

Grazing Land Type sheets for the Western Mary Catchments

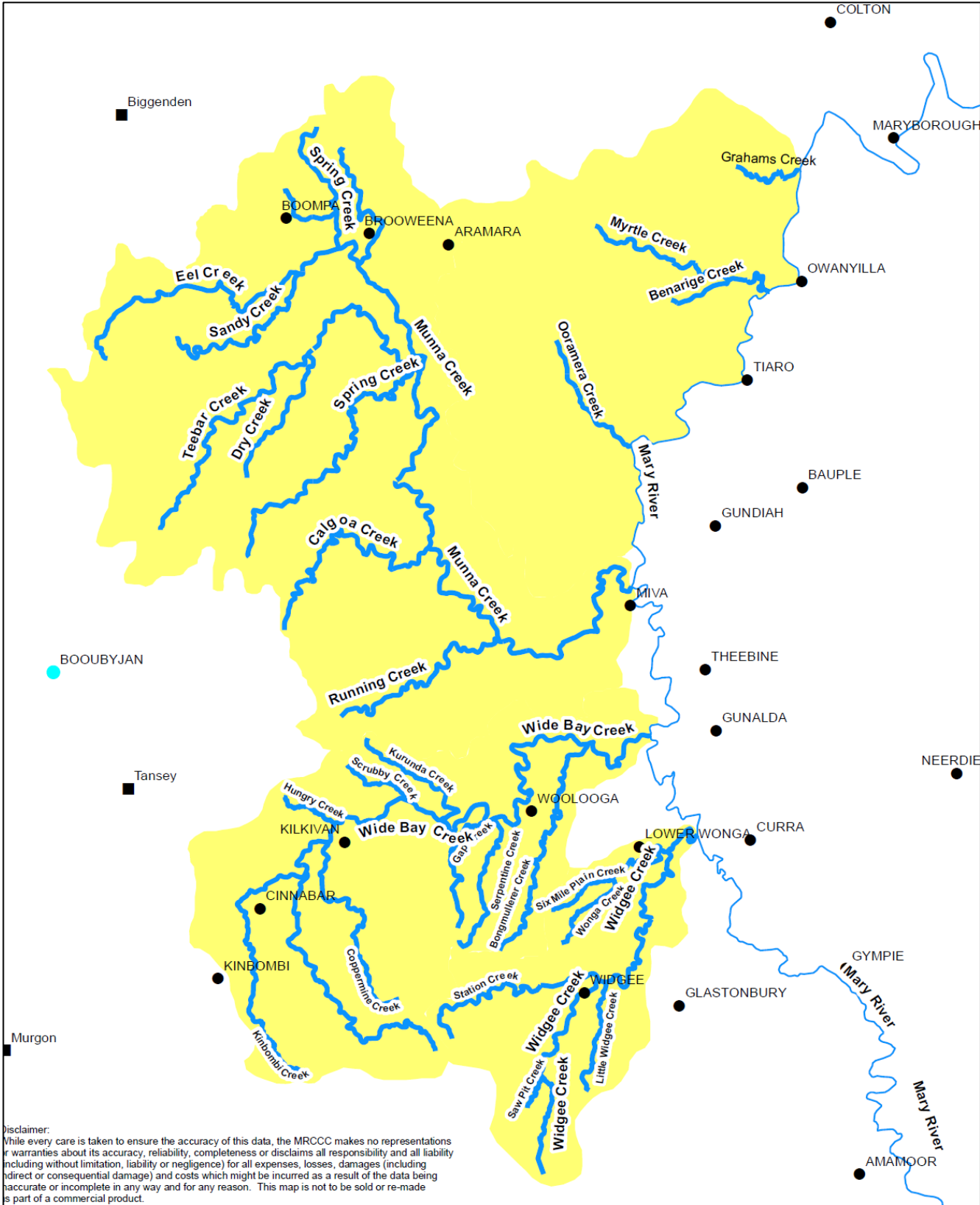


Open forest on granite grazing land type, Calgoa district, north of Woollooga

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Western Mary Catchments



Munna, Widgee and Wide Bay Creek sub-catchments encompass 30% of the Mary River Catchment area. The Western Mary Catchments contains an estimated 60% of the beef cattle population in the whole Mary River Catchment.

Western Mary Catchments grazing land type sheets

1. Blue gum on alluvial flats
2. Open forest on granites
3. Ironbarks on volcanic rocks
4. Open forest on sandstones
5. Open forest on shales
6. Open forest on serpentinites
7. Open forest on andestic volcanic rocks & boulder beds
8. Softwood scrubs on basalts & granites
9. Spotted gum ridges



Blue gum on alluvial flats

Location Notes

Occurs along the Mary River and its major western sub-catchments, i.e. Wide Bay Creek, Widgee Creek, Munna Creek, Teebar Creek, Myrtle Creek.

