A Figure 4.

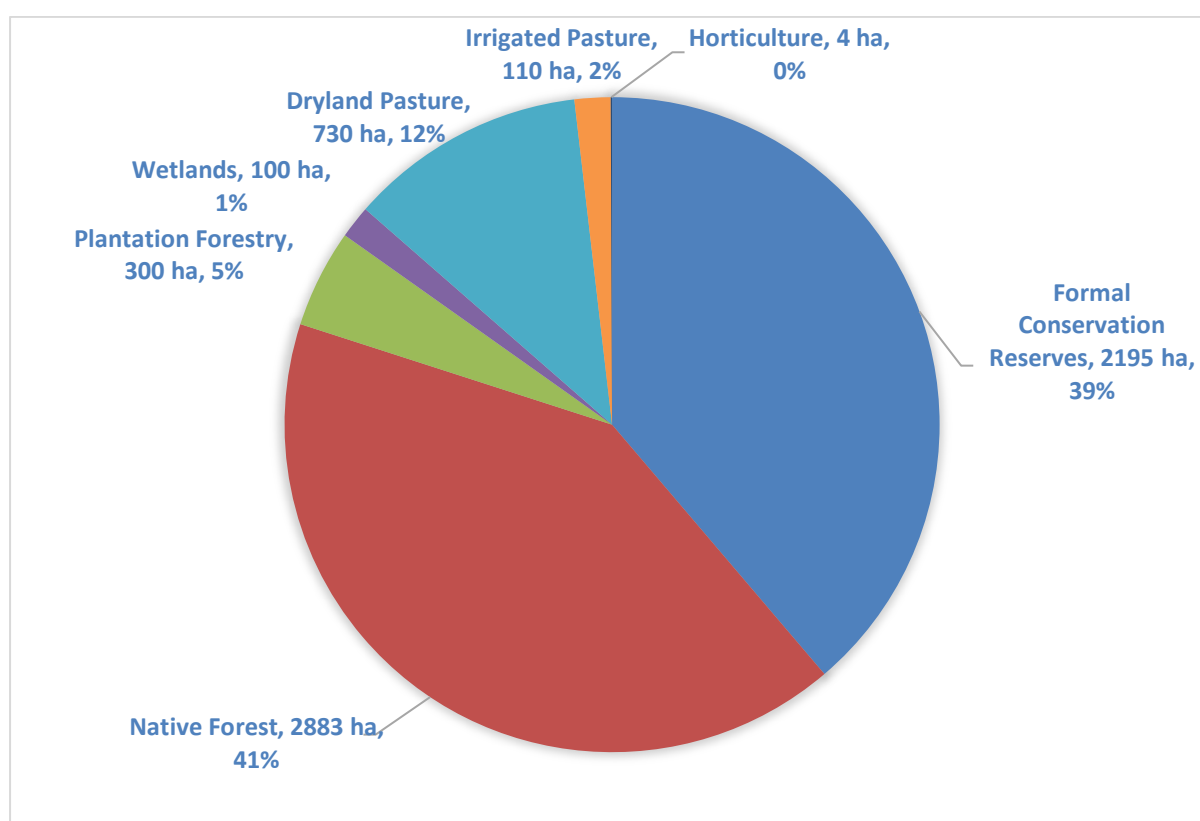
Bangor receives an average annual rainfall of 650mm but is subject to periods of drought and extended dry spells.

The native vegetation present on the property is dominated by dry eucalyptus forest and woodland (as *E. obliqua*, *E. pulchella*), with lesser areas of *Acacia* woodland, *E. ovata* and *E. tenuiramis* forest, with portions of the coastal land covered by scrub, heathland and lowland *Themada* grasslands.

A 100 hectare wetland is present on the far eastern side of the property and is spread over 2 property titles (155378/1 and 153437/1).

The majority (75%) of the Bangor is covered by land use management covenants and reserves, with 2,195 hectares of land covered by conservation covenants and 2,545 hectares included in private timber reserves. 300 hectares of land on the property is covered by plantation forestry.

Figure 1 shows the breakdown of the Bangor property by land use activity and management.



**Figure 1 Bangor property division of land use and management areas**

Infrastructure present on the property includes road network, sheds, 12 hectare centre pivot, irrigation dams (1,646 ML), shearing and various storage sheds, stockyards, 3 residential dwellings, a cellar door and restaurant. The grazing areas on the property are fenced into paddocks, however the vast majority of the property is unfenced.

The Bangor property is currently zoned Rural Resource with the entire coastal fringe zoned as environmental management according to the TIPS2015. Land adjacent to the south and west is zoned as rural resource, with an area of rural living associated with Murdunna to the south west.

The property is held as private freehold land. The land adjacent to the south of Bangor is state-owned, consisting of Permanent Timber Production Zone Land, Future Potential Production Forest, Conservation Area (as pre the Yellow Bluff Creek Conservation Area) and the national Park (As per the Tasman National Park). Other adjacent properties (to the north west) and to the south west are held as private tenure).

### 3.1 Private timber reserves at Bangor

Private timber reserves cover 2,545 hectares of Bangor, and are spread over 4 property titles, which represents a total of 41% of the entire property, see Table 2. These reserves are intended to be used for growing and harvesting timber. Some areas of the land covered by the private timber reserves are occasionally used for short durations of low intensity grazing and are not considered integral and/or required to support the pastoral use on the entirety of the property as a whole. The location of the land covered by the private timber reserves is shown in Appendix A Figure 5.



**Table 2 Bangor property conservation covenant details**

Property title	Reserve ID	Area (hectares)
165986/1	484	270
169808/5	2862	705
155378/1	946	1175
153437/1	2864	395
Total		2,545

### 3.2 Conservation covenants at Bangor

Conservation covenants cover 2,195 hectares and are spread over 5 property titles, which represents a total of 34% of the entire Bangor property, see Table 3. These conservation covenants are legally binding agreements which protect and preserve the landscape, flora and fauna on the property. No land clearing and development of this land is possible. The location of the land covered by the conservation covenants is shown in Appendix A Figure 5.

Some areas of the land covered by the conservation covenants are occasionally used for short durations of low intensity grazing and are not considered integral and/or required to support the pastoral use on the entirety of the property as a whole.

