GIPPSLAND LAKES and Hinterland

LANDSCAPE PRIORITY AREA

Photo: The Perry River
The Gippsland Lakes and Hinterland landscape priority area is characterised by the iconic Gippsland Lakes and wetlands Ramsar site. The Gippsland Lakes is of high social, economic, environmental and cultural value and is a major drawcard for tourists. A number of major Gippsland rivers (Latrobe, Thomson, Macalister, Avon and Perry) all drain through floodplains to Lake Wellington and ultimately the Southern Ocean, with the Perry River being one of the few waterways in Victoria to have an intact chain of ponds geomorphology. The EPBC Act listed Gippsland Red Gum Grassy Woodland and associated Native Grassland ecological community is represented in the landscape priority area. The priority area is within a largely fragmented, agricultural landscape and is located adjacent to the Macalister Irrigation District, which is the largest irrigation area south of the Great Dividing Range (WGCMA 2011).

Maps of the significant natural assets within the Gippsland Lakes and Hinterland landscape priority area are presented in this chapter along with a description of their values, condition and key threats. A summary of the key threats to the significant natural assets within the Gippsland Lakes and Hinterland landscape priority area is provided in Table 4 at the end of this chapter.

Shallow Aquifer

The Shallow Alluvial aquifer includes the Denison and Wa De Lock Groundwater Management Areas. It has high connectivity to surface water systems including the provision of base flow to rivers, such as the Avon, Thomson and Macalister. The aquifer contributes to the condition of other Groundwater Dependent Ecosystems including wetlands, estuarine environments and terrestrial flora. The aquifer is also a very important resource for domestic, livestock, irrigation and urban (Briagolong) water supply. The shallow aquifer of the Avon, Thomson, Macalister and lower Latrobe catchments is naturally variable in quality and yield. In many areas the aquifer contains large volumes of high quality (fresh) groundwater, whereas elsewhere the aquifer can be naturally high in salinity levels. Watertable levels in some areas have been elevated due to land clearing and irrigation recharge. In recent times this has been off-set by prolonged drought, improved efficiency of irrigation water supply and use, and increased groundwater usage. Contamination of the aquifer via fertilisers, dairy effluent, sewerage systems and other industrial or commercial sources presents a key threat to the aquifers and the receiving systems that the aquifers interact with (e.g. rivers, wetlands and the Gippsland Lakes). Unsustainable extraction, particularly during dry periods, can impact on groundwater users, reduce base flow to rivers and place groundwater dependent ecosystems under stress. Altered recharge/discharge patterns due to land use change can also impact the resource and have secondary implications in particular via land salinisation.
The Gippsland Lakes and Hinterland landscape priority area encompasses portions of two biodiversity assets: the Fragmented Habitat - Corner Inlet 90-Mile Beach Coast asset and the Fragmented Habitat - Red Gum Plains asset (Figure 26). The combined contribution of natural values of these two biodiversity assets is depicted in Figure 27.

**Fragmented Habitat - Red Gum Plains**

The Fragmented Habitat - Red Gum Plains biodiversity asset contains the Gippsland Lakes Coastal Park, The Lakes National Park, Providence Ponds Flora and Fauna Reserve, and other smaller reserves and sites of cultural heritage sensitivity. It supports endangered, rare and vulnerable EVCs including the EPBC Act listed Gippsland Red Gum Grassy Woodland and associated Native Grassland ecological community. NaturePrint v2.0 indicates this landscape area as containing habitat of Statewide importance for at least 16 threatened fauna species. It also supports multiple threatened flora species. This asset covers a fragmented natural landscape with medium to large patches of remnant native vegetation. Remnant vegetation patches are moderately connected and the modelled vegetation quality is moderate. Key threats to the asset are vegetation clearing; overgrazing; invasive plants and animals, altered hydrological regimes and extreme events (fire and flood).

**Fragmented Habitat - Corner Inlet 90-Mile Beach Coast**

The Fragmented Habitat - Corner Inlet 90-Mile Beach Coast biodiversity asset contains the Gippsland Lakes Coastal Park and The Lakes National Park. It supports endangered, rare and vulnerable EVCs. NaturePrint v2.0 indicates this landscape area as containing habitat of Statewide importance for at least 23 threatened fauna species. It also supports multiple threatened flora species. This asset covers a fragmented natural landscape with large patches of remnant native vegetation. Remnant vegetation patches are moderately connected and the modelled vegetation quality is moderate to high. Key threats to the asset are invasive plants and animals; soil acidification (including coastal acid sulfate soils); altered fire regimes; overgrazing and extreme events (fire and flood).
Lake Wellington and McLennan Strait

Lake Wellington and McLennan Strait are part of the Gippsland Lakes Ramsar site. They provide very important habitat for a wide variety of common and threatened waterbirds, including resident and migratory species, particularly during drought. Extensive stands of endangered Swamp Scrub fringe these waterways which are valued for commercial and recreational fishing. They connect a number of major Gippsland Rivers (Latrobe, Thomson, Macalister and Avon) with the eastern Gippsland Lakes and Southern Ocean, and facilitate the migration of fish between fresh and salt water. McLennan Strait and its surrounds are of State geomorphologic significance. Lake Wellington underwent a major change in state in the late 1960s; transforming from a clear lake covered in aquatic vegetation with extensive fringing reeds, to a turbid lake with no aquatic vegetation and much reduced fringing reed beds.

Lower Perry River (Reach 23)

The lower Perry River and its chain of ponds morphology is a site of significance in Victoria. The lower Perry River supports relatively natural vegetation communities of bioregional significance, including Swamp Scrub, Plains Grassy Woodland, and Sandy Floor Scrub.
The river also provides important habitat for migratory and non-migratory fish including the EPBC listed Dwarf Galaxias, Southern Pygmy Perch and Australian Bass. The lower Perry connects with the internationally significant Gippsland Lakes via the lower Avon River, and is valued for recreational fishing.

**Lower Avon River (Reach 19)**

The lower Avon River is valued for its fish populations which include highly sought after recreational species such as Estuary Perch, Australian Bass and Black Bream. It also provides connectivity of habitat for species that migrate between fresh and salt water such as the nationally vulnerable Australian Grayling. It is an important water source for the Gippsland Lakes Ramsar site.

