

# Revised Bathing Water Compliance Programme

## Yorkshire Water's £110m investment to achieve 'Excellent' beach standards

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Yorkshire's seaside resorts like Scarborough and Bridlington are amongst the most popular holiday destinations in the UK. Each year thousands of tourists flock to these shores for fun, a bit of relaxation, or even a dip. In fact Scarborough is Britain's oldest seaside holiday resort, welcoming visitors for over 360 years. Yorkshire Water, in partnership with the Department of Environment Food and Rural Affairs (Defra), the Environment Agency (EA), Local Authorities and beach operators, want tourists and people living in these areas to enjoy Yorkshire's beaches for years to come. Which is why Yorkshire Water are investing £110 million between 2010-2015 to help many of the region's seaside resorts achieve an 'Excellent' bathing water quality standard.



Castle Headland separates Scarborough North and South Bays

Photograph courtesy of Peter Smith Photography

### What 'Excellent' means

In 2006, the revised Bathing Waters Directive (rBWD) was adopted, which sets new standards for bathing water quality. These standards mean that bathing waters across the UK must meet a new 'Sufficient' grading by 2015. From this point, bathing waters will be classified as being 'Poor', 'Sufficient', 'Good' or 'Excellent' quality.

### Flying the Blue Flag

But why stop at 'Sufficient'? Yorkshire Water want Yorkshire's East Coast to be recognised for having great beaches, so the company is investing £110m to help many of the region's resorts achieve the 'Excellent' standard - something no other water company is aiming to do.

If this money wasn't invested, and only the 'Sufficient' standard

was aimed for, then local authorities would lose the ability to apply for European Blue Flag status at Filey, Bridlington North and Withernsea beaches. By going for 'Excellent', local authorities will also be able to apply for blue flags at two of the most popular beaches at Scarborough South and Bridlington South.

### So what does this mean for Yorkshire's East Coast?

The aim of this investment is to help the following eight beaches achieve the 'Excellent' standard by 2015, enabling the local authorities to be in a strong position to apply for blue flags.

- Withernsea
- Hornsea
- Bridlington North
- Bridlington South
- Filey
- Scarborough North
- Scarborough South
- Whitby

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# Simplifying the challenges facing a fragile world.





**Programme**

The timelines for delivery are:

|      |   |
|------|---|
| 2010 | Investment started.   |
| 2011 | The EA will establish bathing water profiles for all bathing waters.  |
| 2012 | Monitoring will begin for a 4 year classification of bathing water to be in place by 2015.                                |
| 2015 | The EA will publish the first classification of bathing waters under the revised European Bathing Water Directive (rBWD). |

**Modelling**

The strategy adopted by YWS to meet the requirements of the rBWD involves the use of computational coastal dispersion modelling. This is believed to be the first time that a UK water company has used this approach to meet the 'Excellent' standard.

The alternative approach would have been to adopt the EA surrogate standard of 2 spills per bathing season from Combined Sewer Overflows. The modelling approach will allow YWS to target their solution at the key locations rather than a blanket distribution across the catchment.

The modelling is being undertaken in two stages; sewerage and coastal. This work is ongoing with the phasing being dependent upon the anticipated work within each catchment. The sewerage modelling uses verified and audited InfoWorks models. The outputs from these models are then merged with the outputs from the coastal model, (developed in MIKE 21) using a post processing tool developed by Intertek-Metoc. The outputs from this software predict the long term performance of the bathing waters.

**Scarborough**

The town of Scarborough is one of the most popular resorts on the Yorkshire Coast. Its popularity started in Victorian times and has remained high since then. There are two designated bathing beaches in Scarborough and these are separated by the Castle Headland. The North Bay beach has consistently achieved Blue Flag status, but the South Bay beach has experienced mixed fortunes over the years. It was determined by YWS that the Scarborough scheme could be split into two phases to maximise the benefits from the planned investment.

An early start scheme was developed to improve the capacity and performance of the Wastewater Treatment Works. This work was awarded to one of YWS's framework partners (Byzak-Entec) in 2010, so that the benefits would be available in time for the 2012 bathing season, when the new bathing water monitoring regime

commences. This £7m project will increase the capacity of the WwTW from 360l/s to 480l/s by providing new transfer pumps, new primary and final settlement tanks, as well as increased UV disinfection capacity.

The early start scheme was released because it was considered necessary regardless of the outcome of the coastal modelling work, which was still being completed in 2010.

The second phase of the project is dependent upon the outcome of the coastal modelling. It will involve major sewerage improvements within the urban area to reduce the impact of the CSOs. At the time of writing (June 2011) the outline scheme is being developed. It is anticipated that this phase will have a value of at least £50m.

| Key Project Participants     |   |
|------------------------------|---|
| Client                       | Yorkshire Water Services Ltd  |
| Technical Consultant         | Arup  |
| Commercial Consultant        | Turner & Townsend   |
| Phase 1 Principal Contractor | Byzak-Entec   |
| Phase 2 Investigations       | Black & Veatch<br>ETM (Earth Tech Morrison)<br>Morgan Sindall Grontmij JV |
| Sewer Modelling              | MWH   |
| Marine Modelling             | Arup<br>Intertek-Metoc  |

Although the detail of the scheme has yet to be finalised, the works will involve major construction work at Toll House Pumping Station, Corner Café CSO and Scalby Mills Pumping Station. These sites are all highly visible and are within the main tourist areas. As such, the works require detailed planning and liaison with the local authority to minimise disruption to the town. Although the benefits will be around for many years to come, the short term disruption must still be minimised.

The model outputs have demonstrated that the adoption of the early start scheme was an effective and efficient strategy. It is anticipated that the South Bay will achieve the 'Good' standard following completion. The second phase will then lift the performance to 'Excellent'.

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