**Table 3 Bangor property conservation covenant details**

Property title	Conservation ID	Area (hectares)
153439/1	1094043	19.2
	Total	19.2
165986/1	1094044	190.4
	1094045	116.2
	1357652	134.5
	1094046	15.3
	1377802	11.5
	Total	467.9
169808/5	1377803	13
	Total	13
155378/1	1094047	63.2
	1094057	52.5
	1094048	18
	1094049	10.9
	1094050	16.9
	1094051	71.5
	1381104	26.5
	1094054	177.9
	1094053	212.7
	1381105	17.1
	1094052	46.3
	Total	713.5
153437/1	1094056	8
	1369811	372
	1094055	601.4
	Total	981.4
Total		2,195

## 4 Land capability

The official land capability map for the area was produced by the DPIWE in 2001 at a scale of 1:100,000 and reported in their Nugent report land capability map.

On the subject lot, DPIWE modelling identified the Bangor to be covered by Class 4, 4+5, 5, 6 and 7 land, and no prime agricultural land is present. A breakdown of the land capability areas on the property is shown in Figure 2, and a property land capability map is attached in appendix A Figure 6.

Table 4 provide details on the specific land capability areas.

Class 4 land is defined as:

*Land well suited to grazing but which is limited to occasional cropping or to a very restricted range of crops. The length of cropping phase and/or range of crops are constrained by severe limitations of erosion, wetness, soils or climate. Major conservation treatments and/or careful management are required to minimise degradation.*

*Cropping rotations should be restricted to one to two years out of ten in a rotation with pasture or equivalent to avoid damage to the soil resource. In some areas longer cropping phases may be possible but the versatility of the land is very limited.*

Class 4+5 land is defined as:

*At least 60% Land well suited to grazing but which is limited to occasional cropping or a very restricted range of crops, up to 40% Land unsuited to cropping and with slight to moderate limitations to pastoral use.*

Class 5 land is described as:

*Land with slight to moderate limitations to pastoral use. This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices.*

Class 6 land is described as:

*Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use.*

Class 7 land is described as:

*Land with very severe to extreme limitations which make it unsuitable for agricultural use.*

The key land capability limitation associated with the property is:

- Erosion (e) associated with the risk of rill and sheet erosion on the steeper land, wind erosion and associated scouring on the sandy soils and the potential for degraded soil structural due to pugging from livestock movement on waterlogged soils and/or inappropriate, excessive ground cultivation activities.

- Soils (s) associated with the sandy soil present throughout much of the property are prone to wind erosion, low fertility, and imperfect drainage.
- Complex topography (x) of the land due to uneven and irregular terrain and much of this ground being dissected by gullies and topographic features which severely limits the ability to manage the land for agricultural land use activity

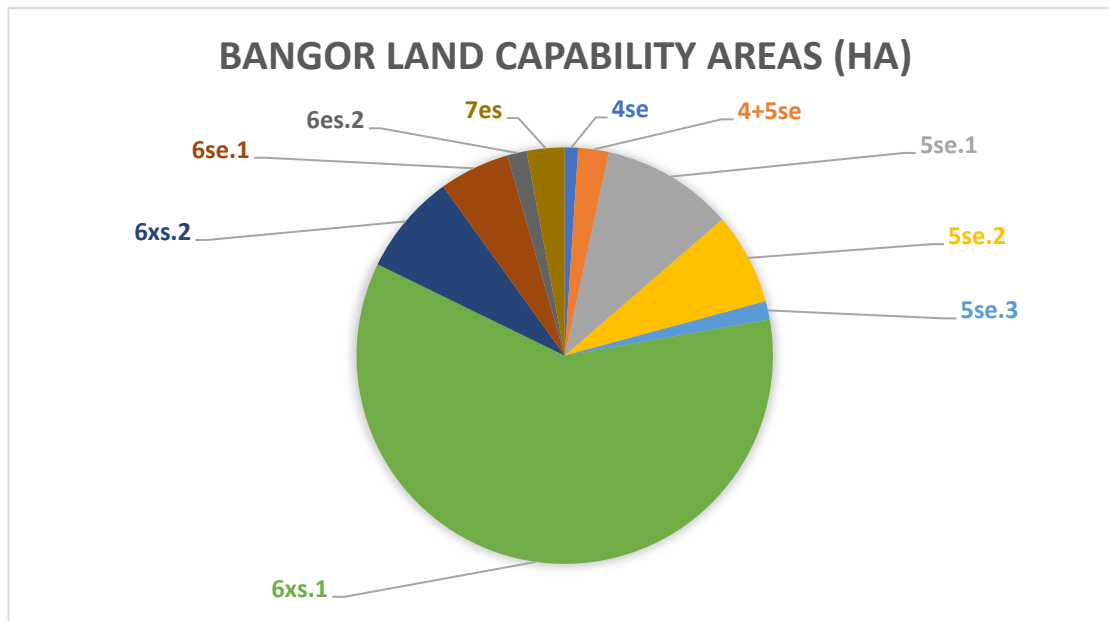


Figure 2 Bangor land capability areas

**Table 4 Land capability table**

Land Capability Class (ha)	Land Characteristics							
	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
Class 4se land  (approx. 65 ha)	Complex of podosol and dermosol soils and occasional vertosol soils on the lowest lying land and land adjacent to the waterways, derived from alluvial sediments.  Black/grey sandy loam black/brown clay and loamy soils, and black heavy clay soils.	3-8%	Gently sloping and undulating group.  5-45m ASL	Low risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 550 chill hours (May to August).	Imperfect to moderately well drained soil and moderate topsoil depth (0-30cm).  Low/moderate soil moisture holding capacity.  Subject to soil water logging and a high seasonal water table during winter.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	Potential areas of this land are suitable for low intensity cropping as two years in ten with a severely limited range of crops.  Suitable for pastoral use with minor limitations.

