

**HOYLAKE BEACH MANAGEMENT: GEOMORPHOLOGY AND ECOLOGY STUDY - SPECIFICATION****BACKGROUND**

In 1999, the Metropolitan Borough of Wirral (MBW), commissioned independent consultants to examine and report on the issue of rising beach levels at West Kirby and Hoylake at the NW corner of the Wirral Peninsula and to provide advice on the processes of long term change, identify management options and preferred management policies to provide the basis for public consultation (Jemmett A and Smith T, Jan 2000).

Subsequent to presentation of this report MBW invited public scrutiny and comment on suggested options and a series of twenty proposed actions for on-going management of the beaches (Metropolitan Borough of Wirral, March 2000).

The proposals identified were not formally adopted by the Council.

In 2010 Wirral Council applied for and received assent from Natural England and the Environment Agency for undertaking beach management at Hoylake for a period of 5 years, comprising:

- Spraying both *Spartina anglica* and *Puccinellia maritima* using approved glyphosate herbicide Round Up Bio-active Gold;
- Spraying isolated clumps of *Spartina anglica* using approved glyphosate herbicide Round Up Bio-active Gold using a hand-held lance spray;
- Mechanically raking the amenity beach using either a comb rake or a Barber Surf rake;
- Removal of accumulated windblown sand, to be recycled within the protected sites i.e. the Dee Estuary SSSI, SAC, Spa and Ramsar site; the North Wirral Foreshore SSSI and the Mersey Narrows and North Wirral Foreshore pSPA and pRAMSAR site.

In 2016, Wirral Council applied for consent for continuation of these activities at Hoylake as part of a wider beach management proposal that also included management of beaches at West Kirby, Wallasey and New Brighton and commissioned production of Habitats Regulations Screening Assessment to support this application for consent (AECOM, March 2016).

In March 2016, Natural England granted assent for a period of 5 years beginning 1<sup>st</sup> April 2016 for the specific beach management actions as shown in box 1 below to be carried out at Hoylake.

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**Box 1: Assented Beach Management Actions at Hoylake April 1<sup>st</sup> 2016 to March 31<sup>st</sup> 2021****Hoylake Beach**

Beach management operations considered in the assessment of Hoylake beach are:

Spraying with Roundup glyphosate based weed killer between once per year in August; Raking three times a week during April to September (inclusive); and Removal of windblown sand from the sea wall as and when it accumulates.

The area to be raked extends from the lifeboat station to Red Rocks in a band 100 metres (m) wide, between 0-100m from the wall. Raking will be undertaken using a tractor and comb rake to remove vegetation followed by a tractor and Barber Surf Rake.

The area to be sprayed extends from the lifeboat station to red rocks, in a band 100m wide, between 0-100m from the wall using a tractor with a boom and in addition if necessary between 100-120m from the wall with knapsack sprayer (additional 20 mband).

Spraying with Roundup, a glyphosate based weed killer, has been deemed the best option for managing common cord grass at Hoylake beach, as physical removal (excavation of material) may lead to further spread of the species and, as test digging has shown, leaves the rhizome behind. Rotoburing is not possible at this location due to the soft sediment; smothering techniques and grazing are unsuitable at this location due to its use as an amenity beach and burning is not effective.

In 2019, following adverse publicity on social media and in the press associated with the continued spraying of the beach at Hoylake, Wirral Council passed a motion 'Glyphosate Free Wirral' detailing how the Council intends to minimise glyphosate use with the exception of invasive species management. .

In November 2019, the Council requested Natural England provide advices under their "Discretionary Advice Service" in relation to how they should go about defining management actions to "ensure that the natural environment is conserved, enhanced and managed for the benefit of future generations, whilst contributing to sustainable development".

In 2020 the Council agreed to halt the use chemicals which control the growth of vegetation, by stopping the spraying of Glyphosate onto the beach area, but with other management actions continuing.

