# **Sea Lion Island RIS update 2023**

3.4 Ecological communities whose presence relates to the international importance of the site

Wetland types present on Sea Lion Island are described below, beginning from the sea and moving inland: permanent shallow marine waters (Ramsar type A); marine sub-tidal aquatic beds (type B); rocky marine shores (type D) or sandy/pebble shores (type E); a coastal brackish lagoon (type J); most of the higher part of the island is covered with peatland (type U), with a few freshwater pools (type Tp).

**Permanent shallow marine waters and aquatic beds.** The substrate is universally flat along the southern shore, with red algal-encrusted bedrock, and extensive, sub-tidally well spaced Giant Kelp *Macrosystis pyrifera* (Tingley *et al.* 1996). Killer Whales *Orcinus orca* regularly feed in this area.

**Rocky marine shores, in places backed by cliffs.** The rocky shorelines support invertebrates such as mussels, limpets and marine algae. Rock pools trap fish and small marine creatures. These rocky shores provide rich feeding areas for Black-crowned Night Heron *N. nycticorax*, Kelp Goose *Chloephaga hybrida*, Crested Duck *Anas specularioides*, Magellanic Oystercatcher *Haematopus leucopodus*, and Blackish Oystercatcher *H. ater*, and nesting areas for species such as Kelp Goose, Falkland Steamer Duck *Tacheres patachonicus* and Crested Duck *Anas specularioide*s. The rocky cliffs provide nesting sites for Rock Shag *Phalacrocorax magellanicus*, with colonies of Imperial Shag *Phalacrocorax atriceps* and Southern Rockhopper Penguin *Eudyptes chrysolophus* on the cliff tops.

**Sandy/pebble shores.** Sandy beaches are found round most of the shores of the island and in the sand neck which cuts right across the island, to the east of the settlement; the latter provides the main hauling out and breeding area for Southern Elephant Seal, with about 650 pups born each year (Galimberti & Sanvito 2020a). Dolphin Gull *Larus scoresbii*, Kelp Gull *L. dominicanus* and South American Tern *Sterna hirundinacea* breed on the beach. In the centre of this beach is a large pond, extensively used for loafing in winter and spring by waterfowl, waders and seals, though it dries out in most summers. While much of this area is composed of bare sand, the principal vegetation associations are Blue grass *Poa alopecurus* and Sea Cabbage *Senecio candidans*. The principal Gentoo Penguin *Pygoscelis papua* colonies are located on the higher parts of this sandy area. Elsewhere, and in particular along the south coast, the pebble shores at the base of the low cliffs provide the main breeding areas for Southern Sea Lion.

**Tussac Grass stands.** Tussac Grass *Poa flabellata* does not fit easily into the Ramsar wetland classification though it is a major wetland habitat type in sub-Antarctic islands. It normally grows around the edge of islands, trapping an open wetter surface in the flatter centre of the island, and possibly plays an important role in conserving water in the soil and maintaining the hydrological and ecological balance of islands. “The similarity between tussock-grass and a small palm tree is due to the curious mode of growth of the former. Each plant forms a hillock of matted roots, rising straight out of the ground, and a few feet or more apart from the roots of the surrounding tussock plants. The hillocks are often six feet high, and four or five feet in diameter, and they throw out from the summit copious grassy foliage, with blades full six feet in length, drooping on all sides, those of the opposite plants meeting, so as to overarch the spaces between them. Thus, a tussock-bog (for so a tract of land covered with this grass is called) becomes a labyrinth” (Hooker 1847). “Tussock thrives where it may be subjected to considerable amounts of sea spray and a moisture-laden atmosphere with a high salt content. Whether the plant benefits nutritionally plays an important part in reducing competition from other plants. Although there are exceptions, tussock stands are generally restricted to coastal belts which rarely exceeds some 300 metres in width” (Strange *et al.* 1988). Tussac Grass has in the past been used for grazing of sheep, cattle and horses, and as a result has decreased or disappeared from many of the settled islands. Only 65 hectares remain on the two main islands of East and West Falkland (Strange *et al.* 1988). Tussac is an important habitat for birds of the Falklands (*e.g.* Woods 1970) and for seals (Strange 1992). On Sea Lion Island, the stands of Tussac Grass, though affected by overgrazing and erosion, are exceptionally good for an island with a history of settlement and sheep raising. Stands of Tussac Grass are found around much of the coastline of Sea Lion Island, above the sandy or pebbly shores.

**Coastal brackish lagoon.** Beaver Pond, a sizeable brackish pool, is at the north-west corner of the island, separated from the sea by a pebble beach. It provides nesting areas for a number of water birds such as Kelp Goose and Falkland Steamer Duck, and supports nesting colonies of Dolphin Gull, Kelp Gull and South American Tern. The eroded areas around the pool have been revegetated with tussac grass since 2015, where colonies of Magellanic Penguin *Sphenicus magellanicus* make burrows, and Upland Goose and Ruddy-headed Goose *Chloephaga rubidiceps* nest and graze. Long Pond has large stands of Californian Club Rush-*Schoenoplectus californicus* that provide nesting for Silvery Grebes *Podiceps occipitalus*, Black-crowned Night Herons, Speckled Teal *Anas versicolor* and Upland Geese *Chloephaga picta*.