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
4+5se  (approx. 150 ha)	<p>Complex of podosol, kurosol and dermosol soils and occasional vertosol soils on the lowest lying land and land adjacent to the waterways, derived from alluvial sediments.</p> <p>Black/grey sandy loam black/brown clay and loamy soils, and black heavy clay soils.</p> <p>Occasional stone and rock fragments in the soil profile.</p>	3-10%	<p>Gently sloping and undulating group.</p> <p>5-20m ASL</p>	Low/moderate risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 580 chill hours (May to August).	<p>Imperfectly drained soil and moderate topsoil depth (0-30cm).</p> <p>Low soil moisture holding capacity.</p> <p>Subject to extended periods of soil waterlogging and experiences a high seasonal water table during winter.</p>	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	<p>Potential areas of this land are suitable for low intensity cropping as two years in ten with a severely limited range of crops.</p> <p>Suitable for pastoral use with minor limitations.</p> <p>Some areas of this land are undeveloped and covered by native vegetation and currently have a negligible level of agricultural productivity.</p>

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5se.1  (approx. 645 ha)	Complex of podosol and dermosol soils and occasional vertosol soils on the lowest lying land and land adjacent to the waterways, derived from alluvial sediments.  Black/grey sandy loam black/brown clay and loamy soils, and black heavy clay soils.	3-5%	Gently sloping and undulating group.  3-30m ASL	Low/moderate risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 550 chill hours (May to August).	Imperfectly drained soil and shallow/moderate topsoil depth (0 to 20-30cm).  Low soil moisture holding capacity.  Subject to extended periods of soil waterlogging and high seasonal water table during winter and early/mid spring.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	Unsuitable for cropping.  Suitable for pastoral use with moderate limitations.  Some smaller areas of this land are undeveloped and covered by native vegetation and currently have a negligible level of agricultural productivity.

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5se.2  (approx. 450 ha)	Typically dermosol soils derived from Jurassic dolerite geology.  Stone and rock fragment present in the soil profile and occasional rocky outcrops present.	5-25%	Gentle to moderate sloping, undulating and rolling ground.  3-155m ASL	Low/moderate risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation, and possible mass movement on the steeper sloping land.	Low. This land experiences cool winters and warm/hot summer conditions.  Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 950 GDD (Oct to April) and up to 470 chill hours (May to August).	Moderately well drained soil and moderate topsoil depth (0-30cm).  Low/moderate soil moisture holding capacity.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	Unsuitable for cropping.  Suitable for pastoral use with moderate limitations.  Some areas of this land are undeveloped and covered by native vegetation and currently have a negligible level of agricultural productivity.



Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5se.3 (approx. 90 ha)	<p>Typically podzolic sandy soils derived from sandstone geology.</p> <p>Stone and rock fragment present in the soil profile and occasional rocky outcrops present.</p>	5-25%	<p>Gentle to moderate sloping and rolling ground.</p> <p>80-110m ASL</p>	Low/moderate risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 470 chill hours (May to August).	<p>Moderately well drained soil and moderate topsoil depth (0-30cm).</p> <p>Low soil moisture holding capacity.</p> <p>Subject to soil waterlogging during extended periods of high rainfall, and high seasonal water table.</p>	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	<p>Unsuitable for cropping.</p> <p>Suitable for pastoral use with moderate limitations.</p> <p>Areas of this land are covered by native vegetation as per <i>eucalyptus</i> dominant forest (negligible level of agricultural productivity) as well as land used for <i>eucalyptus</i> plantation forestry.</p>

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
6xs.1 (approx. 3,780 ha)	<p>Dermosol soils derived from Jurassic dolerite geology.</p> <p>Brown clay loam and loamy soils.</p> <p>Stone and rock fragment present in the soil profile and occasional rocky outcrops and sheet rock present.</p>	5-30%	<p>Gentle to moderate sloping and hilly ground with steep sloping land associated with the gullies present across the ground.</p> <p>3-317m ALS</p>	<p>Moderate to high.</p> <p>Associated with the risk of rill and sheet erosion on bare and exposed soils, the potential for degraded soil structural due to pugging from livestock movement on waterlogged soils and/or inappropriate and excessive ground cultivation activities.</p>	<p>Moderate to severe.</p> <p>This land experiences cool winters and hot summer conditions.</p> <p>Receives on average 650mm annual rainfall, less than 5 annual frost events, up to 1080 GDD (Oct to April) and up to 1100 chill hours (May to August).</p> <p>This land is subject to extended periods of drought where</p>	<p>These soils are generally moderately well drained and have a moderate soil moisture holding capacity.</p> <p>Topsoil depth ranges up to 10-20 cm deep.</p>	<p>Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover.</p> <p>Low lying areas of this land are subject to waterlogging during extended periods of rainfall.</p>	<p>Unsuitable for cropping and suitable for pastoral use with severe restrictions.</p> <p>This majority of this land is covered by native vegetation as per <i>eucalyptus</i> dominant forest (negligible level of agricultural productivity) and some smaller areas eucalyptus plantation forestry.</p>

					annual rainfall can be 50% less than average.			
Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
6xs.2 (approx. 495 ha)	<p>Complex of kurosol and dermosol soils derived from mudstone geology.</p> <p>Frequent small stone and rock fragments present in the soil profile.</p>	5-35%	<p>Gentle to moderate sloping and hilly ground with steep sloping land associated with the gullies present across the ground.</p> <p>3-100m ASL</p>	Moderate/high risk (sheet and rill), due to surface water movement and structure decline due to excessive, inappropriate soil cultivation and mass movement.	<p>Low. This land experiences cool winters and warm/hot summer conditions.</p> <p>Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 470 chill hours (May to August).</p>	<p>Imperfect to moderately well drained soil and shallow topsoil depth (0 to 20cm).</p> <p>Moderate soil moisture holding capacity.</p> <p>Subject to soil waterlogging during extended periods of high rainfall.</p>	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	<p>Unsuitable for cropping.</p> <p>Suitable for pastoral use with severe limitations.</p> <p>The majority of this land is covered by native vegetation as per <i>eucalyptus</i> dominant forest (negligible level of agricultural productivity).</p>

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
6se.1 (approx. 345 ha)	Typically podosol soils derived from alluvial sediments	3-5%	Gently sloping and undulating group.  3-10m ASL	Moderate/high risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 470 chill hours (May to August).	Imperfectly drained soil and shallow/moderate topsoil depth (0 to 10-20cm).  Low soil moisture holding capacity.  Subject to soil waterlogging during extended periods of high rainfall, and high seasonal water table.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	Unsuitable for cropping.  Suitable for pastoral use with moderate limitations.  The majority of this land is covered by native vegetation as per <i>eucalyptus</i> dominant forest (negligible level of agricultural productivity).

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
6se.2  (approx. 95 ha)	Typically podzolic sandy soils derived from sandstone geology.  Stone and rock fragment present in the soil profile and occasional rocky outcrops present.	20-40%	Gentle to moderate sloping and rolling ground.  80-110m ASL	High risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 470 chill hours (May to August).	Imperfect to moderately well drained soil, shallow topsoil depth (0 to 10-20cm).  Low soil moisture holding capacity.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	Unsuitable for cropping.  Suitable for pastoral use with severe limitations.  This majority of this land is covered by native vegetation as per <i>eucalyptus</i> dominant forest (negligible level of agricultural productivity) and eucalyptus plantation forestry.