**Lower Thomson River (Reach 1)**

The lower Thomson River provides important freshwater flows to the Gippsland Lakes and its fringing wetlands. The river has a diversity of habitats including extensive floodplains and wetland systems. It is flanked by endangered Riparian Floodplain Woodland and provides habitat for numerous species of native fish including Australian Bass, Tupong, Estuary Perch, Black Bream, Yellow-eye Mullet and the vulnerable Australian Grayling. It is a popular waterway for boating and includes the Port of Sale, which provides access to the lower Latrobe River and the Gippsland Lakes. It is also a popular area for walking, fishing and bird watching and has Indigenous cultural heritage values. The river supplies water for irrigated agriculture and is integral to the productivity of the Macalister Irrigation District.

**Lower Latrobe River (Reach 1)**

The lower Latrobe River is fringed by extensive reed beds. Relatively intact endangered Swamp Scrub and Floodplain Riparian Woodland communities vegetate the river levees, interspersed with small perched freshwater wetlands in some areas. The lower Latrobe is a very popular recreational fishing and boating destination, and is commercially fished for eels and European carp. It is also a critical conduit for the migration of fish between the Latrobe, Thomson and Macalister Rivers and the Gippsland Lakes, including the vulnerable Australian Grayling. The river provides an important source of freshwater to the Gippsland Lakes, and has significant fringing wetlands which are also part of the Ramsar site.

Many threatened birds are associated with the estuarine reach of the river including Great Egret, White-bellied Sea-Eagle, Royal Spoonbill and Nankeen Night Heron. The Latrobe River delta is of State geomorphologic significance.

The key threats to all of these estuary assets are livestock access; invasive plants and animals; degraded water quality (salinity, sediments and nutrients); altered freshwater and marine inflows; recreational pressure and associated navigational improvements.

**MARINE ASSET VALUES, CONDITION AND KEY THREATS**

**Gippsland Lakes**

This marine asset is adjacent to the Gippsland Lakes Ramsar listed site and falls within the Twofold marine bioregion. It contains part of the Port Albert to Lakes Entrance sandy plain, which has a diverse animal community living within the sediment beds (including burrowing worms and small crustaceans). It is a known Blue Whale and Humpback Whale migratory path. It is a popular surfing location and an area of cultural heritage sensitivity. Key threats to the asset are excess nutrients and sediments entering the system (via urban and agricultural run off, stormwater and sewage outlets/outfalls); oil/shipping traffic spills and ballast discharge (commercial and recreational); and climate variability impacts (rising sea level, temperature, acidity).
GIPPSLAND LAKES AND HINTERLAND

Gippsland Lakes and Hinterland

RIVER

ASSET VALUES, CONDITION AND KEY THREATS

Thomson River (Reach 4)
The Upper Thomson River is designated as a Heritage River due to its high visual amenity, fishing opportunities and habitat for the endangered Australian Grayling. It is a source of irrigation and potable water supply. The Upper Thomson River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants; altered flow regime and livestock access to the riparian zone.

Latrobe River (Reach 2)
The lower Latrobe provides important freshwater flows to the fringing wetlands and main lakes of the Gippsland Lakes. The lower reach of the Latrobe provides a source of water for irrigated agriculture and has extensive floodplain and wetland complexes many of which still support remnant vegetation communities including Floodplain Riparian Woodland and Swamp Scrub. A range of fish and bird species are supported by the lower Latrobe including the White-bellied Sea-Eagle and endangered Australian Grayling. The lower Latrobe River is in poor condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are bank erosion and channel modification; poor water quality; invasive plants and altered flow regime.

Perry River (Reach 23)
The Lower Perry River and its chain of ponds morphology is a site of significance in Victoria. The lower Perry River includes deep pools that support a number of fish species including the endangered Dwarf Galaxias and Pygmy Perch. The lower reach has been impacted on by adjacent land use and the remaining indigenous vegetation provides an important link with downstream environments and the range of rain fed wetlands in the catchment. The Perry River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are livestock access; invasive plants and animals and altered flow regime.

Perry River (Reach 24)
The Perry River is one of the few streams in Victoria to have an intact chain of ponds geomorphology, where the waterway consists of a series of deep pools connected by a shallow channel. The Perry River supports a diversity of fauna and vegetation communities including Sandy Floor Scrub and Plains Grassy Forest. This reach of the Perry River supports large areas of intact indigenous vegetation that provides connectivity between the Gippsland Lakes and Victoria Alpine Region. The Perry River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are bank erosion and channel modification; invasive plants and animals; livestock access and altered flow regime.

SOIL AND LAND

ASSET VALUES, CONDITION AND KEY THREATS

Figure 32: Gippsland Lakes and Hinterland Landscape Priority Area Soil and Land Assets

Figure 31: Gippsland Lakes and Hinterland Landscape Priority Area River Assets

Figure 30: Gippsland Lakes and Hinterland Landscape Priority Area Soil and Land Assets

Figure 31: Gippsland Lakes and Hinterland Landscape Priority Area River Assets

Figure 30: Gippsland Lakes and Hinterland Landscape Priority Area Soil and Land Assets

Figure 32: Gippsland Lakes and Hinterland Landscape Priority Area Soil and Land Assets

Figure 31: Gippsland Lakes and Hinterland Landscape Priority Area River Assets

Figure 30: Gippsland Lakes and Hinterland Landscape Priority Area Soil and Land Assets
**Giffard Plains**

The Giffard Plains soil and land asset is highly valued for the extensive agricultural production it supports. The asset also supports some forestry production in a mostly cleared landscape. The asset is largely intact when supported by groundcover (either introduced or native) but erosive (mainly wind) when cleared of vegetation. These soils are susceptible to primary and secondary salinity in the eastern flats, which is contributing to vegetation loss.

**Red Gum Plains**

The Red Gum Plains soil and land asset is highly valued for the remnant Red Gum Plains Grassy Woodland that this soil supports, along with agriculture and forestry production. The asset is largely intact when supported by groundcover (either introduced or native) but erosive (water) when cleared of vegetation. These soils are susceptible to primary and secondary salinity in the eastern section of the asset area.

**Bengworden Flats**

The Bengworden Flats soil and land asset is highly valued for the remnant Red Gum Plains Grassy Woodland that this soil supports, along with agriculture and forestry production. The asset is largely intact when supported by groundcover (either introduced or native) but erosive (water) when cleared of vegetation. These soils are susceptible to primary and secondary salinity in the eastern section of the asset area.

**Wilson Promontory and Coastal Soils**

The Wilson Promontory and Coastal Soils asset is highly valued for supporting resilient ecosystems and the provision of clear air and water. These soils also support economic values associated with tourism. The asset is largely intact when supported by native vegetation cover. Key threats to the asset are erosion (water) and extreme events (fire and flood).