Grazing Land Type: Blue gum on alluvial flats (ref Land Zone 3)

Vegetation

Alluvial flats characterised by Qld blue gum. Moreton Bay ash, rough bark apple, river she oak, swamp box, black tea-tree. Includes fringing riparian rainforest species - weeping lillypilly, silky oak, black bean, figs, bottlebrush and mat rush.

Land Form

River terraces, levees, flood-plains, creek flats and freshwater wetlands.

Soil Description

Lower terraces – uniform textured sandy loams. Middle/ high terraces - well structured dark friable earths and alluvial loams. Variable soils depending on parent material.

Moisture Holding Capacity - high

Internal Drainage

Usually good, waterlogging issues after flood events.

Inherent Soil Fertility - high.

pH - slightly acid to neutral

Land Use

Extensively cleared for dairying and cropping.

Predominant Grazing Enterprises

Beef breeding and fattening.

Native/*Naturalised Pastures

3P - kangaroo grass, forest bluegrass, black speargrass, *paspalum, *kikuyu, *Pioneer Rhodes, *green panic, *Angleton grass
2P – Qld blue couch, Scented-top,
1P - *matgrass, blady grass, pitted bluegrass, poverty grass, swamp foxtail, wiregrasses & lovegrasses.

Legumes - *white clover, various native legumes

Sown Grass/ Legume Pastures

3P - paspalum, Callide Rhodes grass, Bisset creeping bluegrass

Legumes – white clover, siratro, lotononis, wynn cassia, fine stem stylo

Current Weed Problems

Lantana, yellow bells, cats-claw creeper, castor oil bush, noogoora burr, giant rats tail grass, bahia grass, African lovegrass

Estimated production

Stocking rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/ naturalised pastures	2.5 to 4 (ha/ AE)
Sown grass/ legume pastures	1.5 to 2 (ha/ AE)

Pasture Dry Matter Production

4 000 to 6 000 kg DM/ ha/ year

(based on 'A' land condition & Kilkivan's 872 mm & Marodian's 915mm average annual rainfall)

Safe pasture utilisation rate = 35%

Available pasture = 1 400 to 2 100 kg DM/ ha/ year

Erosion hazard

Pastures - low

Cultivated land - high risk from flooding.

Stream banks are susceptible to scouring and slumping during flood events.

Inherent Salinity/ Sodicty

Low salinity, some sodic subsoils

Land Resource Reference

Atlas of Australian Soils – Landscape unit Mm8 adjacent to the Mary River; other less significant alluvial flats are incorporated into adjacent landscape units.

Land Resource Bulletins – available for the northern portion of the Munna sub-catchment (Maryborough District, 1992)

Soil Classification

*Australian Soil Classification

Dermosols & Tenosols

*Great Soil Groups

Prairie soils

Regional Ecosystem & Conservation Features

Land zone 3 – alluvial river & creek flats

12.3.1 - Gallery on alluvial plains (endangered)

12.3.7 – Blue gum, river sheoak, bottlebrush fringing woodland (not of concern)

12.3.8 – wetlands on floodplains (of concern)

12.3.3 – Blue gum woodland (endangered)

12.3.11 – Blue gum, grey ironbark, pink bloodwood forest on floodplains (of concern)

Conservation Features

This grazing land type can contain habitat for the endangered Mary River Cod and Turtle, as well as the Queensland Lungfish. Koalas are often observed inhabiting this grazing land type.



Open forest on granites, Calgoa district



Open forest on granites, Boompa district



Open forest on granites, Woolooga district

Location Notes

This unit is the most extensive grazing land type in the Western Mary Catchments.

Munna sub-catchment – north and west of Brooweena, running south to Running Creek, including Mt Urah.

Kilkivan district – north and south of Woolooga, Mt Widgee and east of Manumbar.

Grazing Land Type: Open forest on granites (ref Land Zone 12)

Vegetation

Eucalypt open forest characterised by narrow-leaved ironbarks and blue gum. Includes Moreton Bay ash, bloodwood, gum topped box, spotted gum on shallow ridges and rough-barked apple on drainage lines. Shrubby understorey of brush box and wattle spp.

Hoop pine dominated scrub occurs on some mountainous granites.

Land Form

Low hilly, hilly, steep hilly to mountainous terrain with some bare rock.

Soil description

Leached sands (Uc2.1 & 4.1); hard setting loamy soils with mottled yellow subsoils - Solodic (Dy 3.3, 3.4) and Podzolic soils (Dy3.6, 3.7, 3.8).

