



**Scottish  
Water**

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# Welcome

## **Thank you for attending today's information event about our updated proposals for waste water treatment in Gairloch.**

Scottish Water is planning to make changes to Gairloch Waste Water Treatment Works which serves around 1,000 customers in the local area.

The investment will improve the reliability and sustainability of the facility whilst continuing to protect the environment. Our original proposals have been updated following the designation in late 2016 of Gairloch and Sand beaches as bathing waters.

The objectives of today's event are:

- To provide information on our plans
- To explain the changes that have been made
- To answer questions and discuss any concerns

We have information on:

- Where the site is located and why investment is needed
- The engagement that has taken place about our plans so far
- The new Bathing Waters designations
- What is now proposed in response
- The licence application process
- What happens next and how you can keep in touch

We want to continue to keep in touch as our plans progress and will post regular updates on our dedicated webpage:

**[www.scottishwater.co.uk/Gairloch](http://www.scottishwater.co.uk/Gairloch)**

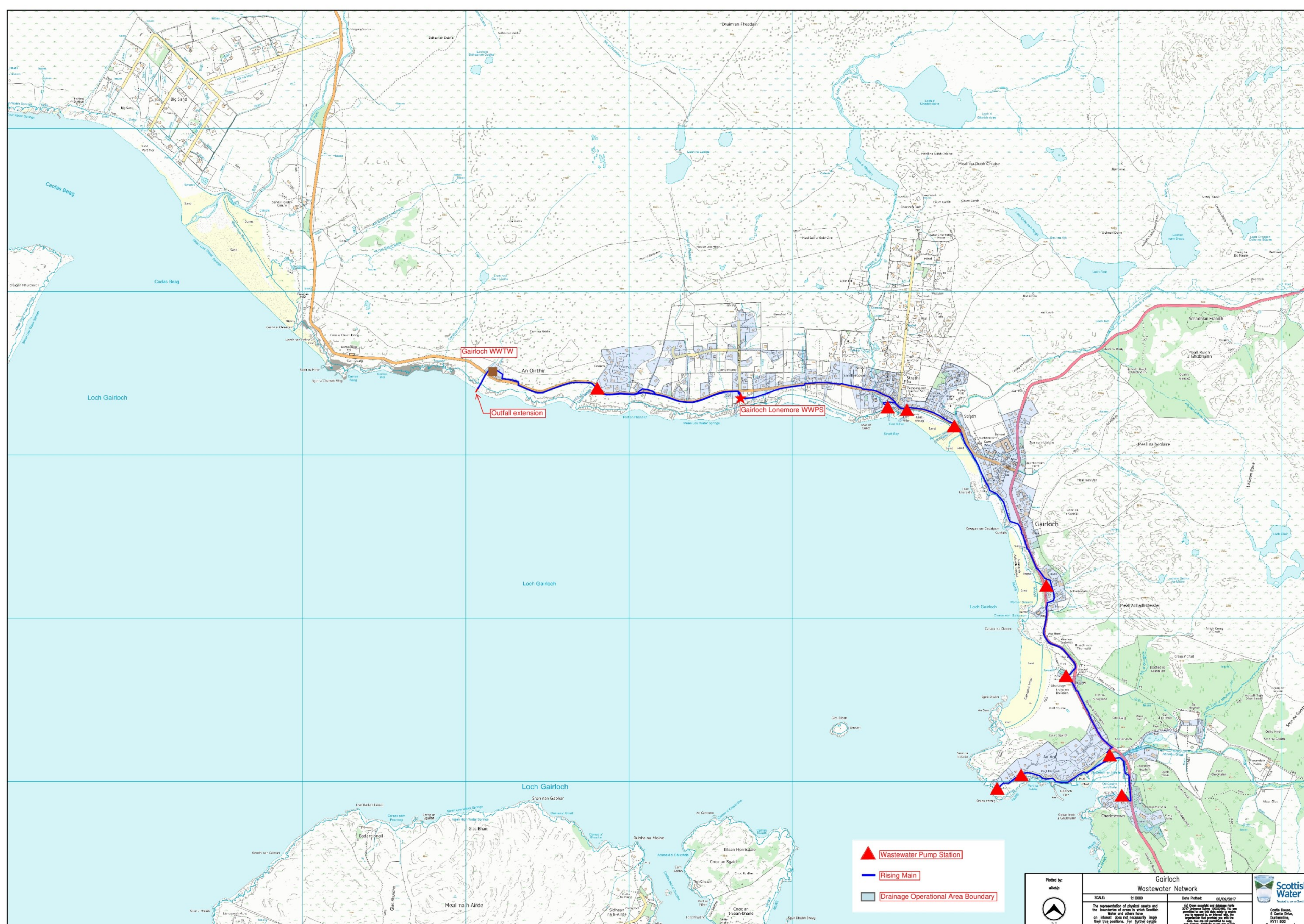


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# Overview

The map below shows the main elements of Scottish Water's existing waste water network in Gairloch.



High level overview of Scottish Water's waste water network in Gairloch. (A larger copy of this map is available.)

The current proposals involve changes at the Waste Water Treatment Works (WWTW) and at Lonemore pumping station. A 25 metre extension to the existing outfall at the WWTW is also proposed.

The rest of the network, which transports waste water to the works for treatment, would not be affected.



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# Why is investment needed?

**The existing membrane treatment process used at the Gairloch Waste Water Treatment Works has proven unreliable to operate and maintain.**

When the Works was built in 2002, the membrane technology chosen was relatively innovative. This promised a high level of sewage treatment within a smaller footprint than had previously been possible - and was felt to be a promising option for rural communities.



Gairloch Waste Water Treatment Works

The technology has not performed well in operation. In particular:

- The pores in the membranes have become clogged much faster than anticipated, preventing the Works from being consistently able to treat the required flow of sewage. This presents a risk of untreated waste water backing up in the network and spilling to the sea.
- The relatively low flows achieved have made it difficult to provide sufficient concentrations of organic matter to 'feed' the biomass that forms part of the treatment process.

As the existing membranes come towards the end of their design life, the difficulty of sustaining adequate treatment of waste water has become greater. A decision was taken to reduce the risk of untreated spills to the environment by installing a more reliable treatment process.

As a result of the issues experienced at Gairloch and other sites, Scottish Water does not intend to continue using this membrane technology at any of its waste water treatment sites in the long term.



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# What has happened so far?

## **Towards the end of 2015, Scottish Water put forward its original proposals for Gairloch Waste Water Treatment Works.**

The proposals for a new septic tank to replace the current Works at Fasaich would have provided a more reliable treatment process, with a reduced carbon footprint and lower operational costs.

Although the plans met the environmental discharge quality requirements at the time, early engagement with the local community towards the end of 2015 identified concerns about the potential impact on local beaches.

### **Bathing Waters designation**

After further engagement with Gairloch Community Council last year, the community applied via the Scottish Environment Protection Agency (SEPA) for the Gairloch and Sand beaches to be designated as bathing waters.

Scottish Water agreed to put its plans on hold to await a decision by the Scottish Government, so that it would be able to revise its plans if necessary to meet the bathing waters environmental standard. In December 2016, it was confirmed that both Gairloch and Sand beaches had been granted bathing water status.

### **What has Scottish Water done in response?**

Since the decision, work has been taking place to design and model the impact of suitable tertiary treatment for the site.

In the interim period, Scottish Water has invested around £90,000 to maintain the existing membrane plant and minimise the risks associated with its continued operation during the current bathing season.