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
7es (approx. 185 ha)	Podosol and rudosol soils derived from alluvial sediments	3-5%	Flay to very gently sloping ground.  1-2m ASL	Moderate/high risk (sheet and rill), due to surface water movement and structure decline due to excessive and inappropriate soil cultivation.	Low. This land experiences cool winters and warm/hot summer conditions. Receives on average 650 mm annual rainfall, has on average less than 2 annual frost events, has up average 1050 GDD (Oct to April) and up to 470 chill hours (May to August).	Imperfectly drained soil and shallow moderate topsoil depth (0 to 20-30cm).  Low soil moisture holding capacity.  Subject to soil waterlogging during extended periods of high rainfall, and high seasonal water table.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover, avoid over-grazing, and reduce grazing pressure during periods of soil waterlogging.	Unsuitable for cropping and pastoral use.  This is covered by wetland, coastal marshes and dune complexes.  Livestock are excluded from grazing this land.

## **5 Water Availability**

A number of named and unnamed streams and creeks flow through the Bangor property.

Two irrigation dams (ID 9390 and 7740) and numerous small stock water dams are present throughout the property.

The Bangor property is not located in a declared irrigation district.

The property is not serviced by TasWater for the provision of drinking water or sewerage services.

## 6 Land Use Activity

### 6.1 Current agricultural land use activity

Agricultural use on the Bangor property includes:

- Pastoral use on 840 hectares
- Vineyard covering 4 hectares

### 6.2 Potential land use activity

#### 6.2.1 Cropping land use activity

The class 4 land and 60% of the class 4+5 land is considered suitable for cropping.

The types of crops which can and could be grown on the property are severely limited due to a number of factors including:

- Soil depth which prevents root crops being grown in all but a limited area of ground with sufficiently deep topsoil.
- Land is often subject to waterlogging during early spring which delays the crop planting window and thereby limiting potential crop yields.
- Land is subject to waterlogging which limits the opportunity and/or yield potential of winter crops such as cereals and canola.
- Distance from processors, such as McCain, Simplot, and poppy processors (eg SunPharma, Extractas and TPI) severely restricts the opportunity to obtain commercial cropping contracts.

#### 6.2.2 Pastoral land use activity

The pastoral land on the property is considered suitable for grazing with generally moderate limitations.

At present Bangor has an average of 7,958 dry sheep equivalents (DSE), being entirely run over the 840 hectares of pastureland, at an average of 9.5 DSE/ha.

A further 1200 DSE is run on the native pasture throughout the year on native forest and woodland, and this equates to a stocking rate 0.2 DSE/ha.

There is very limited scope and potential to increase the carrying capacity on Bangor, and subsequently lift the current DSEs being run on the property. The key constraints limiting the pastoral productivity of the property includes:

- Class 5 and capability covering the largest contiguous parcel of pastureland.
- Being subject to extended periods of low rainfall and drought which requires a conservative approach to the stocking rate which can be run on the block.
- Unsuitable land which can/could be converted to pastureland due to issues including low land capability (as per class 6 land), impracticality of this type of activity and also the subsequent production outcomes would be uneconomic.
- Conservation covenants and private timber reserves status of the majority of the property.

#### 6.2.3 Perennial horticultural land use activity

Bangor has a 4 hectare vineyard and associated cellar door/restaurant enterprise.

The vineyard and associated cellar door/restaurant enterprise are the key economic drivers of the entire property.



## 7 Local and regional agricultural significance

The property title in question holds a limited level of recognised local and regional agricultural significance.

The property has no prime agricultural land present on it.

**Table 5 Bangor property land capability regional significance asper the Nugent land capability mapping area**

Non-prime land capability areas	Nugent land capability mapping area		Bangor property	
	Land area (hectares)	% of total mapping area	Land area (hectares)	% of Nugent land capability mapping areas
Prime class land	335	0.2	0	0
Non-prime class land	121,271	71.2	6,300	5.2
Exempt land	48,831	28.6	0	0
All land classes	170,437	100	6,300	3.7

The entire Bangor property includes 6,300 hectares of which 4,715 hectares are class 6, of which the vast majority of this land is covered by native forest and woodland which is severely constrained in terms of the both the current and potential level of agricultural land use activity.

Conservation covenants cover 2,195 hectares of the property (34% of the entire property) which serves to protect and preserve the landscape, flora and fauna on the property and no land clearing and development of this land is possible.

Private timber reserves cover 2,545 hectares of the property (41% of the entire property), which is set aside for growing and harvesting timber and no agricultural land use activity occurs on this land.

Therefore, it would be reasonable to consider the Bangor property is recognised for the native vegetation present on it, and the associated flora, fauna and wildlife habitats, but not for the quality and/or quantity and prominence of the agricultural land available.

## 8 Property improvement and development considerations

The majority (88%) of the Bangor property is covered by native forest and plantation forestry and is either incapable of and/or has effectively a negligible level of agricultural land use activity.

Approximately 840 hectares of land spread over 6 titles has been cleared and developed for agricultural land use activity, with the balance of the property covered by native forest (5,190 hectares) and in undeveloped state or used for plantation forestry (300 hectares).

Of the 5,190 hectares of undeveloped land on the Bangor property 2,190 hectares is covered by conservation covenants and 2,545 hectares is included as private timber reserves, therefore a potential of 455 hectares of land which in theory could be converted for agricultural use.

If we consider at some point the private timber reserves could theoretically be converted for agricultural use this would encompass potentially 2,910 hectares, of which it is dominated by class 6 land. It is important to note the legal impediment to the clearing and conversion of private timber reserve land to pasture would require issuing a forest practices plan and this is likely to be difficult considering conservation requirements, the low land capability rating and associated limitations (complex topography, soils and prevalence of rock and stone present).

If hypothetically fully developed class 6 land it would be reasonable to anticipate this class of land could have a maximum carrying capacity of approximately 2 to 3 DSE/ha, although extensive areas of the land would support less than 1 DSE/ha due to topographic and soil type constraints.

The development of agricultural land would require a significant level of investment in order to address various improvements including fencing, fertiliser and lime applications, stock water and pasture establishment.

In order to address these property productivity limitations, it would be reasonable to consider a conservative total capital investment of over \$5,800,000 (\$2000+/ha over potentially 2,910 hectares).