**Wetland Asset Values, Condition and Key Threats**

The Billabong Reserve is large wetland that supports unique vegetation communities and a population of the nationally endangered prostrate shrub Dwarf Kerrawang. A number of important bird species have been recorded at the site including the Sharp-tailed Sandpiper which is protected under the JAMBA and CAMBA agreements. The Billabong Reserve is in excellent condition assessed by the Index of Wetland Condition. Key threats to the asset are inappropriate fire regimes; invasive plants and animals and altered flow regime.

**Gippsland Lakes Fringing Wetlands**

The wetlands associated with the western Gippsland Lakes comprise a wide range of wetland types: from rare freshwater wetlands along the lower Latrobe River, through estuarine (variably saline and the most common type), to hypersaline (mainly wind) when cleared of vegetation. These soils are susceptible to primary and secondary salinity in the eastern section of the asset area.
Key threats to the assets are grazing; changed water and salinity regimes (including river regulation, permanent entrance at Lakes Entrance, sea level rise and catchment salinisation); invasive plants and animals; and acid sulfate soils.

**Lower Avon Wetlands**

This asset contains wetlands of the lower Avon River including rare freshwater wetland types (both riverine and catchment/groundwater fed). The wetlands of the Avon River provide habitat connectivity with the Gippsland Lakes, have intact vegetation communities and provide a drought refuge for fauna. Wetlands in this asset group have been impacted by clearing for agriculture and changes to catchment hydrology. Key threats to the assets are invasive plants; altered hydrology and adjacent land use pressures.

**Perry River Wetlands**

This asset contains wetlands of the Perry River including rare freshwater wetland types (both riverine and catchment fed). The wetlands of the Perry River provide habitat connectivity with the Gippsland Lakes, have intact vegetation communities and provide a drought refuge for fauna. Wetlands in this asset group have been impacted by clearing for agriculture and changes to catchment hydrology. Key threats to the assets are altered hydrology; inappropriate fire regimes and invasive plants and animals.

**Table 4: Summary of key threats to significant natural assets within the Gippsland Lakes and Hinterland landscape priority area**

<table>
<thead>
<tr>
<th>Key threats to natural asset values and condition</th>
<th>Aquifers</th>
<th>Biodiversity</th>
<th>Coast</th>
<th>Estuaries</th>
<th>Marine</th>
<th>Rivers</th>
<th>Soil &amp; Land</th>
<th>Wetlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altered flow or hydrological regimes</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
<td>✓</td>
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<tr>
<td>Breached dunes/barrier</td>
<td></td>
<td>✓</td>
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<tr>
<td>Channel modification</td>
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<tr>
<td>Climate variability related extreme events (e.g. wildfire, flood, storm surge, sea level rise)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Disturbance of potential acid sulfate soils</td>
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<td>Erosion</td>
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<td>✓</td>
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<tr>
<td>Inappropriate fire regimes</td>
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<td>✓</td>
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<tr>
<td>Invasive plants and animals</td>
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<tr>
<td>Land use pressure (includes timber harvesting, land and livestock management practices)</td>
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<tr>
<td>Poor water quality (as the result of excess nutrients, sedimentation, oil spills and other pollutants)</td>
<td>✓</td>
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<tr>
<td>Recreational use and visitation impacts (includes activities and access)</td>
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<td>Salinity</td>
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<td>✓</td>
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<tr>
<td>Unsustainable extraction of groundwater</td>
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<tr>
<td>Vegetation clearing</td>
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</tbody>
</table>

GIPPSLAND LAKES AND HINTERLAND

Gippsland Lakes and Hinterland
MULLUNGDUNG

LANDSCAPE PRIORITY AREA

Photo: Ninety Mile Beach
The Mullungdung landscape priority area is characterised by its largely fragmented remnant native vegetation of high biodiversity and natural value, which is poorly connected to larger remnants located within State Parks and conservation reserves outside of the priority area (such as the Mullungdung State Forest). The area supports endangered, rare and vulnerable ecological vegetation classes, including the EPBC Act listed Gippsland Red Gum Grassy Woodland and associated Native Grassland ecological community. The extensive sandy beaches and marine waters of Ninety Mile Beach are a popular destination for local fishermen, holidaymakers and tourists and have indigenous cultural heritage significance. Jack Smith Lake and its associated wetlands are listed in the Directory of Important Wetlands of Australia (DIWA) and are valued for the diversity of bird species they support. The landscape priority area supports broad acre agricultural enterprises (including dairy, sheep and beef grazing) and some forestry production (WGCMA 2011).

Maps of the significant natural assets within the Mullungdung landscape priority area are presented in this chapter along with a description of their values, condition and key threats. A summary of the key threats to the significant natural assets within the Mullungdung landscape priority area is provided in Table 5 at the end of this chapter.

Latrobe Group Aquifer - Yarram Water Supply Protection Area (WSPA)

The Yarram WSPA extends across a large part of the onshore extent of the Latrobe Group Aquifer. It is a major water resource for both irrigation, industry and town water supplies (Yarram) and has been confirmed to interact with rivers (e.g. Tarra River) where it is unconfined (on the southern edges of the Strzelecki Ranges north of Yarram). This aquifer also contains the oil and gas reserves mined off-shore in Bass Strait. The Latrobe Group Aquifer contains extremely large volumes of high quality (fresh) groundwater. Water levels have been declining consistently at a rate of approximately 1m/year over the last few decades, which has resulted in the water becoming less accessible to groundwater users (SRW 2010). The degree to which the declining water levels are impacting on connected surface water systems or groundwater dependent ecosystems is currently unclear. The major threat to the Latrobe Group Aquifer is unsustainable extraction, particularly via the offshore oil and gas industry. Unsustainable extraction poses a threat to onshore groundwater users and may lead to land subsidence (SRW 2010). The potential impacts of emerging technologies (e.g. coal seam methane gas extraction) on groundwater resources will need to be considered (DSE 2011c).
The Mullungdung landscape priority area encompasses portions of two biodiversity assets: the Highly Fragmented Habitat - Gippsland Coastal Plains asset and the Fragmented habitat - Corner Inlet 90-Mile Beach Coast asset (Figure 36). The combined contribution of natural values of these two biodiversity assets is depicted in Figure 37.

