THE CURRENT SITUATION

7. PROJECT AREA SNAPSHOT

Understanding or taking a snapshot of the project area is the first step in creating a successful and long-lasting project. By studying the project area we can strategically assess location and quality of remnant vegetation, waterways, existing environmental assets and other environmental works. This information will present the opportunities for the creation of wildlife corridors or biolinks across the landscape.

Other variables such as catchments, waterways, climate, land use and size, communities, vegetation and other fauna, all combine to form the overall picture of koala habitat.

In this section we'll explore all aspects of the project area and the implications for protection and reestablishment of koala habitat, as well as examine a case study of existing projects. We will also identify threats facing koalas in South Gippsland.

Figure 5: Horse properties are gaining a growing popularity in South Gippsland

"OTHER VARIABLES SUCH AS CATCHMENTS, WATERWAYS, CLIMATE, LAND USE AND SIZE, COMMUNITIES, VEGETATION AND OTHER FAUNA, ALL COMBINE TO FORM THE OVERALL PICTURE OF KOALA HABITAT."

7.1 SOUTH GIPPSLAND LANDCARE NETWORK

Landcare is a community-based movement that has played a major role in raising awareness, influencing farming and land management practices and delivering environmental outcomes across Australian landscapes (DAFF, 2012).

The South Gippsland Landcare Network (SGLN) was formed in 1995 and today is made up of 18 groups and over 800 families who manage and farm the land. These groups are generally formed around social boundaries such as communities, a township or hall. The size of membership of each group varies greatly.

The Network area covers 270,000 ha and is bordered by the Strzelecki Ranges to the north and the Bass Strait to the south. The south-western half of the catchment is part of the Gippsland Plains bioregion, characterized by lowland coastal and alluvial plains with gentle undulating terrain which rises to meet the Strzelecki Ranges to the north. The steep Strzelecki Ranges bioregion covers much of the northern part of the Network (WGCMA, 2010).

Thanks to its high rainfall and productive soils, the South Gippsland area is an important dryland agricultural region, with strong dairy and beef industries. The regional townships of Leongatha, Meeniyan, Poowong, Foster, Mirboo North and Korumburra are located in the Network.