An investment analysis using the EverGraze "Pasture Improvement Calculator" shows that this type of development on class 6 would generate an internal rate of return (IRR) of 0% and is therefore uneconomic to develop this class land.

In reality, due to a combination of the economic considerations and sheer impracticality (eg topographic and soil constraints) of converting the class 6 on the property for agricultural land use activity, no more land on Bangor will and/or could be developed.

The Dunbabin family have exercised ownership over the Bangor property since the 1890s and not attempted to develop the class 6 land in question due to recognising the severe limitations to its productivity potential, and development costs relative to the economic returns.

## 9 Proposed Rural Zoning

The proponent wishes to have the Bangor property zoned as rural under the Tasmanian Planning Scheme.

In order to support the zoning proposal, responses to key considerations have been provided, as per RZ1, RZ2, RZ3 and AZ6.

### 9.1 RZ1

“The Rural Zone should be applied to land in non-urban area with limited or no potential for agriculture as a consequence of topographical, environmental or other characteristics of the area, and which is not more appropriately included within the Landscape Conservation Zone or Environmental Management Zone for the protection of specific values.”

Response:

The majority of the Bangor property, approximately 5,500 hectares of land (spread over 6 titles) is either unable to be developed (as per the conservation covenants and private timber reserves) and/or a severely limited in the potential for the level of current and potential agricultural land use activity, due to:

- The low level of land capability present, that being dominated by class 6 land with a small section of class 7 land.
  - It would be physically impractical to convert much of the class 6 land on the property due to topographic considerations.
  - It would be uneconomic to convert the class 6 land to it's the only viable and sustainable land use activity, that being low intensity dryland pastoral use.
- 2,915 hectares of land is covered by conservation covenants which precludes the land from being converted for agricultural use.

In reality due to a combination of the economic considerations and sheer impracticality (eg topographic constraints) of converting the class 6 for agricultural land use activity no more land on Bangor will and/or could be developed.

Bangor has a complex landscape and land use activity pattern, and rural zoning clearly is the most appropriate and suitable zoning for the property under the Tasmanian Planning Scheme.

## 9.2 RZ2

“The Rural Zone should only be applied after considering whether the land is suitable for Agriculture Zone in accordance with the ‘Land Potentially Suitable for Agriculture Zone’ layer published on the LIST.”

Response:

The “Land Potentially Suitable for Agriculture Zone” layer in the LIST map indicates that the Bangor property has been identified as being unconstrained zoned land.

As outlined in the response to RZ1 due to land capability issues (class 6 land) and land management considerations (as per the conservation covenant and private timber reserve status of the land) the majority of the Bangor property is incapable of supporting agricultural land use activity at present and in the future.

This report provides a clear and detailed assessment of the highly constrained current and future agricultural uses on the property, which does not correspond to Bangor being recognised as being unconstrained for agricultural use.

Land similar to that on Bangor which has been recognised as being unconstrained for agricultural use, and having like land use patterns and activity (eg pastoral, private forest, covered with native forest and with/without conservation covenants) has been recognised and proposed by the Tasman Council to be given an appropriately rural zoning.

### 9.3 RZ3

"The Rural Zone may be applied to land identified in the 'Land Potentially Suitable for Agriculture Zone layer if;

- (a) it can be demonstrated that the land has limited or no potential for agricultural use and is not integral to the management of a larger farm holding that will be within the Agriculture Zone;
- (b) it can be demonstrated that are significant constraints to agricultural use occurring on the land
- (c) the is identified for the protection of a strategically important naturally occurring resources which is more appropriately located in the Rural Zone and is supported by strategic analysis;
- (d) the land is identified for a strategically important use of development that is more appropriately located in the Rural Zone and is supported by a strategic analysis
- (e) it can be demonstrated, by strategic analysis that the Rural Zone is otherwise more appropriate for the land."

Response:

- (a) The majority of the Bangor property, approximately 5,500 hectares of land (spread over 6 titles) is either unable to be developed (as per the conservation covenants) and/or a severely limited in the potential for the level of current and potential agricultural land use activity, due to:
  - The low level of land capability present, that being dominated by class 6 land with a small section of class 7 land.
    - It would be physically impractical to convert much of the class 6 land on the property due to topographic considerations.
    - It would be uneconomic to convert the class 6 land to it's the only viable and sustainable land use activity, that being low intensity dryland pastoral use.
  - 2,915 hectares of land is covered by conservation covenants which precludes the land from being converted for agricultural use.
  - Clearing and converting 2,545 hectares of land covered by private timber reserves would require issuing a forest practices plan and this is likely to be difficult considering conservation requirements, the low land capability rating and associated limitations (complex topography, soils and prevalence of rock and stone present).

This land is not integral and/or required to support the agricultural land use activity on the balance of the property, and/or do not hold any significance in terms of being required land to support the balance of the larger properties as per hosting required infrastructure (eg irrigation dams), right of way accesses, frontage to transport networks or essential pasture land.

Some areas of the land covered by native forest are occasionally used for short durations of low intensity grazing and are not considered integral and/or required to support the pastoral use on the entirety of the property as a whole.

- (b) The property titles in question have a severely limited level of current and potential agricultural land use activity, due to:
  - I. The low level of land capability present, that being dominated by class 6 land.

- II. The land on the property titles is completely undeveloped in terms of agricultural land use including infrastructure such as paddock and vermin proof fencing, improved pastures and a stock water system.

In order to address these property productivity limitations, it would be reasonable to consider a total capital investment of over \$5,800,000 (\$2000+/ha over potentially 2,910 hectares), however this development on class 6 would generate an internal rate of return (IRR) of 0% and is therefore uneconomic to develop this class land.

In reality due to a combination of the economic considerations and sheer impracticality (eg topographic and soil constraints) of converting the class 6 on the property for agricultural land use activity no more land on Bangor will and/or could be developed.

- (c) No strategically important naturally occurring resources have been identified on the property titles in question, and this includes soil, mining leases, water resources and/or beneficial topography. The exception to this is the two irrigation dams present, dam ID 8390 and 7740.
- (d) The property titles in question have been assessed as having no strategic important use or development, rather the land is of particularly low value in terms of agricultural land use both in its' current state and for future development opportunity.

It would be reasonable to consider the Bangor property is recognised for the native vegetation present on it, and the associated flora and fauna, but not for the quality and/or quantity of agricultural land available.

