



Project acronym: B-PAINTS

Project title: Biodiversity and Plastics in Arctic Intertidal and Nearshore Terrestrial Systems

Project leader: Huw Griffiths, British Antarctic Survey, United Kingdom

Discipline: Earth Sciences & Environment: Global change & Climate observation

Station(s): Canadian High Arctic Research Station (CAN)

Using techniques tested in Antarctica, Greenland and Iceland, we will investigate life and human impacts in these often harsh, ice scoured environments. The intertidal and nearshore zone is a relatively low cost and easy to study region and a useful indicator of local pollution. We will map the beaches and surrounding areas near Canadian High Arctic Research Station (CAN) and collect sediments, water, air and invertebrates to test for microplastics and other pollutants. We will also map the distribution of animals, plants and large pieces of plastic from low water up to the nearby terrestrial habitat using standardised observations, physical sampling and a multispectral drone imagery.

Key Objectives:

- Establish a baseline understanding of the intertidal and nearshore in Cambridge Bay.
- Create a legacy of a database of past and present records and easy to follow methods to allow for future replication of the study for monitoring e.g. students, ecotourism and citizen science.
- Assess the impact of microplastic and other pollution in sediments, water, air and intertidal organisms.
- Quantify macroplastic and other litter on the beaches and nearshore areas.
- Identify main sources of pollution in Cambridge Bay, both local and global.