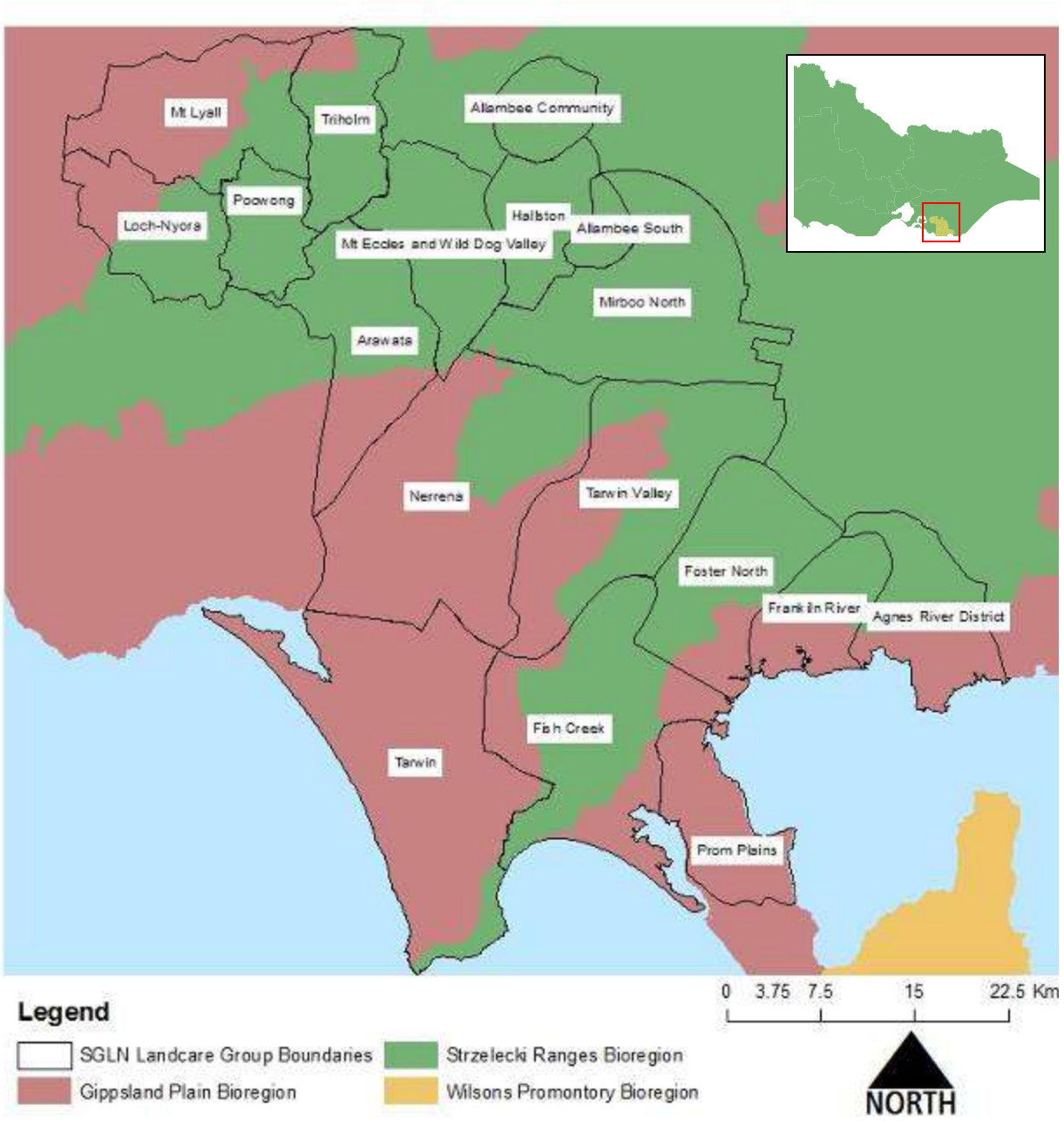

Figure 7 The South Gippsland Landcare Network Group and Bioregions : (WGCMA-mapped data, 2012)

7.2 CATCHMENTS

The South Gippsland Landcare Network encompasses parts of three individual catchments including the Westernport Catchment to the west of the Network managed by the Port Phillip and Westernport Catchment Authority and the Corner Inlet Catchment to the east and Bunurong Catchment to the centre managed by the West Gippsland Catchment Management Authority.

The Corner Inlet Catchment covers a total area of 210,000 ha and is characterised by short, dynamic and independent river systems that drain into the internationally recognised Corner Inlet (WGCMA, 2012). Groups is in the Corner Inlet Catchment include the Prom Plains, Agnes River, Franklin River Landcare Groups, as well as parts of the Fish Creek and Foster North Landcare Groups.

The Bunurong Catchment covers 250,000 ha and includes areas of high quality remnant bush along the coast and in the headwaters of the Tarwin River, as well as quality soils and high rainfall in the central river plains allowing for a thriving agricultural industry. The Bunurong Catchment incorporates the Allambee South, Alambee Community, Hallston, Mt Eccles/Wild Dog Valley, Arawata, Tarwin Valley, Nerrena and Tarwin Landcare Groups, as well as parts of Foster North and Fish Creek Landcare Groups.

The Westernport Catchment is situated to the west of the Landcare Network and incorporates the Poowong, Mt Lyall, Loch/Nyora and Triholm Landcare Groups.