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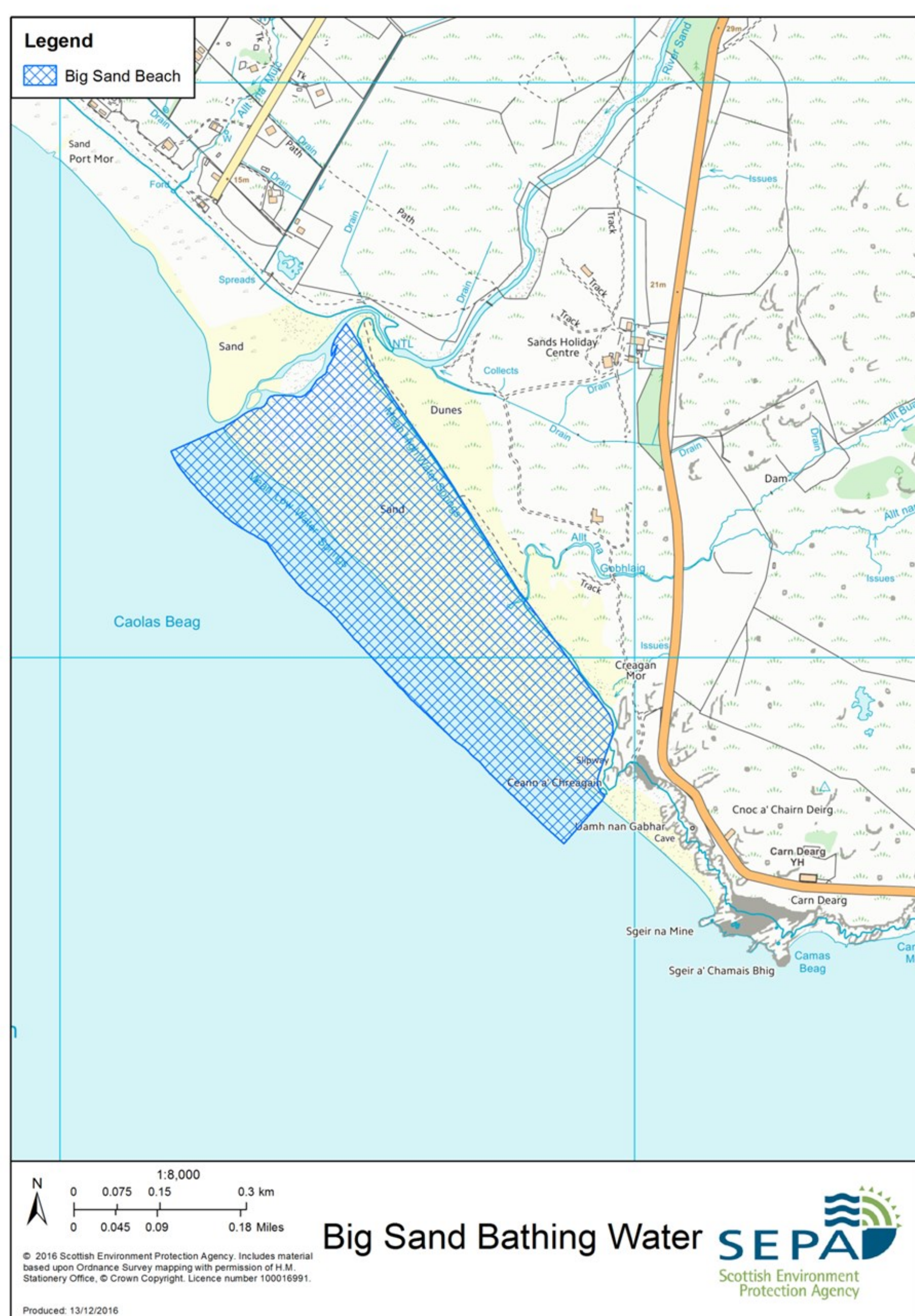
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# Bathing water designations

**Water quality at designated bathing waters is regulated under the European Bathing Water Directive, which is adopted into Scottish law.**

The Scottish Environment Protection Agency (SEPA) takes quality samples at each bathing water throughout the bathing season, from 1 June to 15 September. A pre-season sample is also taken in the last fortnight in May. The water quality indicators tested for are two types of bacteria, E coli and intestinal enterococci.

Water quality classifications are calculated at the end of the season and apply to each bathing water for the duration of the following season.



The maps above show the areas now formally designated as bathing waters at Sand and Gairloch beaches.



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# What is now proposed?

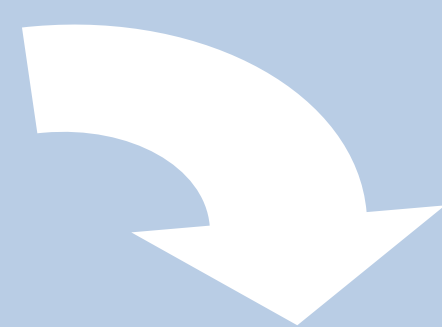
**To meet the bathing waters environmental standard, the new plant is now proposed to include a disc filter and ultra violet treatment.**

The diagram below shows the three stages of the new treatment process. The disc filter and ultra violet treatment will operate throughout the bathing season, which runs from the start of June until mid-September.