A wide range of views are present regarding the future management of Hoylake beach. Principally, some wish to see the continued management of grasses at Hoylake beach, using the existing techniques (glyphosate + mechanical operations) or alternative methods. Others however advocate for allowing natural succession and the cessation of any intervention techniques to control the management of grasses.

The Council wishes to address these conflicting views and reach a consensus on a way forward for managing the beach at Hoylake by producing a new Beach Management Plan (BMP) for the frontage. In order to support development of the BMP the Council is commissioning this Geomorphology and Ecology study to provide data and information to enable informed decisions to be made.

## **CURRENT POSITION**

The beach at Hoylake was selectively sprayed, within the limits as defined in Box 1 (see Figure 1) with glyphosate herbicide to control the growth of *Spartina anglica* and *Puccinellia maritima* from 2010 to 2019.

Mechanical raking and the removal of wind blown sand from against the sea wall, the latter of which is controlled to a degree by fences attached to the promenade railings but which causes blocked drains and nuisance on the highway and to properties on located on North Parade, which also commenced in 2010 is continuing.

## **WHAT IS REQUIRED**

The Council seeks to go out for Tender for a skilled and qualified industry expert to advise, prepare and manage a Geomorphology and Ecology study, comprising the following key tasks:

- 1. Overview of historical evolution of the Hoylake frontage;**
- 2. Review of available data;**
- 3. Identification of historical changes in beach evolution;**
- 4. Liaise with representatives of key stakeholders by phone/e-mail/video call;**
- 5. Attendance at a workshop with local stakeholders to confirm key issues and drivers for future management;**
- 6. Commission ecological study of the frontage to include carrying out a National Vegetation Classification Survey of the inter tidal zone and collation of other relevant designated habitat data in order to provide sufficient data to support development of an HRA Screening report for on-going beach management, including relevant data on bird usage of the frontage;**
- 7. Provide predictions of future change including assessment of range of future climate change scenarios including predicted changes in areas of habitat; potential for development of other habitats; potential changes in bird feeding/roosting areas; etc. utilising results from (5);**
- 8. Review of present and future flood risk across the frontage under different potential management scenarios;**
- 9. Identification of potential beach management actions/options including but not necessarily limited to:**
  - Review of existing management arrangements;
  - Identification of opportunities and constraints on future management activities;
  - Impact of different options on environmental habitats/bird feeding and roosting areas; and
  - Consideration of options based on natural development of the frontage and and/or management to maintain beach amenity across all or parts of the frontage.
- 10. Production of draft and final study reports;**
- 11. Provision of additional support to Council staff in production of BMP.**

## **DATA AVAILABLE**

The following data is available from local, regional or national archives to support the study:

- Cross shore beach profile monitoring data (1986-2020);
  - Typical cross sections through existing man-made coastal defences;
  - Historical LiDAR surveys (various dates 2004-Present);
  - Historical geo-rectified vertical aerial photography (1999-2018);
  - Non geo-rectified vertical aerial photography (pre 1999);
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- Historical oblique aerial photography (2008-2015);
- Local Sediment Analysis data from 1996, 2003, 2010 and 2015;
- Output from Environment Agency Coastal Boundaries Dataset;
- Climate change predictions from UKCP18;
- Core Count WeBs data for Hoylake sector for 2017/18 and 2018/19;
- 5-year (2014-19) WeBS core count synopses for Hoylake sector;
- Dot density maps for low tide bird count data for the Dee Estuary;

## REFERENCES

- AECOM. (March 2016). *Habitats Regulations Screening Assessment and Application for SSSI Assent Relating to Beach Management Operations at Wirral Beaches.*
- Jemmett A and Smith T. (Jan 2000). *The Beaches at West Kirby and Hoylake - Options for Managing Wind Blown Sand and Habitat Change.*
- Metropolitan Borough of Wirral. (March 2000). *The Beaches at West Kirby and Hoylake - Options for Managing Wind Blown Sand and Habitat Change. Consultation Document.*

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## FIGURES

Figure 1: Beach Management Areas at Hoylake Approved in 2016. Areas to be raked and sprayed.