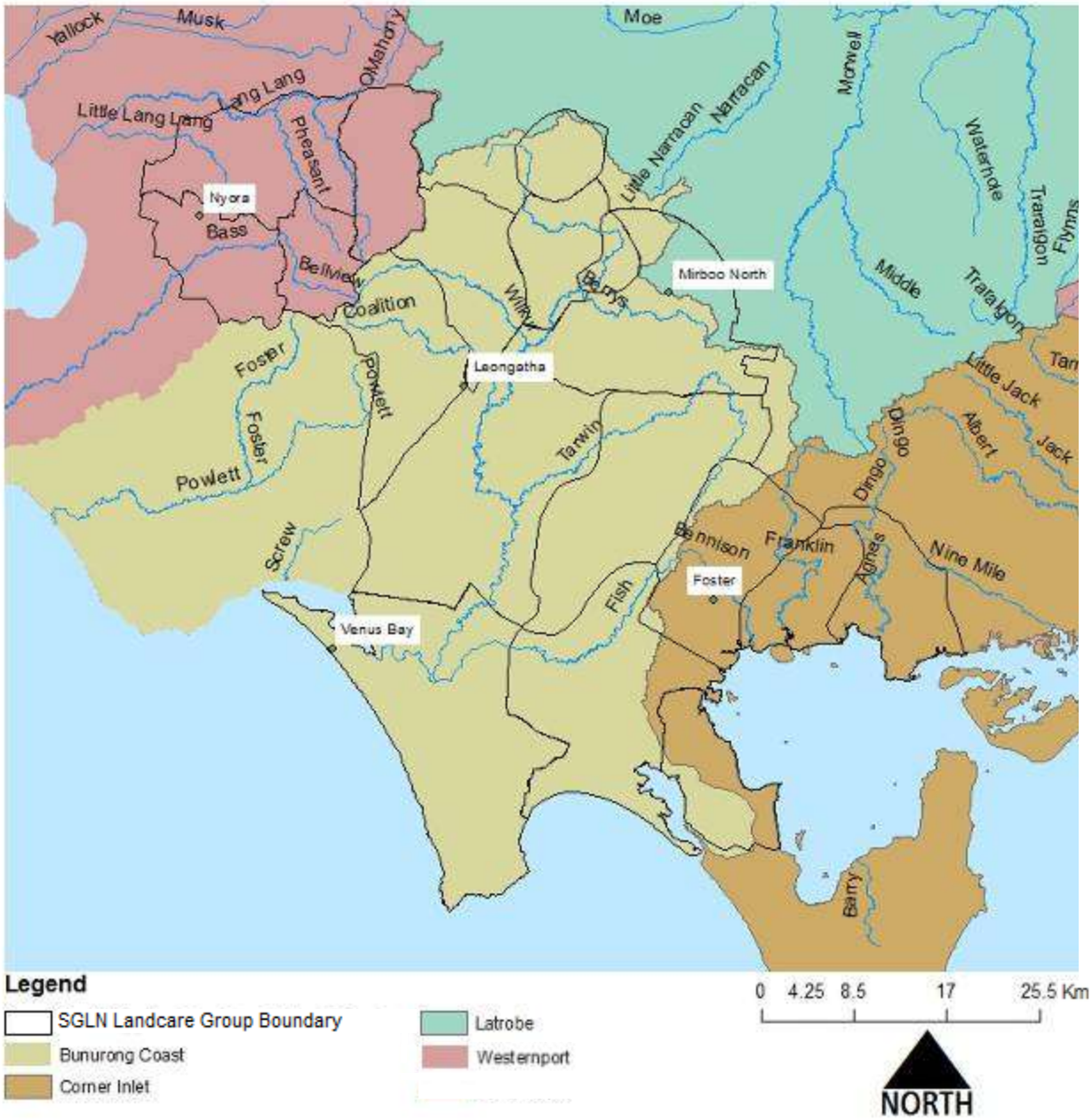

Figure 8 The South Gippsland Landcare Network, important rivers and catchment boundaries (WGCMA-mapped data, 2012)

7.3 WATERWAYS AND WETLANDS

With high and generally reliable rainfall, the Strzelecki Ranges provide significant runoff to a number of creeks and rivers which flow throughout the South Gippsland Landcare Network (Lowe, 2010).

The Index of Stream Condition (ISC) is a measure of measure of river condition in Victoria. It integrates the condition of river hydrology, water quality, streamside zone (vegetation), physical form (bed and bank condition and instream habitat) and aquatic life (DSE, 2012) Although nearly all streams in SGLN have a Index of Stream Condition ranked as marginal or poor (largely associated with altered hydrology and poor vegetation scores), most still support important aquatic ecosystems including macroinvertebrates and often provide important vegetation links across the landscape (DSE, 2012). The Coalition Creek and Upper Lang Lang River are ranked as being in very poor condition (DSE, 2012).

Important wetlands in the Network area include the RAMSAR listed Corner Inlet and the Westernport. Corner Inlet is valued for its high biodiversity including the most southerly embayment and tidal mudflat system off Mainland Australia and the world's most southerly occurrence of White Mangroves and broad leafed seagrass (R Molloy, 2005).The Franklin River and Agnes rivers flow into the Inlet, with both of their river mouths estuaries part of the Corner Inlet RAMSAR site. Both rivers are high contributors of sediment and nutrient to the Inlet.