**Highly Fragmented Habitat - Gippsland Coastal Plains**

The Highly Fragmented Habitat - Gippsland Coastal Plains biodiversity asset contains the Darriman Bushland Reserve, other small reserves, and sites of cultural heritage sensitivity. It supports endangered, rare and vulnerable EVCs; including the EPBC Act listed Gippsland Red Gum Grassy Woodland and associated Native Grassland ecological community. NaturePrint v2.0 indicates this landscape area as containing habitat of Statewide importance for at least six threatened fauna species. It also supports multiple threatened flora species. This asset covers a highly fragmented natural landscape with small patches of remnant native vegetation. Remnant vegetation patches are poorly connected and the modelled vegetation quality is low to moderate. Key threats to the asset are invasive plants and animals; altered fire regimes; overgrazing and extreme events (fire and flood).

**Highly Fragmented Habitat - Corner Inlet 90-Mile Beach Coast**

The Highly Fragmented Habitat - Corner Inlet 90-Mile Beach Coast biodiversity asset contains the Jack Smith Lake Wetland Reserve. It supports endangered, rare and vulnerable EVCs. NaturePrint v2.0 indicates this landscape area as containing habitat of Statewide importance for at least 23 threatened fauna species. It also supports multiple threatened flora species. This asset covers a fragmented natural landscape with large patches of remnant native vegetation. Remnant vegetation patches are moderately connected and the modelled vegetation quality is moderate to high. Key threats to the asset are invasive plants and animals; soil acidification (including coastal acid sulfate soils); altered fire regimes; overgrazing and extreme events (fire and flood).
MULLUNGDUNG

Mullungdung

COASTAL
ASSET VALUES, CONDITION AND KEY THREATS

Figure 38: Mullungdung Landscape Priority Area Coast Asset

Niney Mile Beach
This coastal asset contains the McLoughlins Beach - Seaspray Coastal Reserve and provides important habitat for shorebirds. The main ecological vegetation classes supported include Estuarine Wetland and Coast Banksia Woodland. It contains areas of cultural heritage sensitivity and sites of geological significance, with former lagoon deposits exposed on the beach. The coast asset is also a popular destination for holidaymakers and tourists. Key threats to the asset are urban expansion and development; disturbance of potential acid sulfate soils; invasive plants and animals; breached dunes / barrier - impacting salinity of the Lakes system; and climate variability impacts (storm surge, sea level rise, fire, and flood).

ESTUARY
ASSET VALUES, CONDITION AND KEY THREATS

Figure 39: Mullungdung Landscape Priority Area Estuary Asset

Merriman Creek (Reach 39)
Merriman Creek is a small creek estuary, flowing from the Strzelecki Ranges through intensive grazing and plantation forestry areas, before flowing to Bass Strait adjacent to the township of Seaspray. Merriman Creek is a source of potable water supply. The estuary is a popular location for recreational activities and fishing and provides a diversity of habitat for birdlife. The area has important Indigenous cultural heritage values for traditional owners. The estuary asset was classified as in near pristine condition according to the Ozestuaries classification (GHD 2005). Key threats to this asset are altered flow regimes; poor water quality; bank and dune erosion.
**MARINE ASSET VALUES, CONDITION AND KEY THREATS**

**Ninety Mile Beach**
This marine asset falls within the Twofold marine bioregion and contains the Ninety Mile Beach Marine National Park. It is one of narrowest sectors of the outer barrier of the Gippsland Lakes and is an area of cultural heritage sensitivity. It contains part of the Port Albert to Lakes Entrance sandy plain, which has a diverse animal community living within the sediment beds (including burrowing worms and small crustaceans). The marine asset is a known Blue Whale and Humpback Whale migratory path and popular surfing location. Key threats to the asset are excess nutrients entering the system via agricultural run off; oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina); and climate variability impacts (rising sea level, temperature, acidity).

**SOIL AND LAND ASSET VALUES, CONDITION AND KEY THREATS**

**Giffard Plains**
The Giffard Plains soil and land asset is highly valued for the extensive agricultural production it supports. The asset also supports some forestry production in a mostly cleared landscape. The asset is largely intact when supported by groundcover (either introduced or native) but erosive (mainly wind) when cleared of vegetation. These soils are susceptible to primary and secondary salinity on the eastern flats, which is contributing to vegetation loss.

*Open Dune Grassland at Jack Smith Lake.*
Jack Smith Lake

Jack Smith Lake is wetland of national significance. Jack Smith Lake supports a diversity of vegetation communities including Coastal Banksia Woodland, Saltmarsh areas, Swamp scrub, Wet grasslands and Banksia woodland. The wetland complex is dry in most years, filling only after sustained rainfall in the catchment and only rarely opening to the ocean. The wetlands are valued for the diversity of bird species it supports (including water birds and migratory waders) and it is a popular destination for hunting, camping and bird watching. The area has important Indigenous cultural heritage values for traditional owners. Key threats to this asset are altered flow regimes; invasive plants and animals and visitor impacts.

Table 5: Summary of key threats to significant natural assets within the Mullungdung landscape priority area

<table>
<thead>
<tr>
<th>MULLUNGDUNG LANDSCAPE PRIORITY AREA</th>
<th>Aquifers</th>
<th>Biodiversity</th>
<th>Coast</th>
<th>Estuaries</th>
<th>Marine</th>
<th>Rivers</th>
<th>Soil &amp; Land</th>
<th>Wetlands</th>
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<td>Key threats to natural asset values and condition</td>
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<td>Altered flow or hydrological regimes</td>
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<td>Breached dunes/barrier</td>
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<td>Climate variability related extreme events (e.g. wildfire, flood, storm surge, sea level rise)</td>
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<td>Disturbance of potential acid sulfate soils</td>
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<td>Inappropriate fire regimes</td>
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<td>Land use pressure (includes timber harvesting, land and livestock management practices)</td>
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<td>Poor water quality (as the result of excess nutrients, sedimentation, oil spills and other pollutants)</td>
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<tr>
<td>Potential impacts of emerging technologies (e.g. coal seam gas extraction)</td>
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<td>✓</td>
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<tr>
<td>Recreational use and visitation impacts (includes activities and access)</td>
<td></td>
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<tr>
<td>Salinity</td>
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<tr>
<td>Unsustainable extraction of groundwater</td>
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<td>Urban or industrial development</td>
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</tr>
</tbody>
</table>
STRZELECKI Ranges

LANDSCAPE PRIORITY AREA

Photo: Strzelecki Ranges
The Strzelecki Ranges landscape priority area is characterised by its topography, high rainfall and fertile soils. It is a fragmented landscape, containing remnant native vegetation patches of varying sizes. The landscape priority area is valued for its National Parks and reserves and contains native vegetation of high ecological value (including Cool Temperate Rainforest, Wet and Damp Forest). Within the Strzelecki Ranges, the majestic Tarra Bulga National Park and upper Tarra River attract residents and visitors alike, while also providing habitat for threatened species. This landscape supports intensive agricultural and forestry production, as well as groundwater dependent ecosystems (WGCMA 2011).