## Stage 1: Septic Tanks

In the septic tanks, heavy solids will settle to the bottom, where bacterial action produces digested sludge which is retained for removal by tanker. Lighter solids that float - such as grease, oils and fats - rise to the top and form a scum layer which is again retained for removal by tanker.



## Stage 2: Disc filter

The liquid effluent from the tanks will pass through a mechanical filter to remove remaining particles of 10 micron (0.01mm) and above.



## Stage 3: Ultra violet treatment

Finally, the effluent will pass through banks of ultra violet (UV) lights for disinfection. These are designed to kill 99% of the bacteria present. The process as whole kills 99.9% of the bacteria present in the waste water.

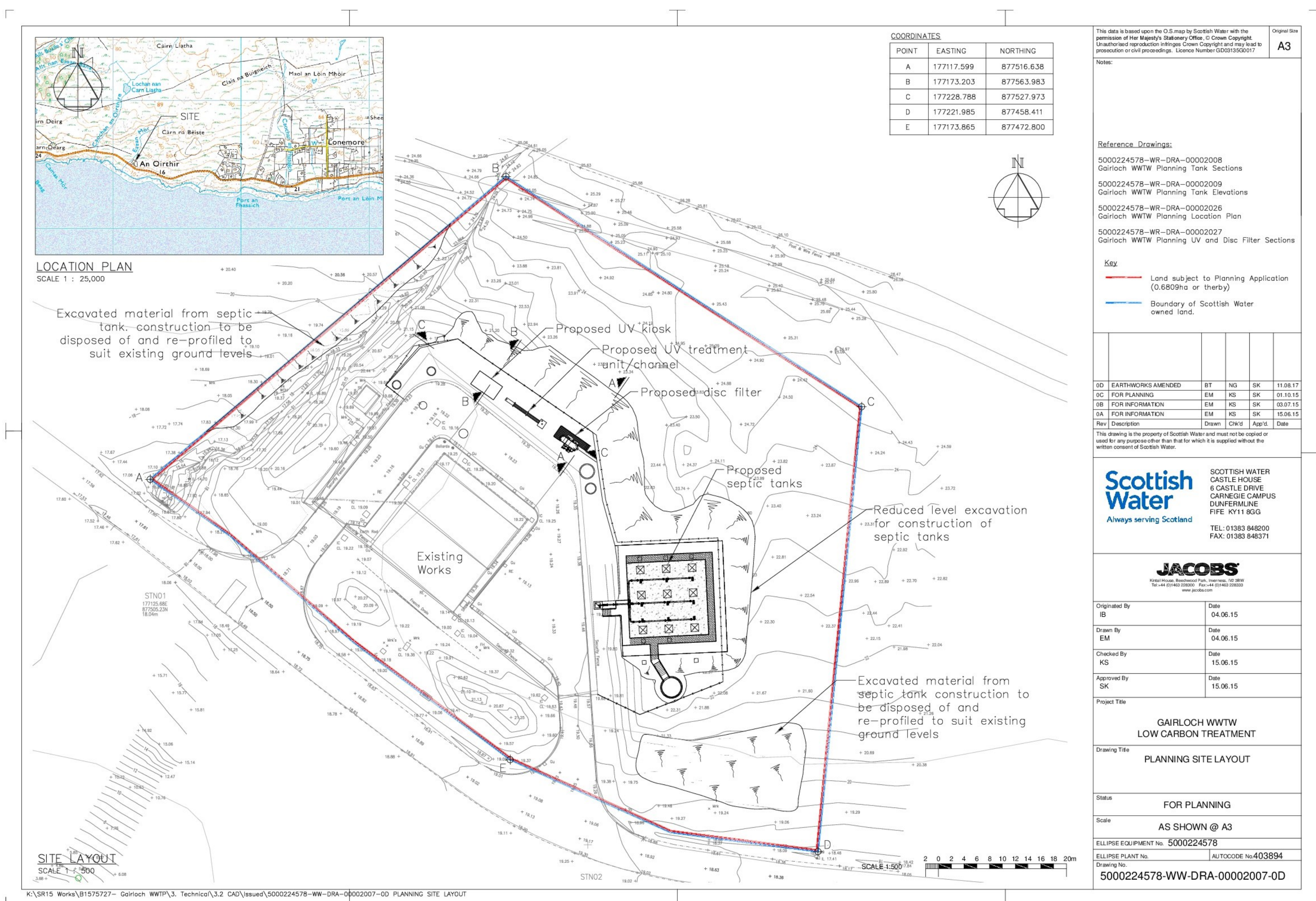


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# What is now proposed?