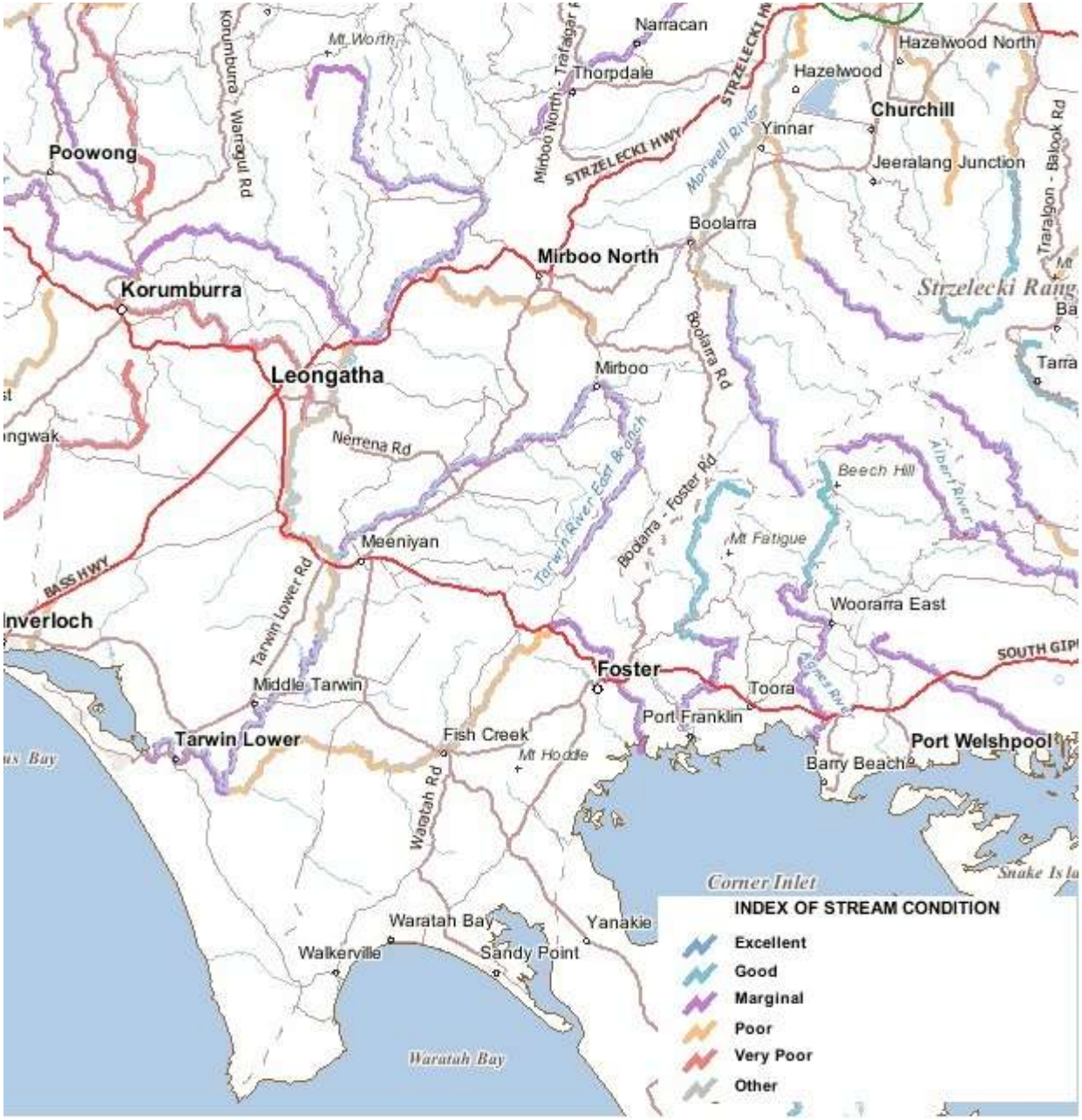

Figure 9 Stream Condition Index of SGLN streams (DSE, 2012)

The marine ecosystem within Westernport is of regional, national and international importance (including a RAMSAR listing) with a range of habitats and associated mangrove, saltmarsh, seagrass, reef and soft seabed communities (Melbourne Water, 2012).The Bass and Lang Lang Rivers are vital to the bay as they contribute high loads of sediments and nutrients to the fragile ecosystem. Other major streams in this catchment include O'Mahony, Minnieburn, Pheasant, Adams and Red Bluff creeks and the Little Lang Lang River.