Soil moisture holding capacity - low

Soil drainage – moderate to poor (mottled subsoils)

Inherent soil fertility - low

pH - generally acidic

Land Use

Selectively cleared for dairying and beef
Native hardwood management

Predominant Grazing Enterprises

Beef breeding and growing. State Forest reserves.

Native/*Naturalised Pastures

3P- Black speargrass, Kangaroo grass, Forest bluegrass,*Pioneer Rhodes grass, *Paspalum
2P - Qld blue couch, barbwire grass, Native Panic, *Indian bluegrass
1P- Pitted bluegrass, blady grass, *matgrass, wiregrasses, native rats tail grasses, native lovegrasses

Sown Grass/ Legume Pastures

3P - Katambora Rhodes, Bisset creeping bluegrass, Paspalum, Pangola
Legumes – Fine-stem and Seca stylos, Lotononis, Wynn cassia

Current Weed Problems

Wattle regrowth, Lantana, Bracken fern, Giant rats tail grass, African lovegrass, creeping lantana

Estimated production

Stocking Rates (ha/adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/ naturalised pastures (cleared)	3.5 to 4.5 (ha/ AE)
Sown grass/ legume pastures	2 to 3 (ha/ AE)

Pasture Dry Matter Production

2500 to 3000 kg DM/ ha/ year

(based on 'A' land condition & Woolooga's 985 mm & Marodian's 915 mm average annual rainfall)

Safe pasture utilisation rate = 25%

Available pasture = 625 to 750 kg DM/ ha/ year

Erosion hazard

Pastures - moderate risk.

Hillslopes – high risk of sheet and gully erosion

Inherent Salinity/ Sodicty

Saline seepage can occur on lower slopes; non-sodic

Land Resource Reference

Atlas of Australian Soils – Landscape Units Cd5, Cd6, Cd9, Ub69, Tf1, Tf2, Ti1, Pu1 & Mm3 (granodiorite)

Soil Classification

*Australian Soil Classification

Chromosols, Kurosols, Brown Ferrosols

*Great Soil Groups

Leached loams, Yellow podzolics.

Regional Ecosystems & Conservation Features

Land zone 12 – granite hills

12.12.5 – Spotted gum & ironbark woodland on granite (least concern)

12.12.12 – Blue gum, pink bloodwood & narrow-leaved ironbark woodland (of concern)

12.12.7 – Narrow leaved ironbark woodland on granite (least concern)

12.12.13 – Hoop pine vine forest on granite (least concern)

The eastern most occurrence of Western bulloak (*Allocasuarina leuhmannii*) is located on granodiorite at Lower Wonga



Ironbarks on volcanic rocks

Location Notes

Widgee and Upper Widgee (Mm7), Lower Wonga (Mm3), from Lower Wonga to Woolooga (Mm5), Marodian and Malarga Downs locality (Mm6, Pb20, Gd8) also in the Yerra locality.

Grazing Land Type: Ironbarks on volcanic rocks (ref Land Zone 11)

Vegetation

Eucalypt open forest characterised by silver-leaved ironbark with a grassy understorey. Includes narrow-leaved and grey ironbarks, Moreton Bay ash, Blue gum and rough barked apple on drainage lines.

Land Form

Undulating low hilly, hilly to steep hilly land and shallow open valleys with alluvial flats in places

Soil Description

Neutral dark friable earths, Prairie soils (Gn3.4) and acid yellow friable earths (Gn3.7, Gn3.5) and red Podzolic soils (Dr2.2).

Soil Moisture Holding Capacity - moderate to high

Soil Drainage - well drained

Inherent Soil Fertility - moderate

pH - slightly acid to neutral

Land Use

Moderate to extensively cleared for grazing; some sugar and grain cropping.

Predominant Grazing Enterprises

Beef breeding and fattening.

Native/ *Naturalised Pastures

3P - Kangaroo grass, Black speargrass, Forest bluegrass, Tambookie, *Paspalum, *Pioneer Rhodes, *Green panic. Native legumes include *Glycine*, *Rhynchosia* & *Zornia* spp

2P - Native panic, Queensland bluegrass,

Scented top, Angleton grass, Indian bluegrass

1P- Pitted blue, blady grass, *mat grass, native rats tail grasses, native love grasses

Sown Grass/ Legume Pastures

3P – Callide & Katambora Rhodes, Bisset creeping bluegrass, Floren bluegrass, Paspalum Legumes - Siratro, Seca, Beefbuilder and Fine stem stylo, Wynn cassia, white clover, lucerne

Current Weed Problems

Lantana, Giant rats tail grass, bahia grass.

