**Q: How many samples to quote for?**

A: Please quote for a analysing a single contaminant sample (with the list provided in annex 2) and then three samples within the HPMA and three outside (so 6 samples in total).

Additionally if you could please quote for one PSA sample and then three scenarios (depending on how many transects are over sediment versus rock), 8/10/12 PSA samples.

**Q: Appendices missing**

A:

Annex 1: Evaluation questions

EQ 1: To what extent has the designation and management of HPMAs achieved recovery in the designated areas

EQ 1.1: How has the marine environment in the HPMA and the species it supports changed since designation?

EQ 1.2: How do these changes represent a trajectory towards ‘recovery’ and achieving specific conservation objectives?

EQ 1.3: How has HPMA designation and management affected the ability of marine assets to deliver ecosystem services?

EQ 1.4 How has HPMA designation and management affected the ability of marine assets to deliver ecosystem services that were selection criteria for HPMAs?

Linked Factor Indicators of Change

Benthic, biodiversity, abundance and function inside/outside the HPMA Extent, diversity and distribution of habitats important for conservation and ecosystem services have changed eg sea grass beds, reef, blue mussel beds, intertidal rock, maerl beds, reefs, shallow subtidal sediment, shelf subtidal sediment, subtidal rock Including 'Essential Fish Habitat' - ie habitat supporting key life stages of commercial fish species and flagship and rare species

Benthic, biodiversity, abundance and function inside/outside the HPMA Abundance, diversity and distribution of benthic species important for conservation and ecosystem services have changed. Including flagship and rare species.

Benthic, biodiversity, abundance and function inside/outside the HPMA Diversity of characteristic benthic communities within the site has changed Including flagship and rare species.

Benthic, biodiversity, abundance and function inside/outside the HPMA Changes in the structure of habitats e.g. shoot density of seagrass

Benthic, biodiversity, abundance and function inside/outside the HPMA Changes in the structure of habitat: e.g. Transition and connectivity from sub-tidal to coastal and terrestrial (ESF spatial configuration)

Benthic, biodiversity, abundance and function inside/outside the HPMA (Commercial) Extent and distribution of biogenic reef or supporting habitat

Benthic, biodiversity, abundance and function inside/outside the HPMA (Commercial) Sediment biota (biomass)

Benthic, biodiversity, abundance and function inside/outside the HPMA Commercial Changes in the function of habitats and species e.g. Number of trophic levels and community composition in each level (Quality of the Ecosystem Services Flow)

Benthic, biodiversity, abundance and function inside/outside the HPMA (Commercial) The list of Invasive Non Native Species (INNS) has changed

Benthic, biodiversity, abundance and function inside/outside the HPMA (Commercial) Shellfish and seaweed stock

Benthic, biodiversity, abundance and function inside/outside the HPMA (Commercial) Quality of shellfish

Blue Carbon Extent and distribution of (% cover) blue carbon habitats

Flood and Coastal Protection Natural strandline – triggers formation of new dunes & saltmarsh

Flood and Coastal Protection Sediment supply/availability (including type, grain size)

Flood and Coastal Protection Cover/bare soil (esp. dunes, shingle, dynamic between saltmarsh/mudflat)

Benthic, biodiversity, abundance and function inside/outside the HPMA Extent and distribution of habitats with a role waste remediation eg seagrass, saltmarsh reef (kelp),

Annex 2: Suite of tests for contaminants analysis

Test Analyte Det Code Method Code

Field data - EA Only Site number 4010 26

Mercury Sediment <63um mg/kg Mercury DW 270 37

OCP NMMP Sediment DW ug/kg HCBD DW 3251 37

OCP NMMP Sediment DW ug/kg Hexachlorobenzene DW 3253 37

OES Sediment NMMP HF mg/kg Aluminium HF Dig DW 8086 31

OES Sediment NMMP HF mg/kg Iron HF DW 5099 31

Organotins DW ug/kg Tributyl Tin DW Cat 4061 31

PAH NMMP Sediment DW ug/kg Basic Suite Anthracene DW 3798 37

PAH NMMP Sediment DW ug/kg Basic Suite B(a)anthracene DW 603 37

PAH NMMP Sediment DW ug/kg Basic Suite B(a)pyrene DW 3680 37

PAH NMMP Sediment DW ug/kg Basic Suite B(ghi)perylene DW 715 37

PAH NMMP Sediment DW ug/kg Basic Suite Chrysene+TriphenyleneDW 3652 37

PAH NMMP Sediment DW ug/kg Basic Suite Fluoranthene DW 737 37

PAH NMMP Sediment DW ug/kg Basic Suite I(123cd)pyrene DW 6400 37

PAH NMMP Sediment DW ug/kg Basic Suite Naphthalene DW 3800 37

PAH NMMP Sediment DW ug/kg Basic Suite Phenanthrene DW 9987 37

PAH NMMP Sediment DW ug/kg Basic Suite Pyrene DW 3682 37

PBDE Sediment ug/kg PBDE 100 DW 9018 37

PBDE Sediment ug/kg PBDE 153 DW 9012 37

PBDE Sediment ug/kg PBDE 154 DW 9014 37

PBDE Sediment ug/kg PBDE 28 DW 5026 37

PBDE Sediment ug/kg PBDE 47 DW 9020 37

PBDE Sediment ug/kg PBDE 99 DW 9016 37

PCB NMMP Sediment DW PCB 028 DW 3143 37

PCB NMMP Sediment DW PCB 052 DW 3146 37

PCB NMMP Sediment DW PCB 101 DW 3149 37

PCB NMMP Sediment DW PCB 118 DW 3152 37

PCB NMMP Sediment DW PCB 138 DW 3155 37

PCB NMMP Sediment DW PCB 153 DW 3158 37

PCB NMMP Sediment DW PCB 180 DW 3161 37

Routine Sediment NMMP HF mg/kg Arsenic HF Digest DW 8088 31

Routine Sediment NMMP HF mg/kg Cadmium HF DW 8084 31

Routine Sediment NMMP HF mg/kg Chromium HF DW 8240 31

Routine Sediment NMMP HF mg/kg Copper HF DW 8082 31

Routine Sediment NMMP HF mg/kg Lead HF Digest DW 8087 31

Routine Sediment NMMP HF mg/kg Lithium HF DW 5094 31

Routine Sediment NMMP HF mg/kg Manganese HF DW 5093 31

Routine Sediment NMMP HF mg/kg Nickel HF DW 8089 31

Routine Sediment NMMP HF mg/kg Zinc HF DW 8083 31

Total Carbon Nitrogen DW mg/kg Nitrogen DW as N 1188 31

Total Organic Carbon DW % Carbon Organic DW 7773 31