The Tarwin River comprises two primary branches (east and west branch) and discharges into Anderson Inlet. The Anderson Inlet is recognised as an Wetland of National Importance, as well as other wetlands in the area the Bald Hills Wetland and the Shallow Inlet (WGCMA, 2010).

7.4 CLIMATE AND RAINFALL

The area of the South Gippsland Landcare Network is characterised by a temperate climate, with mostly reliable rainfall. The Strzelecki region of the Network experiences a higher average rainfall of around 1200 mm a year, compared to the Gippsland plains which generally receive around 800 mm a year (Bureau of Meteorology , 2012).

Recent years have seen persistent drought with annual rainfall in South Gippsland since 1997 being 20 per cent lower than the average between 1885 and 1996 (South Gippsland Municipal Fire , 2011)

7.5 COMMUNITIES

The South Gippsland Landcare Network (which roughly covers the same areas as the South Gippsland shire) has a population of 25,737 (Australian Bureau of Statistics, 2011).

The Network contains the regional townships of Leongatha (population 5332), Nyora (population 1332), Foster (population 1677), Mirboo North (population 2296) and Korumburra (population 4373), as well as many other smaller townships and localities (Australian Bureau of Statistics, 2011). The area retains strong agricultural ties with 16.7% of the population working in agriculture, forestry or fishing in 2011. This had reduced from 20% of the population in 2006 (Australian Bureau of Statistics, 2011).

The percentage of the South Gippsland population who volunteer is 29.3%, above the regional average of 23.4% (Australian Bureau of Statistics, 2011). The level of volunteering can indicate the cohesiveness of the community and how readily individuals are able to contribute to that community (Australian Bureau of Statistics, 2011).

7.6 LAND USE AND SIZE

Much of SGLN area has been extensively cleared of its original dense native vegetation, and now supports productive agricultural farmland. Patches of remnant vegetation remain predominantly on public land, but also on private property.

Agriculture is a hugely important industry in South Gippsland with competitive dairy and beef industries. 77.9% of the South Gippsland Shire area (roughly the same as the South Gippsland Landcare Network) is freehold land (South Gippsland Shire, 2011). The Gippsland region produced around 2.1 billion litres of milk in 2008-09 from 1,714 farms (South Gippsland Shire, 2011). This represents 23% of Australia's milk production making it one of the largest milk producing regions in the country The beef industry in South Gippsland produced around 28% or $101 million in gross value of agricultural production in 2006 (South Gippsland Shire, 2011).

Generally, farming in the area is shifting towards smaller (less than 50ha or $100,000) and larger farms (more than 500ha or more than $500,000), with a loss of medium sized farms (between 100ha to 500ha) (South Gippsland Shire, 2011).

Forestry is prevalent in the upper Strzelecki ranges, particularly in the Grand Ridge Landscape Biodiversity Zone above Foster where hardwood forestry (13.8%) and softwood forestry (17.9%) are important industries (WGCMA, 2009).