The drawing below shows the revised layout of the Waste Water Treatment Works site with the disc filter and ultra violet treatment added.



The proposals involve excavation and ground re-profiling to enable installation of the plant involved in the new treatment process around the landward side of the existing site. The building that sits at the front of the site will be retained.

The pumps and controls at Lonemore Waste Water Pumping Station will also be renewed, with installation of a new kiosk on the site.



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# Licence application process

## **Scottish Water has recently re-applied to SEPA for an amendment to our discharge licence at Gairloch Waste Water Treatment Works.**

Our activity is regulated by the Scottish Environment Protection Agency (SEPA) which will consider our proposed changes, with representations received, and determine whether or not to grant the application.

The application reflects the proposed change in the level of sewage effluent treatment from a membrane treatment process, to a septic tank and seasonal ultra violet treatment process. It also includes the change to the discharge location resulting from the proposed 25 metre extension to the outfall from the Works.

An advert was published in the Ross-shire Journal on Friday 25th August, setting out the basis on which SEPA will assess the application. Printed copies of the full advert are available.

SEPA will determine the application following the conclusion of its consultation.

### **How to find out more and submit representations**

Full details of the application are available on SEPA's website at [www.sepa.org.uk/regulations/consultations/advertised-applications-under-car](http://www.sepa.org.uk/regulations/consultations/advertised-applications-under-car).

Representations, quoting reference CAR/L/1002928, can be sent:

**By email to:**

registrydingwall@sepa.org.uk

**By post to:**

Registry Department, SEPA,  
Dingwall Office, Graesser House,  
Fodderty Way, Dingwall, IV15 9XB

The deadline for representations is **Tuesday 26th September.**





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# What happens next?

**In addition to the licensing process, Scottish Water is applying for planning consent to install the additional equipment at the WWTW.**

Planning consent for the installation of septic tanks was granted by Highland Council in April 2016, but consent is now also required for the structures associated with the disc filter and ultra violet treatment.

There is also an application to Marine Scotland pending for a marine construction licence, which is required for the proposed extension to the outfall pipe.

## **Anticipated timescale**

Subject to the outcome of the SEPA licence amendment application and the consenting processes, we hope to be able to carry out construction work over the coming winter in order to have the new treatment process in operation for the 2018 bathing season.

We will continue to maintain the existing Works for as long as is necessary to ensure a smooth transition and will manage the risks associated with the membranes as far as possible.

## **Managing the construction process**

If you have any comments, questions or concerns about arrangements for construction activity at the Waste Water Treatment Works or at Lonemore Pumping Station, please raise them with our team who will be able to discuss them, if necessary, with our principal contractor. If there are any issues or concerns that arise while work is under way, please contact us so that we can seek to address them.



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# Keeping in touch

**Scottish Water is committed to keeping you and the local community fully informed and engaged with the work we are doing.**

We have listened to the issues that were raised with us in response to our original plans - and we will continue to listen.

Our first responsibility is to provide our customers with water and waste water services that are reliable, sustainable and affordable - 24 hours a day and 365 days a year.

We are a publicly owned company, accountable to the Scottish Parliament and to the people of Scotland. We operate within a policy and regulatory framework, but that makes it no less important that we listen to our customers.

## Volunteering programme



Every Scottish Water employee can take up to 2 days a year to get involved in education, conservation or community activities.

Get in touch if there are volunteering opportunities locally that you think would benefit from our support.

## Keep in touch

If you have any questions or comments after today's event, please don't hesitate to contact us:

Telephone: **0800 0778778**

Email: **[gavin.steel@scottishwater.co.uk](mailto:gavin.steel@scottishwater.co.uk)**

Website: **[www.scottishwater.co.uk/Gairloch](http://www.scottishwater.co.uk/Gairloch)**



Gavin Steel