Maps of the significant natural assets within the Strzelecki Ranges landscape priority area are presented in this chapter along with a description of their values, condition and key threats. A summary of the key threats to the significant natural assets within the Strzelecki Ranges landscape priority area is provided in Table 6 at the end of this chapter.

The Yarram WSPA extends across a large part of the onshore extent of the Latrobe Group Aquifer. It is a major water resource for both irrigation, industry and town water supplies (Yarram) and has been confirmed to interact with rivers (e.g. Tarra River) where it is unconfined (on the southern edges of the Strzelecki Ranges north of Yarram). This aquifer also contains the oil and gas reserves mined off-shore in Bass Strait. The Latrobe Group Aquifer contains extremely large volumes of high quality (fresh) groundwater. Water levels have been declining consistently at a rate of approximately 1m/year over the last few decades, which has resulted in the water becoming less accessible to groundwater users (SRW 2010). The degree to which the declining water levels are impacting on connected surface water systems or groundwater dependent ecosystems is currently unclear. The major threat to the Latrobe Group Aquifer is unsustainable extraction, particularly via the offshore oil and gas industry. Unsustainable extraction poses a threat to onshore groundwater users and may lead to land subsidence (SRW 2010). The potential impacts of emerging technologies (e.g. coal seam methane gas extraction) on groundwater resources will need to be considered (DSE 2011c).
**Latrobe Group Aquifer - Outcropping Areas**

The outcropping areas of the Latrobe Group Aquifer are predominantly found in the foothills of the Strzelecki Ranges where they interact directly with streams (provision of base flow) and support groundwater dependent ecosystems. They are also an important source of recharge for the Latrobe Group Aquifer. The Latrobe Group Aquifer contains extremely large volumes of high quality (fresh) groundwater. Water levels have been declining consistently at a rate of approximately 1m/year over the last few decades, which has resulted in the water becoming less accessible to groundwater users (SRW 2010). The degree to which the declining water levels are impacting on connected surface water systems or groundwater dependent ecosystems is currently unclear. The major threat to the Latrobe Group Aquifer is unsustainable extraction, particularly via the offshore oil and gas industry. Unsustainable extraction poses a threat to onshore groundwater users and may impact of stream flows and groundwater dependent ecosystems (SRW 2010). The potential impacts of emerging technologies (e.g. coal seam methane gas extraction) on groundwater resources will need to be considered (DSE 2011c).

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**BIODIVERSITY ASSET VALUES, CONDITION AND KEY THREATS**

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**Highly Fragmented Habitat - Narracan - Haunted Hills**

The Highly Fragmented Habitat - Narracan-Haunted Hills biodiversity asset supports endangered, rare and vulnerable EVCs. NaturePrint v2.0 indicates this landscape area as containing habitat of Statewide importance for at least five threatened fauna species. It also supports multiple threatened flora species. This asset covers a highly fragmented natural landscape with small to medium patches of remnant native vegetation. Remnant vegetation patches are poorly to moderately connected and the modelled vegetation quality is low to moderate. Key threats to the asset are invasive plants and animals; vegetation clearing, land contamination (excess nutrients); sedimentation and extreme events (fire and flood).
**STRZELECKI RANGES**

**Strzelecki Ranges**

**Fragmented Habitat - Strzelecki Ranges**
The Fragmented Habitat - Strzelecki Ranges biodiversity asset contains Tarra-Bulga National Park, Morwell National Park, Mt Worth State Park, Mirboo North Regional Park, Gunyah Rainforest Reserve and various smaller reserves. It supports endangered, rare and vulnerable EVCs and contains areas of cultural sensitivity. NaturePrint v2.0 indicates this landscape area as containing habitat of at least four threatened fauna species. It also supports multiple threatened flora species. This asset covers a fragmented natural landscape with large patches of remnant native vegetation. Remnant vegetation patches are moderately to highly connected and the modelled vegetation quality is high. Key threats to the asset are invasive plants and animals; vegetation clearing, land contamination (excess nutrients); and extreme events (fire and flood).

**RIVER**

**ASSET VALUES, CONDITION AND KEY THREATS**

![Tarra Bulga National Park (Photo Parks Victoria)](image)

**Upper Tarra River (Reach 35)**
The Tarra River flows from the Strzelecki Ranges, supplies water for the township of Yarram and irrigators on the productive floodplains. The upper reach of the Tarra is identified as being a representative river due to its high environmental values and good condition. The Tarra River supports a number of fish species and threatened fauna including; Tupong, River Blackfish, Climbing Galaxias, Common Jollytail, South Gippsland Spiny Crayfish, Powerful Owl and Baillons Crake.

The Tarra River flows through the Tarra Bulga National Park and is a popular destination for walkers and sight-seeing. The Upper Tarra River is in good condition according to the 2004 Index of Stream Condition rating, with excellent riparian vegetation, physical form and connectivity. An updated Index of Stream Condition Rating is due later in 2012. Key threats to the asset are invasive plants; bank erosion and sedimentation; and fire.

**SOIL AND LAND**

**ASSET VALUES, CONDITION AND KEY THREATS**

![Tarra Bulga National Park (Photo Parks Victoria)](image)
East Strzelecki

The East Strzelecki soil and land asset is highly valued for the native vegetation communities of high ecological value it supports (e.g. Cool Temperate Rainforest). The asset also has high economic value for supporting forestry production. The asset is largely intact when supported by native vegetation cover. Cleared areas can be highly susceptible to land slips and erosion.

Red Soils

The Red Soils asset is highly valued for supporting agricultural production. These soils therefore have high economic value, with the ability to persist under intensive agricultural practice. The soil and land asset also has high ecological values, as it provides habitat for species, including the Giant Gippsland Earthworm and a suite of rare and threatened Burrowing Crayfish. The asset is a highly resilient soil type, mostly in satisfactory condition to support the desired land use. Whilst highly permeable, areas are susceptible to compaction (livestock and machinery) and areas devoid of vegetation (natural or cleared) are easily eroded.