Estimated production

Stocking Rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/ naturalised pastures	3.5 to 4 (ha/ AE)
Sown grass/ legume pastures	2 (ha/ AE)

Pasture Dry Matter Production

4000 to 5500 kg DM/ ha/ year

(based on 'A' land condition & Kilkivan's 872 mm & Marodian's 915mm average annual rainfall)

Safe pasture utilisation rate = 30%

Erosion hazard

Pastures – risk of scald patches on slopes

Cultivated land – medium to high risk

Steeper hillslopes are prone to landslips

Inherent Salinity/Sodicity

Low salinity, non-sodic

Land Resource Reference

Atlas of Australian Soils Landscape Units – Mm3 (diorite), Mm5, Mm6, Mm7, Pb20, Mf10 & Gd8

Soil Classification

*Australian Soil Classification

Dermosols and Kurosols

*Great Soil Groups

Prairie soils and red Podzolics

Regional Ecosystem & Conservation Features

Land zone 11 – metamorphic rocks

12.11.3 - Open forest generally with grey ironbark and grey gum on metamorphics ± interbedded volcanics (not of concern)

12.11.7 – Narrow leaved ironbark woodland on metamorphics ± interbedded volcanics (not of concern)

12.11.8 – Silver leaved and narrow leaved ironbark woodland on metamorphics ± interbedded volcanics (of concern)



Open forest on andesitic volcanic rocks and boulder beds, Kinbombi Falls

Location Notes

Generally located adjacent to the Coast Range west of Kilkivan, including the Tansey, Goomeri, Kinbombi & Manumbar districts.

Grazing Land Type: Open forest on andesitic volcanic rocks and boulder beds (ref Land Zone 12)

Vegetation

Eucalypt open forest with grassy understorey. Silver-leaved, narrow-leaved and grey ironbarks, red bloodwood & Moreton Bay ash. Blue gum & rough barked apple on drainage lines.

Land Form

Low hilly, moderate hilly, steep hilly to mountainous with some bare rock and associated beds of large rounded boulders.

Soil Description

Shallow loamy soils (Um4.1); hard setting loamy yellow (Dy2.4), red (Dr2.4) Podzolic soils & minimal prairie soils (Gn3.1, 3.2, 3.4) on creek flats. Includes some gilgai microrelief on flats.

Soil Moisture Holding Capacity – low to moderate

Soil Drainage - well drained

Inherent Soil Fertility – low to moderate

pH – mainly acidic soils

Land Use

Low to moderate clearing for grazing.

Predominant Grazing Enterprises

Beef breeding and growing

Native/*Naturalised Pastures

3P - Kangaroo grass, Black speargrass, Forest bluegrass, Tambookie, *Paspalum, *Pioneer Rhodes.

2P - Native panic, Queensland bluegrass, Scented top, Indian bluegrass

1P- Pitted blue, wiregrasses, blady grass, *mat grass, native rats tail grasses, native love grasses

Sown Grass/Legume Pastures

3P –Katambora Rhodes, Bisset creeping bluegrass

Legumes – Seca & Fine stem stylo, Wynn cassia

Current Weed Problems

Lantana, Giant rats tail grass, African lovegrass

Estimated production

Stocking Rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Uncleared native/ naturalised pastures	8 (ha/ AE)
Cleared native/ naturalised pastures	6 (ha/ AE)
Sown grass/ legume pastures	3 (ha/ AE)

Pasture Dry Matter Production

3000 to 4000 kg DM/ ha/ year

(based on 'A' land condition & Kilkivan's 872 mm & Goomeri's 789 mm average annual rainfall)

Safe pasture utilisation rate = 25%

Erosion hazard

Steeper hillslopes are prone to sheet and gully erosion

Inherent Salinity/ Sodicty

Low salinity, non-sodic

Land Resource Reference

Atlas of Australian Soils Landscape Units – S_j9, S_j10, P_d10, Q_b25, L_k8, L_k9, P_u1

Soil Classification

*Australian Soil Classification

Dermosols & Kurosols

*Great Soil Groups

Minimal prairie soils and red Podzolics

Regional Ecosystem & Conservation

Features

Land zone 12 – granite hills

12.12.7 – Narrow leaved ironbark woodland on igneous rocks (least concern)

12.12.8 – Silver leaved ironbark woodland on igneous rocks (of concern)

This land type provides habitat for the threatened Nangur Skink and a rare cypress pine (*Callitris baileyi*). Boulder beds are round water washed rocks interlocked together in a conglomerate, and can be observed at Kinbombi Falls.



Open forest on sandstone, Mt Urah district

Location Notes

This unit is the second most extensive grazing land type in the Western Mary Catchments. Located in a wide strip along the western side of Mary River from north of Myrtle Creek running south to Wide Bay Creek and bounded by the Mt Urah Range to the west. Also includes the Sexton district north of Bells Bridge.