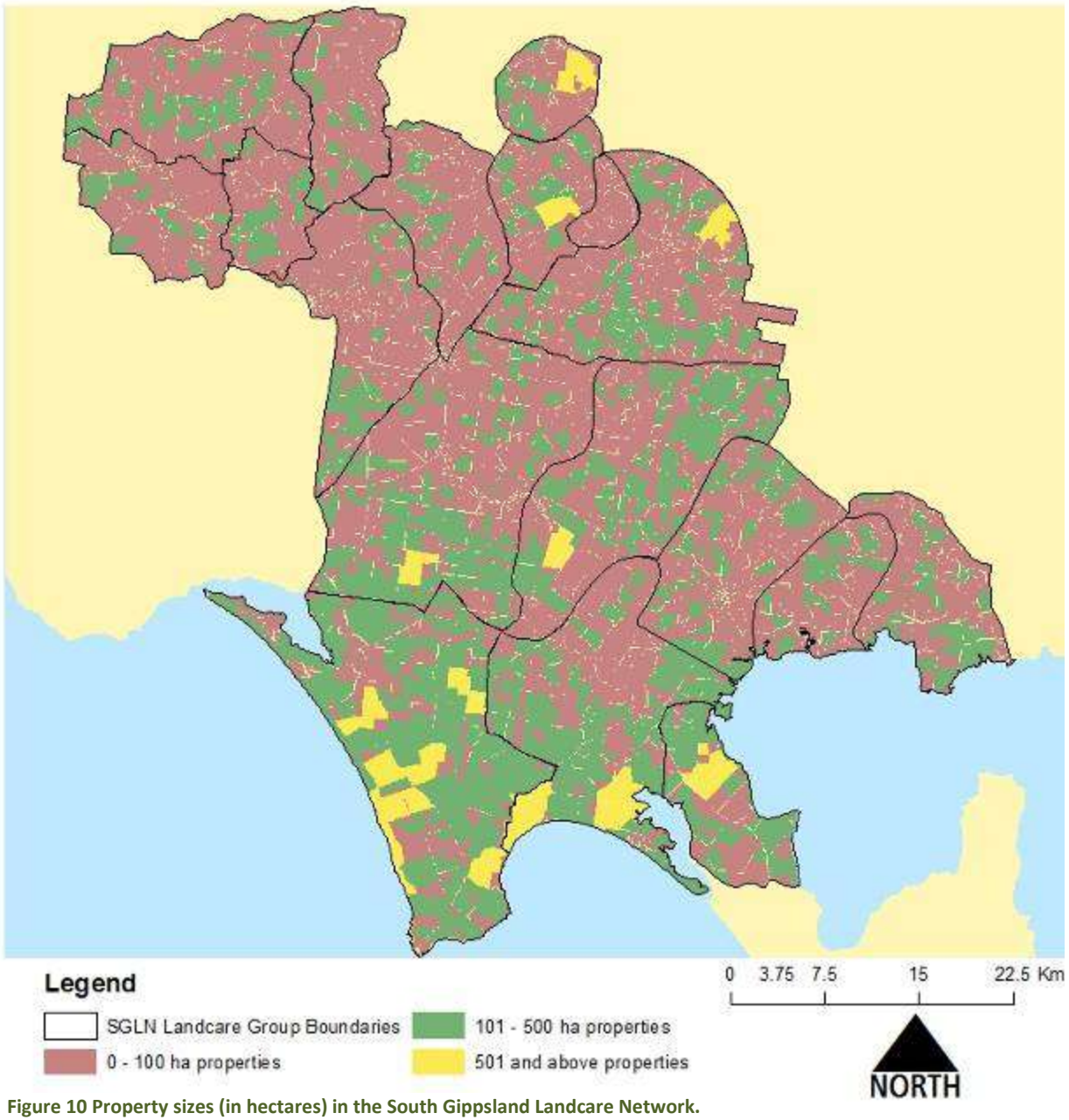

Figure 10 Property sizes (in hectares) in the South Gippsland Landcare Network. (WGCMA-mapped data, 2012)

7.7 NATIVE VEGETATION SUMMARY

Due to varied physical characteristics a wide range of Ecological Vegetation Classes (EVC) is found within the South Gippsland Landcare Network area. Much of the remnant vegetation found in the South Gippsland Landcare Network is highly fragmented patches on private property. Around 17% of the Network is mapped as remnant vegetation (Dataset, 2005)

The 5 EVCs with the highest cover in the South Gippsland Landcare Network are Wet Forest, Damp Forest, Lowland Forest, Damp Heathy Woodland/Lowland Forest Mosaic and Swamp Scrub (DSE mapping).

The Southern region of the Network is characterised by coastal species such as Coast Banksia Woodland, Swampy Woodland, Estuarine Wetland, Coastal Headland Scrub, Coastal Saltmarsh and Riparian Scrub. The Cape Liptrap Coastal park is a continuous corridor of various coastal EVCs.

The lower Gippsland plains are characterised by EVCs such as Lowland Forest, Swamp Scrub, Shrubby Foothill Forest, Swampy Riparian Woodland and other woodlands.

The northern regions of the Network are characterised by Wet Forest and Damp Forest, extending across the Strzelecki Ranges bioregion.

