Hauxley Mine Water

In March 2017 NIFCA were made aware of mine water issues relating to groundwater rising from a flooded mine and that it was at that time the waters were reaching the surface through the beach at Hauxley/Hadston.


Upwelling.

In early summer the chairman of the authority was made aware of the fact that the upwellings were contaminated and could potentially impact Coquet to St. Mary's MCZ.

NIFCA officers looked into establishing who is the responsible organisation for dealing with pollution from mine water. It was established the the lead organisations are the Coal Authority and Environment Agency.

NIFCA then became aware the the Coal Authority planned to begin a trial to pump water from a mine in an attempt to reduce groundwater levels. The pumped out water was to be discharged through an existing outfall at Hauxley.

On checking with other organisations it was confirmed that Natural England had issued a consent for the discharge. The Marine Management Organisation confirmed that they were aware of the situation at Hauxley and the MMO had decided that this mine water discharge was exempt from requiring a marine licence. The Environment Agency stated that it had issued a consent for an investigation into groundwater levels and confirmed that it had taken water samples from the sites where the upwellings have occurred and that pollution levels were not raised. They would continue to take water samples including at the site of the discharge.


Discharge.

In August 2017 the Coal Authority confirmed that a pumping test to investigate water levels in the area would begin around 14th August (pumping actually started 29th August) . At that time permission for the pumping was until October, this was extended to November.

Prior the commencement of pumping NIFCA officers conducted a series of fish surveys in the area using a seine net. The surveys were carried out at the same locations where the EA are taking water samples. These sites being at the south end of Druridge Bay Country Park, at the North end of Druridge Bay (site of an upwelling through the beach) and at the position of the outfall pipe (also a site of an upwelling). After pumping had been underway for several week the officers conducted additional fish surveys at these sites. Then after the completion

of pumping around the 20th November a final round of surveys were conducted in early December.

In addition to recording the species and size of the fish at each location, officers also recorded the temperature, pH, salinity and dissolved oxygen of the sea, using a YSI Pro Plus meter.

During each of the surveys the temperature, pH, salinity and percent of dissolved oxygen of the sea remained similar at each of the three sites. In July the temperature varied between 13.2 C to 14.0 C, pH 7.99 - 8.3, salinity 33.73 - 33.84 parts per 1000 and dissolved oxygen 99 -102. In September the temperature varied between 12.6 C to 12.8 C, pH 7.93 - 8.2, salinity 34.16 - 33.9 parts per 1000 and dissolved oxygen 94.8 -96.6. In December the temperature varied between 8.0 C to 8.4 C, pH 8.03 - 8.8, salinity 34.6 - 34.9 parts per 1000 and dissolved oxygen 101 -103. All these values are in line with other surveys conducted in the area and do not indicate anything out the norm.

With regards to the fish surveys these were carried out to assess if the discharge would have an impact on the numbers of common fish species. During the first two sets of surveys the main species caught at all sites were Herring, Sprat and Sandeel and the quantities off these species remained similar at each of the sites. During the December survey sprat and herring were abundant at the first two sites surveyed. While at the site of the discharge the main species was sand smelt. As this species requires similar conditions to herring and sprat it is unlikely the discharge is responsible for the lack of herring and sprat. All three of these species form tight shoals and it is not uncommon to catch predominantly only one species during surveys.