



Title: Seil WwTW FlexFilter Trial Information Meeting

Location: *Teams* call, hosted by Scottish Water
4th February 2022

Notes of Meeting

Present:
Jenni Minto MSP for Argyll & Bute (Chair), Keir Low MSP's Office, Cllr Kieron Green & Cllr Andrew Vennard Argyll & Bute Council, William Munro & Semas Anderson Seil & Easdale Community Council, David Ainsley, George MacKenzie & Alex Wright, Ron Robinson & John Sedgewick Save our Seil, Chris Chubb Technical Expert, Alan Thomson SW, Donald Milne SW, Iain Jones SW, Bill Elliot SW and Logan Stewart SW
Apologies: Cllr Elaine Robertson

1	<p>Welcome & Introduction</p> <p>Attendees welcomed by the Chair Jenni Minto MSP</p> <p>Agenda of the meeting:</p> <table border="0"> <tr> <td>Welcome & Introductions</td> <td style="text-align: center;">(10.00 - 10.05)</td> <td style="text-align: center;">Jenni Minto MSP Chair</td> </tr> <tr> <td>Balvicar upgrade</td> <td style="text-align: center;">(10.05 - 10.15)</td> <td style="text-align: center;">Iain Jones Scottish Water</td> </tr> <tr> <td>Overview of FlexFilter trial</td> <td style="text-align: center;">(10.15 - 10.25)</td> <td style="text-align: center;">Donald Milne Scottish Water</td> </tr> <tr> <td>Feedback to date</td> <td style="text-align: center;">(10.25 - 10.35)</td> <td style="text-align: center;">Donald Milne Scottish Water</td> </tr> <tr> <td>Next steps</td> <td style="text-align: center;">(10.35 - 10.45)</td> <td style="text-align: center;">Donald Milne Scottish Water</td> </tr> <tr> <td>Discussion/AOB</td> <td style="text-align: center;">(10.45 - 11.00)</td> <td style="text-align: center;">All</td> </tr> </table>	Welcome & Introductions	(10.00 - 10.05)	Jenni Minto MSP Chair	Balvicar upgrade	(10.05 - 10.15)	Iain Jones Scottish Water	Overview of FlexFilter trial	(10.15 - 10.25)	Donald Milne Scottish Water	Feedback to date	(10.25 - 10.35)	Donald Milne Scottish Water	Next steps	(10.35 - 10.45)	Donald Milne Scottish Water	Discussion/AOB	(10.45 - 11.00)	All	
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Balvicar Upgrade

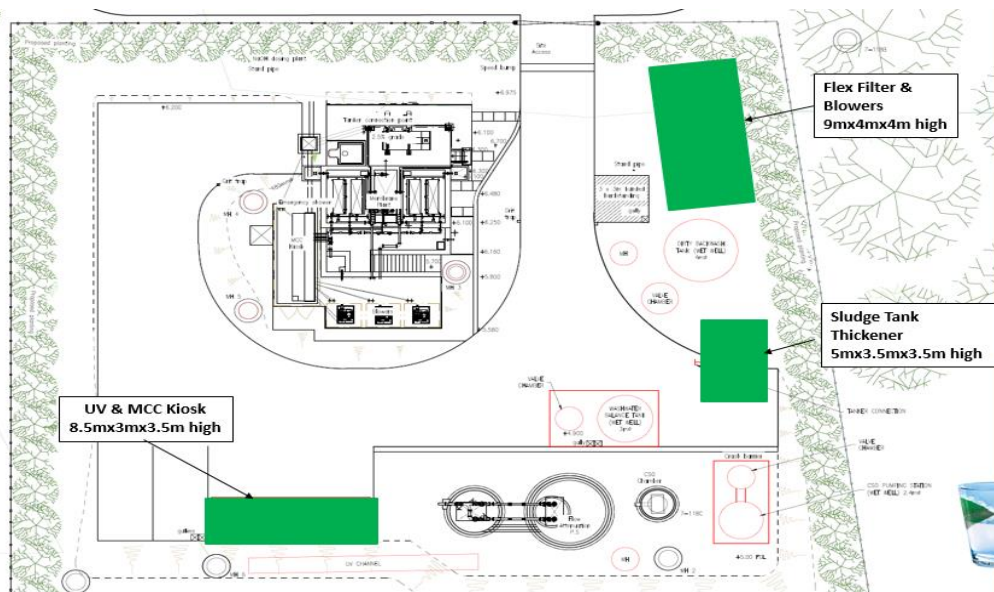


- Existing membrane plant is operating well
- CSO treatment solution is being developed (FlexFilter followed by UV treatment)
- Lowest Whole Life Cost
- Lowest whole life carbon
- Lowest community disruption