Grazing Land Type: Open forest on sandstones (ref Land Zone 9-10)

Vegetation

Eucalypt open forest characterised by spotted gum and gum topped box. Includes ironbarks, brush box, bloodwood, Moreton Bay ash, smooth barked apple. Shrubby understorey of wattle spp and dogwood.

Land Form

Low rounded hilly to hilly terrain with shallow open valleys. Occasional trachyte outcrops.

Soil Description

A grouping of sandstone derived soils of yellow & red podzolics, soloths, leached sands & leached earths, and trachyte outcrops. Hard setting loamy soils with mottled yellow clayey subsoils (Dy3.4) and loamy soils over red clayey subsoils (Dr3.4); leached sands (Uc2.1), leached yellow earths (Gn2.6) and hard yellow soils (Dy2.3).

Soil moisture holding capacity – low (poor water infiltration rate)

Soil drainage – poor (mottled sub-soils)

Inherent soil fertility – low organic matter soils with extremely low (soloths) to low fertility overall

pH - generally acidic

Land use

Selectively cleared for dairying and beef
Native hardwood forestry

Predominant grazing enterprises

Beef breeding and growing, State Forest reserves.

Native/ *Naturalised Pastures

Characterised by blady grass and Qld blue couch.
3P- Black speargrass, Kangaroo grass, Forest blue grass, *Pioneer Rhodes grass, *Paspalum
2P - Qld blue couch, *Signal grass, barbwire grass
1P- Pitted bluegrass, poverty grass, blady grass,
*matgrass, wiregrasses, native rats tail grasses, native lovegrasses

Sown Grass/ Legume Pastures

3P - Katambora Rhodes, Bisset creeping bluegrass, Pangola
Legumes – Fine-stem, seca and Beefbuilder stylos, lotononis, Wynn cassia

Current Weed Problems

Wattle regrowth, Lantana, Bracken fern, Giant rats tail grass, African lovegrass

Estimated production

Stocking Rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

Uncleared native pasture	10 to 40 (ha/ AE)
Cleared native/ naturalised pastures	5 to 8 (ha/ AE)
Sown grass/ legume pastures	2.5 (ha/ AE)

Pasture Dry Matter Production

2500 to 3300 kg DM/ ha/ year

(based on 'A' land condition & Brooweena's 1004 mm & Woollooga's 985 mm average annual rainfall)

Safe pasture utilisation rate = 25%

Available pasture = 625 to 825 kg DM/ ha/ year

Erosion hazard

Pastures - high risk

High risk of gully erosion if dispersible subsoil is exposed - linked to high suspended sediment loads

Inherent Salinity/ Sodidity

Saline seepage and expression can occur on lower slopes; generally sodic subsoils

Land Resource Reference

Atlas of Australian Soils – Landscape Units Tb69, Tb70, Tb71 (trachyte), Tb81, Cd8, Cd10, Pl2, Mt2, Mb11, Lk7

Soil Classification

*Australian Soil Classification

Kurosols, Tenosols, Kandosols

*Great Soil Groups

Yellow and red podzolics, yellow earths, soloths ND leached sands.

Regional Ecosystems and Conservation Features

Land zone 9-10 – sandstone hills

12.9-10.3 - Open forest with spotted gum & gum topped box on sandstone (of concern)

12.9-10.2 – Woodland of spotted gum and ironbarks on sandstone (least concern)

12.9-10.7 – Woodland of ironbark, blue gum, Moreton bay ash on sandstone (of concern)

12.9-10.21 – Woodland of yellow stringybark, brown bloodwood on sandstone (least concern)



Open forest on serpentinites – dominated by grass trees,
Kilkivan



Open forest on serpentinites, Upper Widgee

Location Notes

A strip running northwards from Upper Bella and Upper Kandanga Creeks to west of Widgee township, north and south of Kilkivan township and a strip north of Mt Urah (Munna subcatchment)

Grazing Land Type: Open Forest on Serpentinities (ref: Land Zone 11)

Vegetation

Eucalyptus open forest characterised by grass trees. Includes narrow-leaved ironbark, red bloodwood, golden wattle, gum topped box, banksia, blue gum, forest oak and a grassy understorey.

Land Form

Undulating, low hilly, steep hilly to mountainous country with serpentine rock outcrops in places.

Soil Description

Prairie soils – dark friable earths (Gn3.4), and dark porous gravelly loams (Um6.2). Heavy dark clays (Uf6.3) occur on stream flats.

Soil Moisture Holding Capacity - moderate

Soil Drainage - well drained, except for the heavy clay flats.

Inherent Soil Fertility – low, characterised by high magnesium levels.

pH - slightly acid to neutral

Land Use

Light to moderately cleared for grazing.