- (e) Based a review and assessment of the local and regional significance the property titles in question hold no important and/or critical agricultural values. It should be noted that the land on the property titles in question are:
  - I. undeveloped for agricultural land use activity
  - II. covered by class 6 land (associated with severe limitations to agricultural land use activity)
  - III. have no infrastructure present (eg dams, mining leases and/or utilities)
  - IV. are not integral nor support to the operation and/or management of any adjacent or larger agricultural properties
  - V. Does contain extensive areas of land which are covered by conservation covenants

Bangor has a complex landscape and land use activity pattern, and rural zoning clearly is the most appropriate and suitable zoning for the property under the Tasmanian Planning Scheme, and this request is commensurate with that of the Tasman Council.

## 9.4 AZ6

“Land identified in the ‘Land Potentially Suitable for Agriculture Zone’ layer may be considered for alternative zoning if:

- (a) Local or regional strategic analysis has identified or justified the need for alternate consistent with the relevant regional land use strategy, or supported by more detailed local strategic analysis consistent with the relevant regional land use strategy and endorsed by the relevant council;
- (b) For the identification and protection of a strategically important naturally occurring resource which requires an alternate zoning;
- (c) For the identification and protection of significant natural values, such as priority vegetation area as defined in the Natural Assets Code, which required an alternate zoning, such as the Landscape Conservation Zone or Environmental Management Zone;
- (d) For the identification, provision or protection of strategically important uses the require an alternate zone; or
- (e) It can be demonstrated that:
  - (i) The land has limited or no potential for agricultural use and is not integral to the management of a larger farm holding that will be within the Agriculture Zone;
  - (ii) There are significant constraints to agricultural use occurring on the land; or
  - (iii) The Agriculture Zone is otherwise not appropriate for the land

Response:

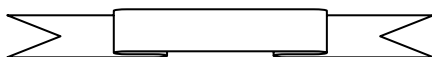
- (a) All Bangor property titles have been identified as unconstrained in the “Land potentially suitable for agriculture zone”. As outlined in the response RZ2 other land with a similar land use pattern and activity (eg pastoral, private forest, covered with native forest and with/without conservation covenants) has been recognised and proposed by the Tasman Council to be given an appropriately rural zoning.
- (b) No strategically important naturally occurring resources have been identified on the property titles in question, and this includes soil, water resources and/or beneficial topography.
- (c) 34% of the Bangor property is covered by conservation covenants which recognises the conservation values of the land and serves to protect and preserves the flora and fauna seeks to prevent clearance of important habitat and minimise the loss of biodiversity.  
  
41% of the Bangor property is covered private timber reserves and on class 6 land which has effectively no agricultural land use.
- (d) The property titles in question have no identified and/or intended strategic uses.
- (e) The property title in question have a severely limited level of current and potential agricultural land use activity, due to:
  - I. The low level of land capability present, that being dominated by class 6 land.
  - II. Clearing and converting 2,545 hectares of land covered by private timber reserves would require issuing a forest practices plan and this is likely to be difficult considering the low land capability rating and associated limitations (complex topography, soils and prevalence of rock and stone present).

- III. In order to address these property productivity limitations, it would be reasonable to consider a total capital investment of over \$5,800,000 (\$2000+/ha over potentially 2,910 hectares), however this development on class 6 would generate an internal rate of return (IRR) of 0% and is therefore uneconomic to develop this class land.
- IV. In reality due to a combination of the economic considerations and sheer impracticality (eg topographic and soil constraints) of converting the class 6 on the property for agricultural land use activity no more land on Bangor could be developed.
- V. This land is not integral and/or required to support the agricultural land use activity on the balance of the property, and/or do not hold any significance in terms of being required land to support the balance of the larger properties as per hosting required infrastructure (eg irrigation dams), right of way accesses, frontage to transport networks or essential pasture land.
- VI. The fragmented nature of the current available agricultural land means it is not present on a single title, rather it makes up a small portion of each of the titles which makes up the entirety of Bangor



## 10 Conclusions

1. The proposed development consists of a proposed rezoning of the property titles in question under the Tasmanian Planning scheme from agricultural to rural.
2. The majority of the land associated with Bangor has a very low level of land capability (as per class 6) which is severely limited in terms of both the current and potential agricultural land use activity.
3. 34% of Bangor is covered by conservation covenants with the purpose to preserve and minimise any loss of biodiversity and habitat and hence further limits any scope for conversion of the land for agricultural land use activity.
4. 41% of Bangor is covered by private timber reserves and on class 6 land which has effectively no agricultural land use.
5. The agricultural land which present on Bangor makes up only 13.5% of the entire property and is fragmented across with sperate property titles.
6. Due to cost of developing the land relative to the economic returns which could be generated from the potential low intensity dryland pastoral use it would not be suitable and/or economic to convert the current undeveloped land for productive agricultural use.
7. The rural zoning of the property title in question is commensurate with the current and future potential land use activity that could be conducted on the property and associated severe limitations associated with this land.
8. The rural zoning of the property title in question is commensurate with the Tasman Council's consideration that all agricultural zoned land throughout the Forestier Peninsula to be given rural zoning.



## 11 References

Beattie L, Saul P, Sargeant K, Dowling A (2016) Pasture Improvement Calculator (Version 4.2). MLA, AWI and Agriculture Victoria.

DeRose R. (2002) Land Capability Survey of Tasmania, Nugent, 1:100 000 map. Department of Primary Industries, Water and Environment, Tasmania.

DeRose & D.J. Todd, (2001) Land Capability Survey of Tasmania. Nugent Report. Department of Primary Industries, Water and Environment, Tasmania.

Department of Justice, Agriculture Land Mapping Project - identifying land suitable for inclusion within the Tasmanian Planning Scheme's Agriculture Zone, Background Report, Tasmanian Government, 2017.

Guideline No. 1 Local Provisions Schedule (LPS): zone and code application, Tasmanian Government, Amended June 2018

Grose C.J. (1999) Land Capability Handbook: Guidelines for the Classification of Agricultural Land in Tasmania. 2nd Edition, DPIWE, Tasmania.

Tasman Interim Planning Scheme 2015.

Tasman Council, Ordinary Council Meeting Minutes Agenda Wednesday 23 June 2021.

Tasmanian Planning Scheme – Rural and Agriculture, Factsheet 4, Department of Justice, Tasmanian Government, 2017.

## 12 Declaration

I declare that I have made all the enquiries which I consider desirable or appropriate, and no matters of significance which I regard as relevant have, to my knowledge, been withheld.

