

## Appendix 8: Sensitive species and diversity assessment

For each species assessed the following items have been presented:

- Summary table of figures showing mean abundance/0.1m<sup>2</sup>, sorted by depth range and EUNIS code, by year for data from 1995 to 2015 (for the years which data is available);
- Detailed figures of mean abundance/0.1m<sup>2</sup> (including  $\pm 1$  standard deviation), sorted by depth range, EUNIS code and year (for years which data is available);
- Figures are also presented for mean abundance/0.1m<sup>2</sup> across years for combined EUNIS codes and depth ranges.

Figures detailed in Appendices 8c, 8d, 8g, 8j, 8i and 8j were produced using a pivot table to extract data from the worksheet described in Appendix 7a, which looked at sensitive species. The pivot table function *average* was used to generate average abundance and *StDev* to generate standard deviation, which were both subsequently plotted. A count of the total number of samples in any one year was also generated using the pivot table function *count*.

In addition to species abundance, diversity indices *number of taxa* and *abundance ratio* were assessed and similarly presented (Appendices 8a and 8b). Graphs for this assessment were produced using a using a pivot table to extract data from the same worksheet. The data extracted was the total number of taxa. This included those recorded in the sample records as number of individuals, and those that only recorded presence (as *P*). The pivot table function *average* was used to generate average abundance across samples and *StDev* to generate standard deviation, which was subsequently plotted. Again, A count of the total number of samples in any one year was also generated using the pivot table function *count*.

For colonial species (*Flustra foliacea* and *Hydrallmania falcata*), instead of average abundance, a percentage occurrence was calculated across samples per year (Appendices 8e and 8f). Graphs were based on using a pivot table to extract on their presence. The pivot table function *count* was used on a reference number relating to each sample to generate the number of occurrences of *P* (present) in the worksheet. A count of the total number of samples in any one year was calculated using the function *count*. Percentage of samples in any one year for each combination of EUNIS and depth being examined were calculated from the number of occurrences of *P* and the total number of samples collected. As the results are averages of the number of samples in any year, standard deviations could not be calculated.

*N.B. In many figures trendlines plotted by Microsoft Excel extend beyond the range of available data. These trendlines should be taken as an indication of the trajectory of the metric within the range of years for which data is available only, and should not be used to extrapolate.*

The EUNIS codes identified in The WNNC SAC are:

<b>EUNIS Code</b>	<b>Description</b>
<b>A2</b>	<b>Littoral sediment</b>
A2.2	Littoral sand and muddy sand
A2.3	Littoral mud
A2.5	Coastal saltmarshes and saline reedbeds
<b>A5</b>	<b>Sublittoral sediment</b>
A5.1	Sublittoral coarse sediment
A5.2	Sublittoral sand
A5.3	Sublittoral mud
A5.4	Sublittoral mixed sediments
A5.5	Sublittoral macro-phyte dominated sediment
A5.6	Sublittoral biogenic reefs
A5.7	Features of sublittoral sediments

The following depth ranges were used:

- -10 to 0 m (Intertidal)
- 0 to 10 m
- >10 m