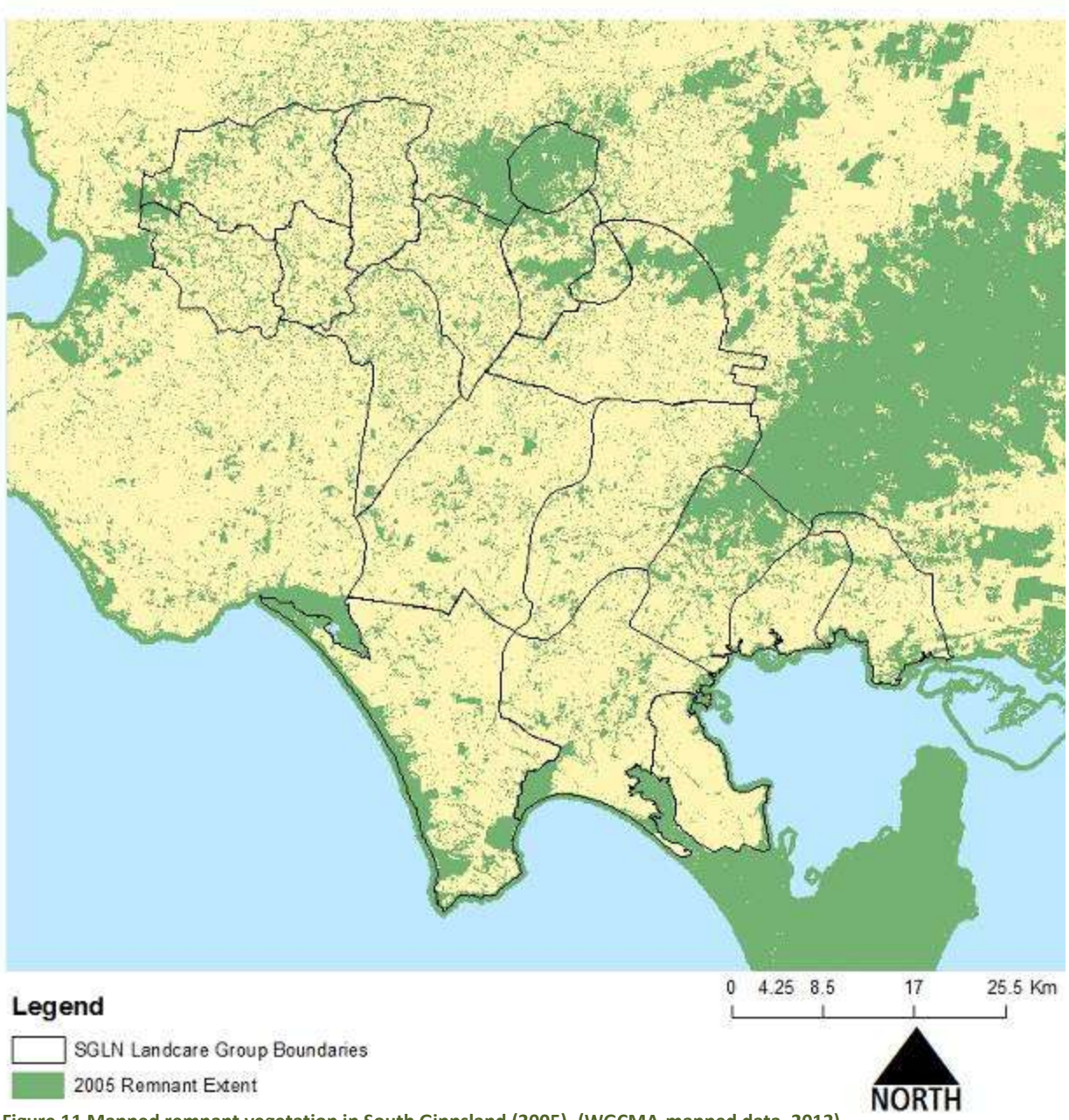

Figure 11 Mapped remnant vegetation in South Gippsland (2005). (WGCMA-mapped data, 2012).

7.8 FAUNA AND FLORA

Due to varied physical characteristics a rich diversity of fauna and flora is found within the South Gippsland Landcare Network area..

Fauna species found across the Network include the nationally significant fauna species such as the vulnerable listed Australian Grayling, Grey-headed Flying Fox, Growling Grass Frog and the endangered listed Southern Brown Bandicoot and Spot Tailed Quoll (WGCMA, 2009)l.

Other notable species found here include the Giant Gippsland Earthworm, Powerful Owl, Strzelecki Burrowing Cray, and White Bellied Sea-eagle (WGCMA, 2009).

Flora species found across the Network include the nationally significant flora species the Strzelecki Gum (Eucalyptus strzeleckii). The Strzelecki Gum has a National Recovery Plan (Carter, 2006).