Jason Lynch

Mr Jason Lynch B. App.Sci (Hort) CPag  
Senior Consultant  
Pinion Advisory Pty Ltd  
July 2021

## Appendices

## Appendix A



Figure 3 Bangor property titles





#### Figure 4 Topography of the Bangor property

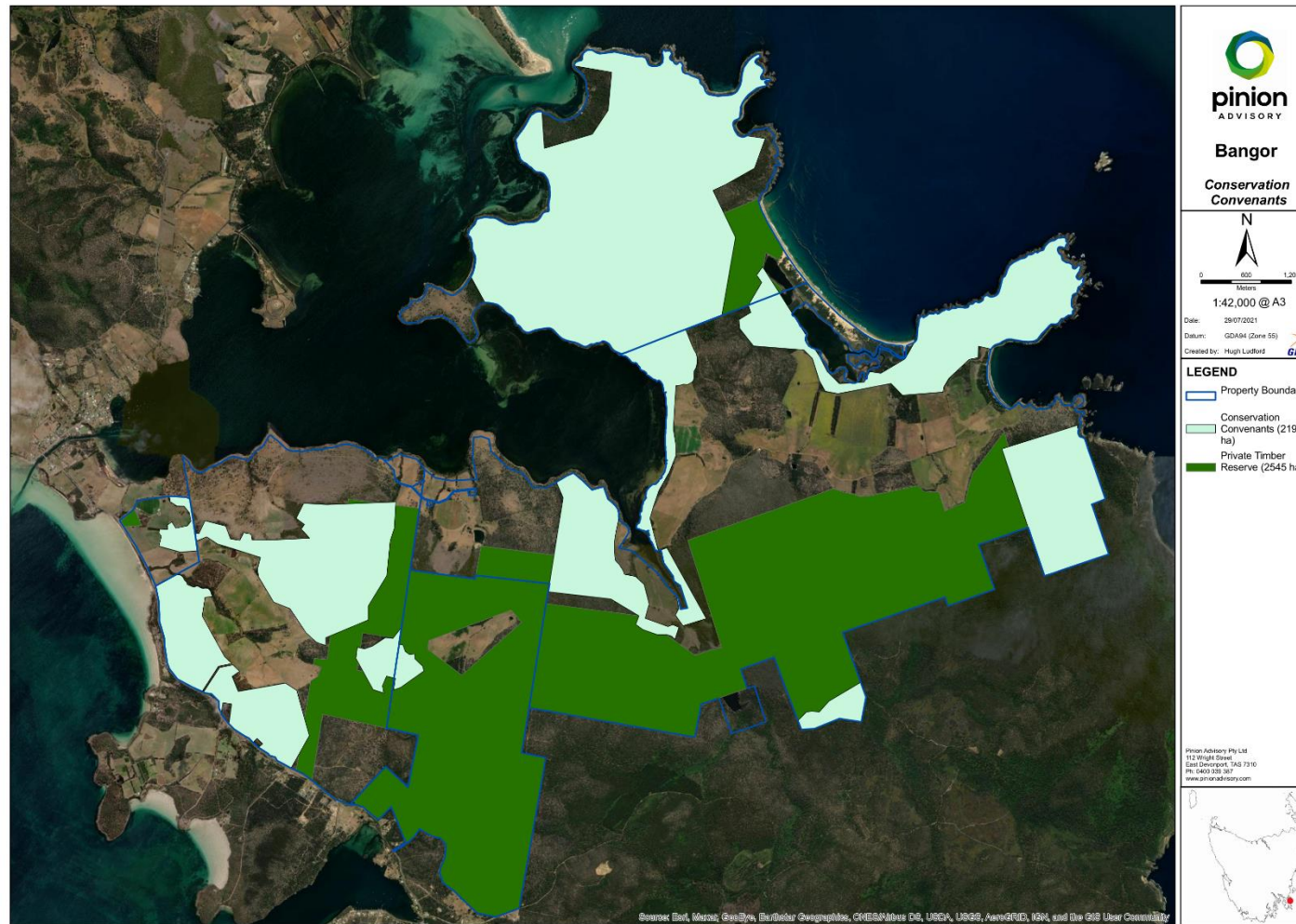


Figure 5 Conservation covenant and private timber reserve areas present on the property