Predominant Grazing Enterprises

Beef breeding and growing steers.

Native/*Naturalised Pastures

3P - Kangaroo grass, Black speargrass, Forest bluegrass, Tambookie, *Paspalum, *Pioneer Rhodes. Native legumes include *Glycine*, *Rhynchosia* & *Zornia* spp

2P - Native panic, Qld bluegrass, *Hamil guinea, Scented top, barbwire grass, Qld blue couch

1P- Pitted blue, blady grass, *mat grass, native rats tail grasses, native love grasses

Sown Grass/Legume Pastures

3P - Katambora Rhodes, Bisset creeping bluegrass, Floren bluegrass

2P - Hamil guinea grass

Legumes - Siratro, Seca and Fine stem stylo, Wynn cassia

Current Weed Problems

Lantana, Creeping lantana, Giant rats tail grass.

Estimated production

Stocking Rates (ha/ adult equivalent)
(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/ naturalised pastures	5 to 6 (ha/ AE)
Sown grass/ legume pastures	2 to 3 (ha/ AE)

Pasture Dry Matter Production

3500 to 4500 kg DM/ ha/ year
(based on 'A' land condition & Kilkivan's 872 mm average annual rainfall)

Safe pasture utilisation rate = 25%

Erosion hazard

Pastures – low risk, but higher risk of gully erosion on steep slopes

Inherent Salinity/Sodicity

Low salinity, non-sodic

Land Resource Reference

Atlas of Australian Soils Landscape Units – Gd7 & Mm4

Soil Classification

*Australian Soil Classification

Dermosols

*Great Soil Groups

Prairie & minimal Prairie soils

Regional Ecosystem & Conservation Features

Land zone 11 – hills on metamorphic rocks

12.11.15 – Ironbark and blue gum woodland with Grass-trees on serpentinite (of concern)

12.11.3 - Open forest generally with Grey Ironbark & Grey Gum on metamorphics ± interbedded volcanics (not of concern)

12.11.10 - Notophyll vine forest ± Hoop Pine on metamorphic rocks (not of concern)

12.11.14 - Ironbark, blue gum and pink bloodwood grassy woodland on metamorphic rocks (of concern)



Open forest on shales, Widgee

Location Notes

This unit is the third most extensive grazing land type in the Western Mary Catchments.

Munna sub-catchment: includes parts of the Brooweena and Teebar districts southwards adjacent to Munna Creek to Running Creek.

Kilkivan district: north of the Woolooga granites, west of Widgee township and north of Gap Creek.

Grazing Land Type: Open forest on shales (ref Land Zone 11)

Vegetation

Eucalypt open forest characterised by spotted gum. Includes ironbarks, gum topped box and Moreton Bay ash. Shrubby understorey of brush box, forest oak and wattle spp.

Land Form

Low hilly, hilly, steep hilly to mountainous

Soil Description

Soils are characterised by hard-setting gravelly loamy soils (texture contrast soils).

Leached loams (Um2.1); loamy soils over yellow clayey subsoils (Dy3.4), and loamy soils over red clayey subsoils (Dr3.4).

Soil moisture holding capacity - low

Soil drainage – poor (mottled subsoils)

Inherent soil fertility – low organic matter soils with low fertility overall. Associated phyllitic shale soils are more fertile.

pH - moderately acid

Land use

Extensively cleared for beef and dairying.

Predominant grazing enterprises

Beef breeding and growing

Native hardwood forestry

Native/*Naturalised Pastures

3P- Black speargrass, Kangaroo grass,

*Pioneer Rhodes grass, Forest bluegrass,

*Paspalum

2P – Qld blue couch, Barbwire grass, Native panic

1P- Pitted bluegrass, Blady Grass, *Matgrass, wiregrasses, native rats tail grasses

Sown Grass/Legume Pastures

3P - Katambora Rhodes, Bisset creeping bluegrass, Pangola

2P - Hamil Guinea grass

Legumes – Lotononis, Villo mix, Beefbuilder and Seca stylos, Wynn cassia, White clover

Current Weed Problems –

Wattle regrowth, Lantana, Groundsel, Bracken fern, Giant rats tail grass

Estimated production

Stocking Rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/ naturalised pastures	4 to 6 (ha/ AE)
Sown grass/ legume pastures	2.5 to 3 (ha/ AE)

Pasture Dry Matter Production

3 000 to 4 000 kg DM/ ha/ year

(based on 'A' land condition & Kilkivan's 872 mm & Marodian's 915 mm average annual rainfall)

Safe pasture utilisation rate = 25%

Available pasture = 750 to 1000 kg DM/ ha/ yr

Erosion hazard

Pastures - moderate to high risk

Hillslopes – High risk of sheet and gully erosion. Linked to high suspended sediment loads.

