

MEMO

TO Environmental Policy

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FOR YOUR ACTION

Coastal sites and habitats with significant indigenous biodiversity values in the Wellington region: Technical memo to support updates to Schedules F4 and F5 in the 2023 Plan Change

This memo summarises the key supporting information from which the marine sites and habitats of significance in the Wellington region were selected for inclusion in updated Schedules F4 (Sites of significant indigenous biodiversity values in the coastal marine area) and F5 (Habitats with significant indigenous biodiversity values in the coastal marine area) of the Natural Resources Plan (GWRC 2022).

Background

Schedules F4 and F5 list estuaries, coastal and offshore marine sites and habitats in the Wellington region with significant indigenous biodiversity values. The criteria against which these sites and habitats of significance have been assessed are listed in Policy 23 of the Regional Policy Statement for the Wellington region (Appendix 1; RPS, GWRC 2013). These criteria have been developed to identify indigenous ecosystems and habitats with significant indigenous biodiversity values. Sites and habitats are considered significant if they meet one or more of the Policy 23 criteria. These

criteria align closely with NZ Coastal Policy Statement Policy 11 for protecting indigenous biological diversity in the coastal environment.

The sites and habitats listed in Schedules F4 and F5 are drawn directly from several reports and a recent dive campaign:

- a report prepared by the Department of Conservation (DOC) listing the locations and values (social and ecological) for all the estuaries in the Wellington Hawke's Bay Conservancy (Todd et al. 2016);
- two NIWA reports commissioned by GWRC listing coastal and marine sites and habitats of significance in the Wellington region (MacDiarmid et al. 2012; Nelson et al. 2021);
- a report by Victoria University of Wellington (Bell et al. 2022) describing animal-dominated reef communities on the Kapiti Coast; and
- a sampling campaign in March 2022 by scientific divers at the Department of Conservation and NIWA taxonomists to collect and identify a black coral colony at Kapiti Island.

Estuaries in the Wellington region

Information for estuaries relevant to the Policy 23 criteria is taken from Todd et al. (2016). This report collates for the first time, all of the available information for estuaries throughout the Wellington Hawke's Bay conservancy, including ecological, historical, cultural and recreational values. This represents a significant body of work and it is from this report that the 35 estuarine sites located within the Wellington region were selected for Schedule F4. The key studies on which the report is based and from which the fulfilment of Policy 23 criteria could be assessed were a freshwater fish survey (Allibone et al. 2010) and three region-wide broad scale habitat mapping surveys documenting the distribution of estuaries throughout the Wellington region (Robertson & Stevens 2007a, b, c). The freshwater fish study may appear anomalous but it is important because

most of New Zealand's freshwater fish are migratory and require unimpeded passage between freshwater and the sea, via estuaries, in order to complete their life cycle.

Information taken from these reports for assessment against Policy 23 criteria is specific to the aquatic flora and fauna of estuaries and does not include birds; sites for birds in the coastal marine area are considered in Schedule F2c.

Coastal and offshore marine sites and habitats of significance in the Wellington region

In 2011 GWRC engaged NIWA to identify coastal and marine areas of significant biodiversity value in the Wellington region that fulfill the Policy 23 criteria (MacDiarmid et al. 2012). Seven sites and five habitats of significant marine biodiversity were identified within the region. These sites ranged from shallow Porirua Harbour to the methane seeps lying in 1,100 m of water in the southeast corner of the region.

In 2021 NIWA was commissioned to update this report and an additional seven sites and one habitat were included in the schedules (Nelson et al, 2021). These new sites included the recently mapped and sampled nearshore red algae meadows and horse mussel beds in Evans Bay, as well as two offshore seamounts at the outer extremes of the territorial sea.

These sites and habitats are deemed significant for the indigenous ecosystems and biodiversity they support, and all are impacted to some degree by human activities. Information for some sites, such as the Opouawe Bank methane seeps is plentiful, but for other sites, such as the sponge gardens and horse mussel beds, the information is more variable. Accordingly, sites that have well defined locations have been included in Schedule F4 and those sites and habitats for which there is little or no spatial information (eg, kelp and black coral colonies) have been included in Schedule F5.