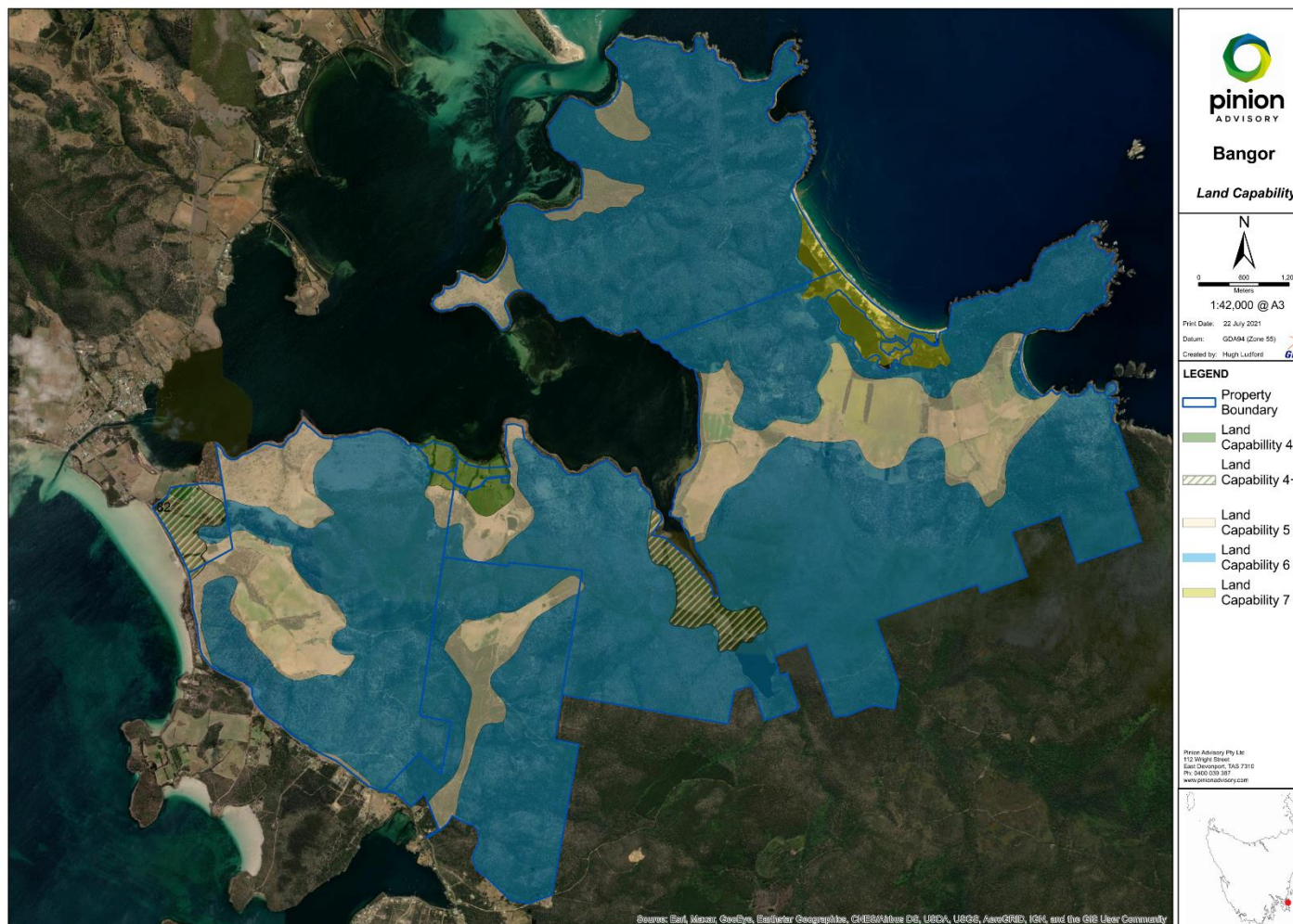


Figure 6 Bangor property land capability map

## Appendix B Jason Lynch professional profile



### Jason Lynch

**Position:**

Senior Consultant - Agronomy

**Qualifications:**

B App Sci (Hort)

CPAg (Certified Practicing  
Agriculturalist)

**Professional Associations:**

Australian Institute of Agricultural  
Science

Australasia Pacific Extension  
Network

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**INTRODUCTION**

Jason Lynch is a senior consultant at Pinion Advisory, with over 20 years experience in production agronomy, various aspects of grazing management and property development. Jason works with clients to improve the profitability and sustainability of a diverse range of agricultural production systems.

Jason has agronomic experience in both pasture based and a range of broad acre and intensive cropping systems, in addition to horticultural enterprises. Jason provides advice to clients on crop protection, integrated pest management practices, soil health management, plant and soil nutrition, and soil moisture and irrigation management. He has well developed communication skills and has extensive experience in the delivery of presentations and group facilitation for both small and large audiences. Jason's client mix includes small and large scale businesses, and both family farms and corporate enterprises.

Jason is able to provide independent agronomic advice with an in-depth knowledge of farming systems.

**PROFESSIONAL EXPERIENCE**

- 2013 - present: senior consultant – Pinion Advisory/Macquarie Franklin
- 1998 - 2013: senior agronomist - Serve-Ag Pty Ltd

**RECENT PROJECTS**

- Property assessments and technical support, Cradle Coast NRM, Property Our Productive Soils 2019 to present
- Irrigation water reuse project, Western Water, Victoria, 2018-present
- Property agricultural assessments, council planning scheme compliance reports and provision of expert witness statements across the various Tasmanian municipalities, 2005 -present
- Farm Water Access Plans and land capability assessments for various irrigation schemes including the Dial Blythe, Duck, Midlands, North Esk, Scottsdale, South Esk, South East, Southern Highlands and Swan River, Tasmanian Irrigation Sept 2013 - present
- Pasture Principles course facilitator and coach, Cressy/Tamar, Coal Valley, Derwent Valley Evandale, Flinders Island, North West Northern/Central/Southern Midlands, Meander Valley, 2014 - present





## Jason Lynch

### Areas of Expertise

- Extension & communications
- Facilitation
- Agronomic advice
- Vegetable production
- Cereal production
- Forage and fodder production
- Floriculture
- Berry fruit production
- Crop protection
- Soil fertility
- Plant nutrition
- Soil, plant and water analytical testing
- Biofumigation
- Gross margin analysis
- Agricultural research
- Land capability assessment
- Land use constraint analysis
- Farm drainage

### Pinion Advisory Expertise

- Agronomic advice
- Crop protection
- Land capability assessment
- Sustainable soil management
- Soil science
- Red meats and dairy feed base management
- Agricultural research
- Extension and communication
- Irrigation

- MLA Producer Demonstration Site technical support with Longford Red Meat Group, MLA, 2016 - 2018
- GRDC Opportunity For Profit project, Management Guidelines, Tasmania, GRDC, 2016-2019
- Lifetime Ewe Management Facilitator, RIST, Jan 2015-Dec 2015
- Insect Pasture Pest IPM course delivery, Cradle Coast NRM, May 2014-July 2015
- Managing Your Finances course delivery, Dairy Tas, 2015
- F300 – Boosting livestock production efficiency and decreasing greenhouse gas emissions, North West Tasmanian Beef Producers Group Coach, Meat and Livestock Australia, Nov 2014 - March 2015
- Dairy Australia Taking Stock, 2016 - present
- Regular delivery of presentations to various NRM, grower and agricultural industry groups throughout Tasmania, 2006-present
- Sustainable Agriculture Program involving soil testing and the delivery of property nutrient budgets and fertiliser recommendations, Cradle Coast NRM, Jan 2013-May 2013
- Property management planning services and land capability assessments, Agricultural Resource Management, 2007-2010
- Soil health management, including agronomic advice and research and development relating to soil fertility, nutrient management, erosion management, green manure and biofumigation crops
- Provision of comprehensive agronomic advice covering a wide range of broadacre and horticultural crops such as alliums, turf, berry fruit, brassicas, canola, carrots, cereals, hemp, legumes, floriculture, poppies and potatoes (fresh, processing and seed production)

### BOARDS AND STEERING COMMITTEES

- Forage Value Index technical committee group member, Dairy Australia Jan 2020 - present
- More milk from forages steering committee group member, Tasmanian Institute of Agriculture, Sept 2013 – June 2014
- Dairy Futures CRC steering committee for forage technologies adoption, Dairy Australia, Sept 2013 – June 2016
- Forage Improvement Community of Interest group, member, Dairy Australia, Dec 2015 – present
- Tasmanian Institute of Agriculture Participatory Action Research Group member, 2016-2018