Inherent Salinity/ Sodicity

Salinity and sodicity usually low

Land Resource Reference

Atlas of Australian Soils – Landscape Units Tb69, Tb79, Tb80, Tb82, Fu5

Soil Classification

*Australian Soil Classification

Kurosols, Tenosols

*Great Soil Groups

Leached loams, Red & Yellow

Podzolics

Regional Ecosystems & Conservation

Features

Land zone 11 – hills on metamorphic rocks

12.11.3 - Open forest generally with Grey Ironbark and Grey Gum on metamorphics ± interbedded volcanics (not of concern)

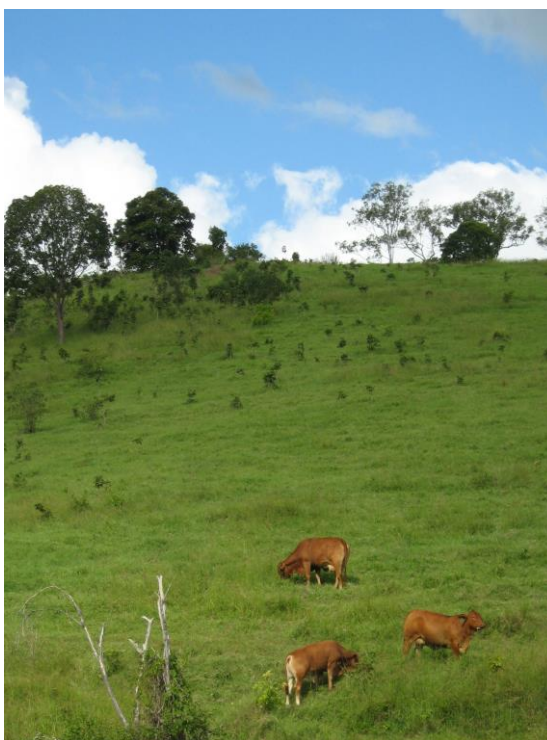
12.11.10 - Notophyll vine forest ± Hoop Pine on metamorphics ± interbedded volcanics (not of concern)

Location Notes

This unit is the third most extensive grazing land type in the Western Mary Catchment



Hoop pine scrub near Upper Widgee



Softwood scrub regeneration and pastures

Location Notes

Located in pockets in the vicinity of Glastonbury, Lower Wonga, Oakview, Black Snake, Mudlo Gap and Mt Urah. Also found in Running Creek and Calgoa Creek sub-catchments.

Grazing Land Type: Softwood scrub on volcanics and granites

(ref Land Zone 8, 11 and 12)

Vegetation

Softwood scrub characterised by hoop pine with a shrubby understorey: Crows ash, white and red cedar, Lignum-vitae, figs, vines and tulipwood; also includes bastard/ dry scrubs. Minimal grassy understorey.

Land Form

Hilly, steep hilly to mountainous terrain and dissected plateau remnants on volcanic rocks and granites.

Soil Description

Volcanics - red, brown & dark friable earths (Gn3.1, Gn3.4). Granites – leached sands and loams (Uc2.1, Uc4.1, Um2.1, Um4.1)

Soil Moisture Holding Capacity - moderate

Soil Drainage - well drained soils

Inherent Soil Fertility - high

pH - slightly acid to neutral

Land Use

Extensively cleared for dairying, horticulture e.g. bananas, hoop pine plantation forestry and beef grazing purposes.

Predominant Grazing Enterprises

Beef breeding and fattening.

Native/*Naturalised Pastures

Minimal grassy understorey.

3P – Qld bluegrass, forest bluegrass, kangaroo grass, black speargrass, Tambookie grass, *paspalum, *Pioneer Rhodes, *Green panic

2P – Qld blue couch, * Hamil guinea, slender chloris

1P – Pitted bluegrass, blady grass, wiregrasses, lovegrasses, reed grass.

Legumes - various native legume spp

Sown Grass/Legume Pastures

3P - Callide Rhodes, Green and Gatton Panic, Bisset bluegrass, Paspalum

Legumes – Glycine, siratro, Seca and fine stem stylo, Wynn cassia

Current Weed Problems

Lantana, cats-claw creeper, asparagus fern, giant rats tail grass, African lovegrass

Estimated production

Stocking Rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/naturalised pastures (cleared)	3 to 4 (ha/ AE)
Sown grass/ legume pastures	1.5 to 2 (ha/ AE)

Pasture Dry Matter Production

6 000 to 7 500 kg DM/ ha/ year

(based on 'A' land condition and Kilkivan's 872 mm & Marodian's 915mm average annual rainfall)

Safe pasture utilisation rate = 30%

Erosion hazard

Pastures – low to moderate

Cultivated land – high (due to slope)

Steeper slopes are prone to landslips

Inherent Salinity/Sodicity

Low salinity; non-sodic

Land Resource Reference

Atlas of Australian Soil – Landscape Units Mp9, Mm5, Cd5, Pd10, Pu1, Rh10. Steep examples of the above units have been identified as high hillslope erosion hazard including landslips.