Further information about the sources of data and the process by which sites and habitats of significance were finalised are contained within the report (Nelson et al, 2021).

Additional sites and habitats

Schedule F4 also includes two marine reserves, two wildlife reserves, one scientific and one scenic reserve and a wildlife refuge. The NZCPS 2010 requires the protection of indigenous biodiversity in the coastal environment, including areas set aside for full or partial protection under other legislation [Policy 11a(vi)].

Schedule F5 also includes seal haul-outs, inanga spawning habitat, saltmarsh and seagrass habitats. Seal haul outs were identified as significant during the development of the Regional Policy Statement. Inanga spawning habitat, saltmarsh and seagrass habitats span the freshwater/marine boundary and are included in Schedule F5 to ensure these significant habitats are protected in both

the coastal marine area and riverine environments. The ecosystem functions and values of these habitats are well documented though their full spatial extent is still to be determined.

Black coral colonies were added to both schedules following the collection of samples from the northern end of Kapiti Island in 2022. There was anecdotal evidence of colonies in the area but it wasn't until 2022 when the Guardians of Kapiti Marine Reserve provided video evidence that formal sampling by Department of Conservation scientific divers and identification by coral taxonomists was carried out. This revealed a single large colony outside the boundaries of the marine reserve which is vulnerable to anchoring and fishing activities. Local divers have found other colonies in the area but these have not yet been mapped. Black coral colonies are therefore included in schedule F4 where we have a known location, and schedule F5 as a recognized significant habitat. Note we have withheld the precise location of the Kapiti Island colony for the interim, pending conversations with the community.

Finally, marine ecologists from Victoria University of Wellington were engaged by GWRC in a programme of work in 2021/22 and 2022/23 to progressively map animal-dominated reef habitats in Wellington Harbour and on the south-west coast of the region. This work located and described the biodiversity values of a range of reefs, primarily sponge gardens. These gardens, which generally occur below the depth at which light can penetrate (e.g., >30m depth), provide important ecological functions and support high biodiversity of fish and invertebrate species. This work is ongoing and will also identify and describe shallow water (<30m depth) animal-dominated communities to be added to these schedules at a later date.

Information gaps

There is currently insufficient information about the extent and diversity of the Wellington region's marine environment to prepare a definitive list of significant marine sites and habitats. For many sites, we know their general location, but not their full spatial extent (eg, Kapiti Island rhodolith beds, or black coral colonies). For some habitats, we have robust scientific information about their ecosystem values but not their location (eg, kelp forests). Therefore, Schedules F4 and F5 should be considered 'working tables' to be updated in time as new information becomes available.

References

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Appendix 1 – Greater Wellington Regional Policy Statement: Policy 23 criteria

Policy 23: Identifying indigenous ecosystems and habitats with significant indigenous biodiversity values – district and regional plans

District and regional plans shall identify and evaluate indigenous ecosystems and habitats with significant indigenous biodiversity values; these ecosystems and habitats will be considered significant if they meet one or more of the following criteria:

- (a) Representativeness: the ecosystems or habitats that are typical and characteristic examples of the full range of the original or current natural diversity of ecosystem and habitat types in a district or in the region, and:
 - (i) are no longer commonplace (less than about 30% remaining); or
 - (ii) are poorly represented in existing protected areas (less than about 20% legally protected).
- (b) Rarity: the ecosystem or habitat has biological or physical features that are scarce or threatened in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.
- (c) Diversity: the ecosystem or habitat has a natural diversity of ecological units, ecosystems, species and physical features within an area.
- (d) Ecological context of an area: the ecosystem or habitat:
 - (i) enhances connectivity or otherwise buffers representative, rare or diverse indigenous ecosystems and habitats; or
 - (ii) provides seasonal or core habitat for protected or threatened indigenous species.
- (e) Tangata whenua values: the ecosystem or habitat contains characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Māori.