Table 6: Summary of key threats to significant natural assets within the Strzelecki Ranges landscape priority area

<table>
<thead>
<tr>
<th>STRZELECKI RANGES LANDSCAPE PRIORITY AREA</th>
<th>Biodiversity</th>
<th>Rivers</th>
<th>Soil &amp; Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key threats to natural asset values and condition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate variability related extreme events (e.g. wildfire, flood, storm surge, sea level rise)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Erosion</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Inappropriate fire regimes</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invasive plants and animals</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Land contamination (as the result of excess nutrients)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor water quality (as the result of excess nutrients, sedimentation, oil spills and other pollutants)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedimentation</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Soil compaction (as the result of machinery or livestock)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation clearing</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VICTORIAN Alps

LANDSCAPE PRIORITY AREA

Photo: Mt Howitt
The Victorian Alps landscape priority area is characterised by its largely contiguous vegetation and topography. It is valued for its National and State Parks and Wilderness Areas, which provide for a wide array of recreational opportunities. The landscape is underpinned by relatively stable soils and contains largely intact ecological vegetation communities and numerous rare and threatened species. Wetlands listed in the Directory of Important Wetlands of Australia (DIWA), which are valued for their intact hydrology, geomorphologic significance and habitat provision are also found within this landscape. The upper reaches of the rivers that flow through the landscape are in excellent to good condition (WGCMA 2011).

Maps of the significant natural assets within the Victorian Alps landscape priority area are presented in this chapter along with a description of their values, condition and key threats. A summary of the key threats to the significant natural assets within the Victorian Alps landscape priority area is provided in Table 7 at the end of this chapter.
Upper Latrobe River (Reach 7)
The upper Latrobe River provides unregulated freshwater flows to lower parts of the system. The river flows through state forest which has multiple uses including the production of timber. This section of the Latrobe supports a range of species including Barred Galaxias, River Blackfish and Gippsland Spiny Crayfish and Nankeen Night Heron. The reach contains largely intact riparian vegetation including Damp Forest, Wet Forest and Riparian Forest and is one of the few catchment areas to be unaffected by fire in the last five years. It is valued for its visual amenity and is a popular spot for recreational fishing. The upper Latrobe River is in good condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition Rating is due later in 2012. Key threats to the asset are invasive plants and animals; livestock access; adjacent land use pressure and bank erosion.

Loch (Reach 30)
The Loch River flows downstream from the Noojee State Forest through native forest and softwood plantations before meeting the Latrobe River above Noojee. The Loch River is located within a declared water supply catchment and supports intact vegetation communities. It is valued for its visual amenity and is a popular destination for recreational fishing. The Loch River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants; adjacent land use pressure; and inappropriate fire regimes.

Upper Thomson River (Reach 99)
This reach of the Thomson River provides freshwater inflows to the Thomson Reservoir, which is a major storage of potable water. Key threats to asset are invasive plants and animals; and extreme events (fire).

Upper Thomson River (Reach 5)
The upper Thomson River extends downstream from the Thomson Reservoir. This section of the Thomson River is recognised for its heritage values and has high social value for visual amenity, sightseeing, walking, kayaking and recreational fishing. It provides water for downstream use by irrigators and for town water supply. The upper Thomson River is in moderate condition to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are barriers to fish passage; channel modification; and altered flow regimes.
**Upper Thomson River (Reach 4)**

The upper Thomson River is designated as a Heritage River due to its high visual amenity, fishing opportunities and habitat for the endangered Australian Grayling. It is also a source of potable water supply. The upper Thomson River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants; altered flow regimes; and livestock access to the riparian zone.

**Tyers River (Reach 17)**

The Tyers River provides flows to the Moondarra Reservoir, which supplies water for Gippsland Water. The river supports native fish populations including River Blackfish, Gippsland Spiny Crayfish and eels and is a popular recreational fishing spot. The Tyers River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition Rating is due later in 2012. Key threats to the asset are invasive plants; fire regimes; and livestock access.

**Aberfeldy River (Reach 18)**

The Aberfeldy River provides unregulated inflows to the Thomson River and is a source of potable water supply. The Aberfeldy together with the upper Thomson River is listed as a Heritage River. The Aberfeldy River has excellent water quality and supports a diverse fish population. It has high social value and is used for fishing, kayaking, four-wheel driving and camping. The Aberfeldy River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants and inappropriate fire regimes.

**Barkly River (Reach 13)**

The Barkly River extends downstream from the Alpine National Park before meeting the Macalister River above Licola. The Barkly River supports a range of native fish including River Blackfish, Gippsland Spiny Crayfish, galaxias and eels. The Barkly River is valued for its visual amenity and recreational opportunities including camping. The Barkly River is in good condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants and animals; and inappropriate fire regimes.

**Upper Macalister River (Reach 12)**

The upper Macalister River extends downstream from the Alpine National Park to the township of Licola. The upper Macalister River is fast flowing with a confined rocky bed and supports important vegetation communities including Riparian Shrubland and Rocky Outcrop Shrubland that are largely intact. It is valued for its recreational opportunities including camping, walking, four-wheel driving and kayaking. This section of the Macalister River also provides inflows to Lake Glenmaggie for irrigation and potable water supply. The upper Macalister River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants and animals; inappropriate fire regimes and visitor impacts.

**Upper Avon River (Reach 22)**

The upper Avon River provides flows to the Moondarra Reservoir, which supplies water for Gippsland Water. The river supports native fish populations including River Blackfish, Gippsland Spiny Crayfish and eels and is a popular recreational fishing spot. The upper Avon River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition Rating is due later in 2012. Key threats to the asset are invasive plants; and inappropriate fire regimes.

The upper Avon River extends downstream from the Avon Wilderness Area, providing freshwater flows to the fringing wetlands and main lakes of the Gippsland Lakes. The Avon River also supplies water for irrigated agriculture and horticulture. In its upper reaches the Avon is physically stable and its vegetation is largely intact providing an important link between the Gippsland Lakes and Victorian Alps. The upper Avon River is in moderate condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants and animals; and inappropriate fire regimes.

**Victorian High Plains north of Licola.**
### VICTORIAN ALPS

#### Victorian Alps

#### SOIL AND LAND

**ASSET VALUES, CONDITION AND KEY THREATS**

The Alps soil and land asset are valued for the native vegetation communities of high ecological value that they support and the associated high economic value attributed to tourism. This asset is largely intact when supported by native vegetation cover and therefore do not impact upon clear air and water quality within the area. Key threats to the asset are erosion (water erosion and from roads and tracks) and extreme events (fire).