As an indicator of the number of floral species found in the area, a total of 932 plant species have been recorded within the Grand Ridge Biodiversity Landscape Zone, which is located to the east of the Network. 36 of these are rated as State significant fauna (WGCMA, 2009).

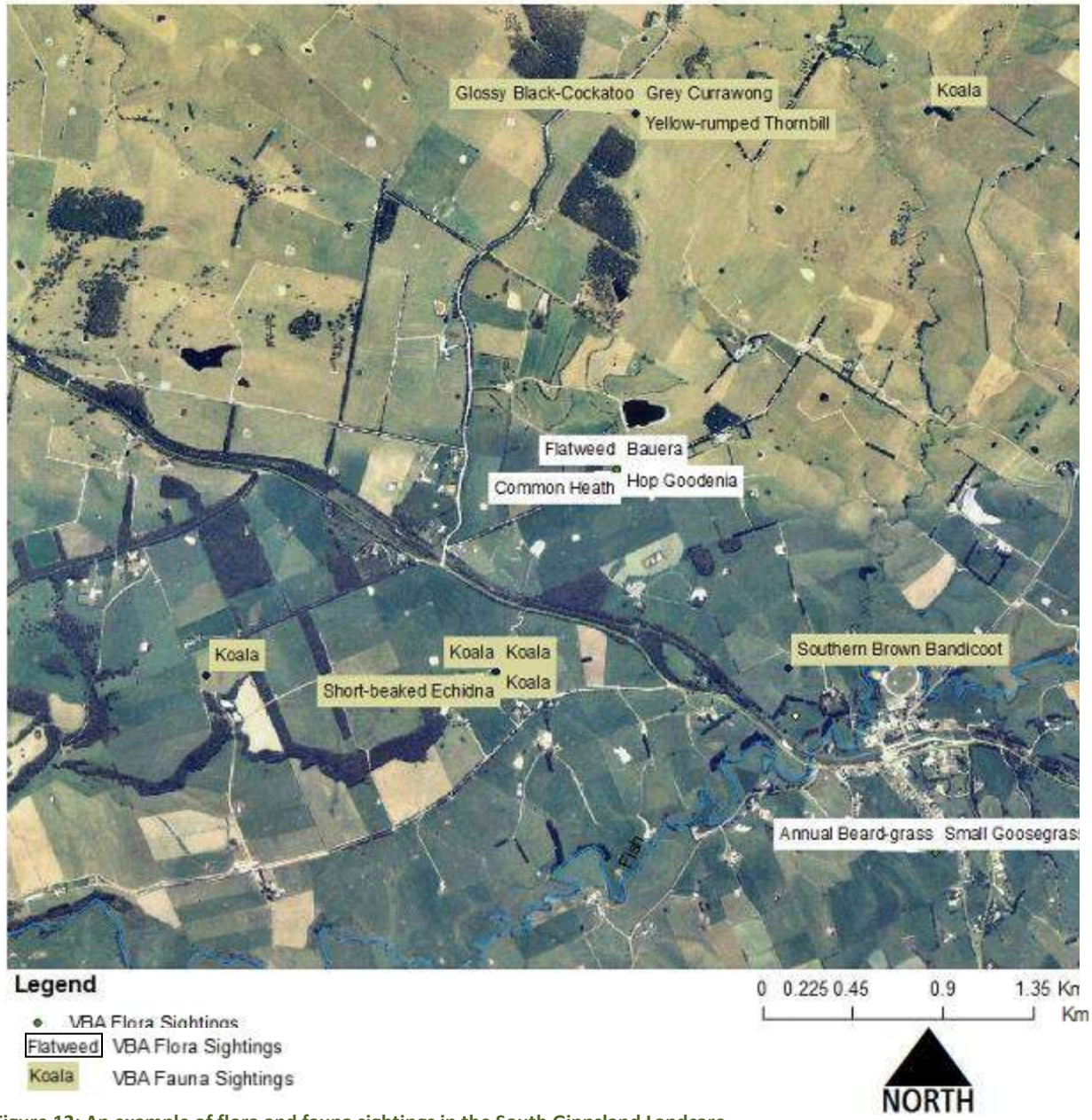

Figure 12: An example of flora and fauna sightings in the South Gippsland Landcare Network. Fauna and Fauna Victorian Biodiversity Atlas sightings around Fish Creek. (WGCMA-mapped data, 2012) VBA dataset