SW Internal
General

Balvicar Upgrade - Preliminary Layout



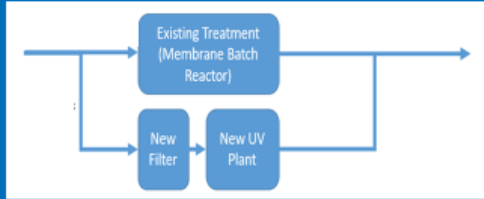
SW Internal
General



Points from Iain Jones SW:

- Desired course of action remains FlexFilter and UV treatment with a new septic tank to be installed for Seaview cottages at a later date
- Gave overview of slide
- Stated the aim for three new process units to be installed (as per slide)

Overview & Timescales of FlexFilter Trial



- Trial to confirm suitability and inform design of permanent works, including UV plant
 - Six month trial commenced November 2021
 - Water quality testing (does FlexFilter solution work?)
 - UV transmissivity testing (will UV solution work?)
 - UV collimated beam testing (informs design of UV solution)
 - Simulated seasonal variation to stress test the pilot plant



FlexFilter Pilot Plant



Points from Donald Milne SW:

- Stated that internal approval had been attained, a contractor appointed (Ross-shire Engineering), who had agreed to work with Stantec engineers to allow continuity in project
- Highlighted that there was real value in undertaking the pilot to determine appropriateness for the site, to ensure the UV solution works, and to eventually inform the design of the permanent works
- Mentioned that the materials for the trial had been delivered by US firm WesTech Engineering.
- Gave update on trial testing: SW now have good data on winter type flows, the next stage of the trial will be to simulate seasonal variations

Feedback to Date

- The trial data has, to date, confirmed the suitability of the FlexFilter solution
- Sampling and testing has, to date, confirmed the suitability of UV as a solution for achieving the required bacteriological-kill



Points from Donald Milne SW:

- Reiterated that testing of winter flows had been positive
- Stated that FlexFilter was performing well and that UV appears to be an appropriate solution for the site (as per slide)

Next Steps

- Seasonal variations will start being simulated in February through a minor amendment to the current test rig
- Continue sampling and testing to confirm suitability of the FlexFilter and UV systems
- Currently exploring whether there is value in the pilot plant remaining on site to validate simulated seasonal variations
- On successful completion of the pilot, progress the design of the permanent works – estimated to take *circa* six months
- On successful completion of the pilot, potential to progress the Seaview Cottages project



Points from Donald Milne SW

- Gave overview of slide
- Mentioned that SW were also testing to see if there would be value in keeping pilot equipment on site after completion of the pilot

6 **Discussion/AOB**

Points and questions raised by those in attendance:

George MacKenzie:

Concerned that proposal still contains 4m high construct. Also asked if, additional to seasonal variation testing, modelling was in place for next 20 years, taking climate change into account.

Donald Milne SW:

Aware of height issue. The design stage will commence once the trial is complete and height lowering measures will be considered then. Believes there is a good understanding of likely regional flows (17 litres per second), which should take into account next 20 or 30 years.

We can confirm that seasonal variation was modelled initially in 2017, but the hydraulic modelling undertaken pre-dated current UK Climate Projections 2018 (UKCP18) which we now use... within the design stage we would expect Climate Change impact to be modelled.

Jenni Minto MSP:

Stated that she has also begun to see larger rainfall events

David Ainsley:

Asked why the technology is working now and not before, and also enquired if there would be a procedure in place to allow the community to call for independent testing to ensure the site is compliant.

Iain Jones SW:

Operational practices have been altered, and telemetry monitoring inlet and outlet flows gives confidence that membrane plant is functioning as it should. A maintenance plan will ensure future compliance. Correct process for community would be to inform SEPA who arrange appropriate sampling.

Ron Robinson:

Climate change flows are important to consider. Asked for more information on how simulated variation flows are orchestrated. Asked if real time telemetry will be available and web based.

Donald Milne SW:

On simulated variations: a change to the rig is made to allow additional solids to go into the FlexFilter, the strength of these additional solids can be varied using the main flow.