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#### WETLAND

**ASSET VALUES, CONDITION AND KEY THREATS**

The Baw Baw Plateau wetlands are a large alpine peatland complex located within the Baw Baw National Park. The wetlands support significant intact alpine and subalpine vegetation communities and have high visual amenity and social value. Key threats to the asset are invasive plants and animals; inappropriate fire regimes; and visitor impacts.

Caledonia Fen is part of a large alpine peatland complex within the Alpine National Park. It is a Wetland of National Importance and is valued for its intact Sphagnum Bog vegetation communities. The site is of geomorphologic significance and the pollen record at the site is extremely important for understanding the history of plant evolution and geological change in Australia. Caledonia Fen is in excellent condition assessed by the Index of Wetland Condition. Key threats to the asset are invasive plants and animals; and inappropriate fire regimes.
Lake Tali Karng
Lake Tali Karng is the only permanent natural lake in the Victorian highlands. The lake has important Indigenous cultural values for traditional owners. Lake Tali Karng has high visual amenity and is popular for walking, fishing and camping. Key threats to the asset are visitor impacts and inappropriate fire regimes.

Upper Macalister Wetlands
The Upper Macalister wetlands are a large peatland complex within the Alpine National Park. The wetlands support significant largely intact alpine and subalpine vegetation communities and have high visual amenity and social value. Key threats to the asset are invasive plants and animals; and inappropriate fire regimes.

Table 7: Summary of key threats to significant natural assets within the Victorian Alps landscape priority area

<table>
<thead>
<tr>
<th>VICTORIAN ALPS LANDSCAPE PRIORITY AREA</th>
<th>Biodiversity</th>
<th>Rivers</th>
<th>Soil &amp; Land</th>
<th>Wetlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key threats to natural asset values and condition</td>
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<td></td>
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<tr>
<td>Altered flow or hydrological regimes</td>
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<tr>
<td>Barriers to fish passage</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Channel modification</td>
<td></td>
<td>✓</td>
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</tr>
<tr>
<td>Climate variability related extreme events (e.g. wildfire, flood, storm surge, sea level rise)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Erosion</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
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<tr>
<td>Inappropriate fire regimes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Invasive plants and animals</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Land use pressure (includes timber harvesting, land and livestock management practices)</td>
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<tr>
<td>Recreational use and visitation impacts (includes activities and access)</td>
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<td>✓</td>
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</tbody>
</table>
WILSONS Promontory

LANDSCAPE PRIORITY AREA

Photo: Tidal River
Wilsons Promontory

The Wilsons Promontory landscape priority area is characterised by the largely contiguous native vegetation that is located within the iconic Wilsons Promontory National Park. The priority area is further defined by its marine environment, which contains the Wilsons Promontory Marine National Park. The National Parks are highly valued by both residents and tourists for their natural scenic values, educational and recreational opportunities and Indigenous cultural heritage significance. The landscape is underpinned by relatively stable soils and contains largely intact ecological vegetation communities and numerous rare and threatened species. Tidal River’s close proximity to the main day visitor, camping and overnight accommodation is a popular site for activities including walking, sightseeing, swimming, kayaking, boating and recreational fishing.

Maps of the significant natural assets within the Wilsons Promontory landscape priority area are presented in this chapter along with a description described below in terms of their values, condition and key threats. A summary of the key threats to the significant natural assets within the Wilsons Promontory landscape priority area is provided in Table 8 at the end of this chapter.
Wilson Promontory Landscape Priority Area

Largely Intact Landscape - Wilsons Promontory
The Largely Intact Landscape - Wilsons Promontory biodiversity asset is an area of highly contiguous native vegetation on public land defined by Wilsons Promontory National Park in its entirety. It supports endangered, rare and vulnerable EVCs and contains areas of cultural heritage sensitivity. NaturePrint v2.0 indicates this landscape area as containing habitat of Statewide importance for at least 12 threatened fauna species. It also supports multiple threatened flora species. This asset covers a largely intact natural landscape with large contiguous patches of remnant native vegetation. Remnant vegetation patches are highly connected and the modelled vegetation quality is high. Key threats to the asset are invasive plants and animals; altered fire regimes; visitation pressure and extreme events (fire and flood).

COASTAL ASSET VALUES, CONDITION AND KEY THREATS

Figure 58: Wilsons Promontory Landscape Priority Area Coast Asset

Due to the range of recreational opportunities it supports, the coast asset is a popular destination for both residents and visitors. Key threats to the asset are invasive plants and animals; inappropriate infrastructure and recreational overuse; and climate variability impacts (storm surge, sea level rise, fire, and flood).

Estuary Asset Values, Condition and Key Threats

Darby River (Reach 11), Sealers Creek (Reach 13) and Miranda Creek (Reach 14)
The small estuaries of Wilsons Promontory, Darby River, Sealers Creek and Miranda Creek drain from the mountain range that extend through the National Park and drain either to the ocean or to the Corner Inlet Ramsar Site. The estuaries of Wilsons Promontory support a diversity of important vegetation communities as well as fish and bird species. The estuaries are a popular destination for visitors to the park and are used for walking and sightseeing. Key threats to the assets are invasive plants and animals; fire regime and visitor impacts.

Wilson Promontory
This coastal asset incorporates the entire Wilsons Promontory National Park. It contains sites of geological significance and areas of cultural heritage sensitivity. The Yanakie dunes are an extensive active dune system crossing the isthmus. The Wilsons Promontory coastal asset provides habitat and roosting sites for migratory and resident shorebirds and habitat for penguins.
**Features of note include the Wilsons Promontory south islands, deepwater habitat and high sea-level cave. White shark residency is located within the open sea pelagic environment. Key threats to the asset are oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina and Northern Pacific Sea Star); and climate variability impacts (rising sea level, temperature, acidity).**

**Tidal River (Reach 23)**

Tidal River is a small river estuary located in the Wilsons Promontory National Park. The estuary is adjacent to the Park’s main visitor, camping and accommodation area. Tidal River is highly valued for its visual amenity and is a popular spot for recreational fishing, walking, swimming, sightseeing and boating. The estuary supports a range of threatened species including the Eastern Great Egret, Swamp Skink, Southern Brown Bandicoot and White-bellied Sea-Eagle. The area has important Indigenous cultural heritage values for traditional owners. This estuary was classified as a wave dominated strandplain estuary in largely unmodified condition according to the Ozestuaries classification (GHD 2005). Key threats to the asset are visitor impacts; invasive plants and poor water quality.