Soil Classification

*Soil groups

Red Ferrosols, Dermosols, Chromosols,

*Great Soil Groups

Prairie soils and Krasnozems

Regional Ecosystems and Conservation Features

Land zone: 9-10 – sandstone hills; 11 – metamorphic rocks; 12 – hills on granitic rocks

12.12.13- Hoop pine vineforest on granites (of concern)

12.12.16 – Notophyll vineforest on granite (least concern)

12.12.17 – Semi evergreen vinethicket (endangered)

12.11.10 – Hoop pine vineforest on metamorphics ± interbedded volcanics (least concern)

12.9-10.16 – Hoop pine vineforest on sandstone (of concern)

Conservation Features

The threatened Black breasted button quail and Nangur Skink can be found in this land type.



Spotted gum ridge

Location Notes

Widespread on ridges throughout the district, e.g. Sexton, Calgoa, Aramara, Gundiah and in association with several grazing land types.

Grazing Land Type: Spotted gum ridges (ref Land Zone 9/10, 11, 12)

Vegetation

Open forest on shallow ridges dominated by spotted gum. Includes gum-topped box, brush box, Moreton Bay ash, grey ironbark, forest oaks. Shrubby understorey of wattle species incl dogwood.

Land Form

Ridges, hillcrests and steeper slopes

Soil Description

Ridges with shallow soils in several grazing land types. For example, shallow gravelly loams and leached sands overlying shales, sandstones and granites. Exposed rock is common.

Soil moisture holding capacity - very low, due to high rainfall run-off

Soil drainage - well drained

Inherent soil fertility - low. Very low in organic matter.

pH - moderately acid

Land Use - native hardwood forestry and grazing

Predominant grazing enterprises

Growing store cattle. State Forest reserves

Native/ *Naturalised Pastures

3P – Kangaroo grass, Black speargrass

2P – Barbwire grass, Qld blue couch

1P - Pitted bluegrass, wiregrasses, native lovegrasses, blady grass, Cockatoo grass, native rats tail grasses

Sown Grass/ Legume Pastures

Unsuitable for intensive pasture development - low-key legume establishment only

Legumes – Fine stem & seca stylo, Wynn cassia

Current Weed Problems

Lantana, wattle regrowth, Bracken fern, Mother of millions

Estimated production

Stocking Rates (ha/ adult equivalent)

(1 AE = 450 kg live weight animal)

	Stocking Rate
Native/ low key pasture development	8 to 10 (ha/ AE)

Pasture Dry Matter Production

up to 1500 kg DM/ ha/ year

(based on 10m² of tree basal area & Kilkivan's 872 mm & Brooweena's 1004 mm average annual rainfall)

Safe pasture utilisation rate = 10%

Available pasture = up to 150kg DM/ ha/ year

Erosion hazard

Very high – high risk of sheet & gully erosion

Inherent Salinity/ Sodicty

Salinity low, some subsoils may be sodic

Land Resource Reference

A range of Atlas of Australian Soils Landscape units eg. Tb69, Cd5

Soil Classification

*Australian Soil Classification

A range of soil groups on ridges

*Great Soil Groups

A range soil groups on ridges

Regional Ecosystems & Conservation Features

Land zones 9-10 (sandstone hills), 11 (metamorphic rocks) & 12 (granite hills)

12.11.6 – Open forest with spotted gum, and ironbark on metamorphics (not of concern)

Habitat for threatened cycads - *Cycas megacarpa* and *Macrozamia parvifolia*

12.11.18 – Woodlands of spotted gum & gum topped box on metamorphic rocks (least concern)

12.12.5 – Open forest with spotted gum & ironbark on granites (least concern)

12.9-10.3 – Open forest with spotted gum & gum topped box on sandstone (of concern)

Grazing land type sheets for the Mary Catchment

- Munna sub-catchment (2005)
- Mary Catchment desktop study (2007)
- Gympie district (2011)
- Western Mary Catchments (2014)

<http://mrccc.org.au/wp-content/uploads/2014/05/Grazing-Land-Types-of-the-Gympie-District.pdf>

Grazing land type booklets are also available for neighbouring regions

- Inland Burnett (2004 & updated, 2007)
- Coastal Burnett (2008)
- South East Qld (including Brisbane Valley & Sunshine Coast)