On trial data being published: currently too early to share data, suggests that all data can be shared at the end of the trial.

In terms of annual flow return for Balvicar the detailed data is sent to SEPA as part of the annual flow return.

Alan Thomson SW:

Combined sewer overflow discharges and how they are monitored/spill volumes etc are subject to much debate and media attention presently. In England there are significantly more real time electronic data monitors (EDM'S) installed in CSO's only, but water quality is 14-16%. Scotland has the reverse situation: a high water quality of around 80% but far less EDM monitoring. SW have agreed to install 1000 monitors at locations where there is a belief that more data will help make investment decisions. As this develops and more data is collected there will also need to be agreement about how best to share this data with the relevant stakeholders.

Jenni Minto MSP:

Believes there may be a water quality app in England. Concerned that monitors and investment may go to urban areas and not rural.

Ron Robinson:

Believes that there are scientific people on Seil who can properly interpret the data.

Alan Thomson SW:

The new Electronic Data Monitoring (EDM'S) planned across Scotland will be installed at prioritised CSO sites which may be affecting water quality. This assessment will be based upon environmental needs and not location. This is at an early stage and we don't have presently have an app although this will be considered as part of the future EDM project.

The project being delivered removes this existing CSO because all flows now arriving at Balvicar will be subject to treatment and therefore there is no requirement for an EDM at this particular location. As above, data is send to SEPA as part of the annual flow return.

Jenni Minto MSP:

Will ask general question to SEPA about where electronic data monitors (EDMs) may go.

Alex Wright:

Stakeholders previously told four years ago that UV technology would require a larger footprint, what has changed? Tallest building currently planned to go nearest the road, could it go furthest from the road?

Chris Chubb:

Original consideration may have been for a secondary treatment plant followed by a UV facility which would have been a larger footprint. Membrane plant decision was taken to allow for a smaller footprint. Initially, the membrane plant had problems with underloading, this has been managed out by the filter which increases the number of solids going to the membrane plant and improves its performance further.

Donald Milne SW:

We are trialling the flex filter solution and initial information indicates UV treatment is appropriate and will work. Reiterated that design stage will follow trial to determine the size of the unit needed.

Alan Thomson SW:

Commitment has been made to appropriately screen the site which will be addressed in the planning stage.

George MacKenzie:

Asked if a short statement can be prepared on what went wrong with the originally installed plant.

Iain Jones:

The volume and peak flow of combined foul and surface water flows arriving at Balvicar WwTW is currently more than the capacity that the WwTW can treat, causing the Combined Sewer Overflow (CSO) at the inlet to the WwTW to spill into the Seil Sound. Our preferred option is to retain Balvicar WwTW on existing site and provide an additional side stream UV Treatment. This retains the Membrane plant to treat the base biological and bacteriological loading from the network with the new parallel treatment mechanical treatment stream with a screen, flex-filter (or similar), and UV treatment treating circa

	<p>10l/s⁽¹⁾, thus ensuring that all discharges are treated and disinfected prior to discharge. A septic tank will be installed at Seaview to provide first time treatment to 8 properties.</p> <p>Ron Robinson:</p> <p>Does the new treatment process use a centrifugal system?</p> <p>Donald Milne SW:</p> <p>No – it uses a filtration system. Synthetic compressed material which has a various porosity allows solids to be trapped in the filter. Air is then used to backwash solids back into the collection point, this effluent is then recycled into the membrane plant.</p> <p>All capital projects are required to set out a maintenance regime for operational teams. SW has obligation to comply with discharge consent, Combined Sewer Overflows (CSOs) are part of that. The FlexFilter should remove suspended solids that may have been visible before, and the UV treatment should kill bugs.</p> <p>Jenni Minto MSP:</p> <p>Asked for any final questions and a summary of next steps</p> <p>Alan Thomson: summary/next steps:</p> <p>Thanked everyone for their attendance and time.</p> <p>Will ensure regular updates are provided.</p> <p>Next logical time for update will be after seasonal variation testing has been undertaken. At that point, the Seaview cottages project can be looked at.</p> <p>Email to send any further questions: seil@scottishwater.co.uk</p>	
6	<p>Next steps</p> <p>Complete trial of FlexFilter system.</p> <p>Keep the community informed</p>	SW
7	<p>Next Meeting</p> <p>TBC</p>	SW