**RIVER ASSET VALUES, CONDITION AND KEY THREATS**

**Tidal River**

This marine asset falls within the Flinders marine bioregion and contains the Wilsons Promontory Marine National Park. It is a popular surfing and diving location and contains areas of cultural heritage sensitivity and significance. The marine asset is home to Australian Fur Seal and New Zealand Fur Seal colonies and is a known migratory pathway for Blue, Humpback and Southern Right Whales.

**Features of note include the Wilsons Promontory south islands, deepwater habitat and high sea-level cave. White shark residency is located within the open sea pelagic environment. Key threats to the asset are oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina and Northern Pacific Sea Star); and climate variability impacts (rising sea level, temperature, acidity).**

**Wilson Promontory**

This marine asset falls within the Flinders marine bioregion and contains the Wilsons Promontory Marine National Park. It is a popular surfing and diving location and contains areas of cultural heritage sensitivity and significance. The marine asset is home to Australian Fur Seal and New Zealand Fur Seal colonies and is a known migratory pathway for Blue, Humpback and Southern Right Whales.

**RIVER ASSET VALUES, CONDITION AND KEY THREATS**

**Tidal River**

This marine asset falls within the Flinders marine bioregion and contains the Wilsons Promontory Marine National Park. It is a popular surfing and diving location and contains areas of cultural heritage sensitivity and significance. The marine asset is home to Australian Fur Seal and New Zealand Fur Seal colonies and is a known migratory pathway for Blue, Humpback and Southern Right Whales.

**Features of note include the Wilsons Promontory south islands, deepwater habitat and high sea-level cave. White shark residency is located within the open sea pelagic environment. Key threats to the asset are oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina and Northern Pacific Sea Star); and climate variability impacts (rising sea level, temperature, acidity).**

**Wilson Promontory**

This marine asset falls within the Flinders marine bioregion and contains the Wilsons Promontory Marine National Park. It is a popular surfing and diving location and contains areas of cultural heritage sensitivity and significance. The marine asset is home to Australian Fur Seal and New Zealand Fur Seal colonies and is a known migratory pathway for Blue, Humpback and Southern Right Whales.

**Features of note include the Wilsons Promontory south islands, deepwater habitat and high sea-level cave. White shark residency is located within the open sea pelagic environment. Key threats to the asset are oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina and Northern Pacific Sea Star); and climate variability impacts (rising sea level, temperature, acidity).**

**Wilson Promontory**

This marine asset falls within the Flinders marine bioregion and contains the Wilsons Promontory Marine National Park. It is a popular surfing and diving location and contains areas of cultural heritage sensitivity and significance. The marine asset is home to Australian Fur Seal and New Zealand Fur Seal colonies and is a known migratory pathway for Blue, Humpback and Southern Right Whales.

**Features of note include the Wilsons Promontory south islands, deepwater habitat and high sea-level cave. White shark residency is located within the open sea pelagic environment. Key threats to the asset are oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina and Northern Pacific Sea Star); and climate variability impacts (rising sea level, temperature, acidity).**

**Wilson Promontory**

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**Features of note include the Wilsons Promontory south islands, deepwater habitat and high sea-level cave. White shark residency is located within the open sea pelagic environment. Key threats to the asset are oil/shipping traffic spills and ballast discharge (commercial and recreational); invasive plants and animals (e.g. Spartina and Northern Pacific Sea Star); and climate variability impacts (rising sea level, temperature, acidity).**

**Wilson Promontory**

This marine asset falls within the Flinders marine bioregion and contains the Wilsons Promontory Marine National Park. It is a popular surfing and diving location and contains areas of cultural heritage sensitivity and significance. The marine asset is home to Australian Fur Seal and New Zealand Fur Seal colonies and is a known migratory pathway for Blue, Humpback and Southern Right Whales.
Wilsons Promontory

**Tidal River (Reach 23)**

Tidal River is located on the west coast of Wilsons Promontory. It is adjacent to the main day visitor, camping and overnight accommodation hub and is a popular for walking, sightseeing, kayaking and fishing. Tidal River supports a range of fauna and vegetation communities and provides all the freshwater for the Tidal River community. Tidal River is in good condition according to the 2004 Index of Stream Condition rating. An updated Index of Stream Condition rating is due later in 2012. Key threats to the asset are invasive plants; inappropriate fire regimes and visitor impacts.

**SOIL AND LAND ASSET VALUES, CONDITION AND KEY THREATS**

**WETLAND ASSET VALUES, CONDITION AND KEY THREATS**

This wetland asset incorporates the wetlands of Wilsons Promontory. The wetlands support largely intact vegetation communities and have near natural water regimes. A number of rare or threatened fauna and flora are associated with the wetlands and the wetlands are valued for their visual amenity and recreational opportunities. Key threats to the asset are inappropriate fire regimes; invasive plants and animals; and visitor impacts.

**Wilsons Promontory and Coastal Soils**

The Wilsons Promontory and Coastal Soils asset are valued for the native vegetation communities of high ecological value that they support and the associated high economic value attributed to tourism. This asset is largely intact when supported by native vegetation cover and therefore do not impact upon clear air and water quality within the area. Key threats to the asset are erosion from roads and tracks construction and use; and extreme events (fire).
Table 8: Summary of key threats to significant natural assets within the Wilsons Promontory landscape priority area

<table>
<thead>
<tr>
<th>WILSONS PROMONTORY LANDSCAPE PRIORITY AREA</th>
<th>Biodiversity</th>
<th>Coast</th>
<th>Estuaries</th>
<th>Marine</th>
<th>Rivers</th>
<th>Soil &amp; Land</th>
<th>Wetlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key threats to natural asset values and condition</td>
<td></td>
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<tr>
<td>Climate variability related extreme events (e.g. wildfire, flood, storm surge, sea level rise)</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Erosion</td>
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<tr>
<td>Inappropriate fire regimes</td>
<td>✓</td>
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<tr>
<td>Invasive plants and animals</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Poor water quality (as the result of excess nutrients, sedimentation, oil spills and other pollutants)</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Recreational infrastructure development and construction</td>
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<tr>
<td>Recreational use and visitation impacts (includes activities and access)</td>
<td>✓</td>
<td></td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Wilson Promontory.