Scottish Water Gairloch Stakeholder Group

Meeting Minutes

Date of Meeting: Monday 27th September 2021, 6:30pm

Location: Via Microsoft Teams

Present:

Gairloch Community Representatives	Karen Buchanan (KB) Alex Gray (AG) Ian McWhinney (IMcW)
SEPA	Paul Griffiths (PG)
Scottish Water	Kirsty McLaughlan (KMcL) Iain Jones (IJ) Kevin Clifton (KC) Gavin Steel (GS)

Apologies:
John Port (JP)

Minutes

1. Welcome

Gavin Steel welcomed everyone to the meeting and thanked them for attending.

2. Minutes of meetings held on 3rd November 2020 and 23rd February 2021

GS noted that the minutes of the previous two meetings remained to be formally approved. No amendments had been received by email and none were requested at the meeting.

3. Actions and matters arising

03/11/20 Action 1: GS to circulate collated sampling data to members of the group.

> GS confirmed that this had been done after the meeting.

03/11/20 Action 2: GS and KC to feed back the Stakeholder Group's view within Scottish Water and confirmed that the UV would not be switched off without further discussion with members.

> GS noted, as reflected at the February meeting, that the UV had operated throughout winter 2020/21.

03/11/20 Action 3: Scottish Water to circulate a draft update for proposed publication in the Gairloch and District Times.

> GS noted that this action had been carried forward to the February meeting but had been completed in the Spring.

23/02/21 Action 1: Scottish Water and SEPA to identify a suitable programme for a winter trial period operating without UV over winter 2021/22 and bring this for discussion at a future Stakeholder Group meeting around the end of the 2021 Bathing Season.

> GS noted that this had been included on the agenda for this meeting.

23/02/21 Action 2: Scottish Water to circulate a draft update for proposed publication in the Gairloch and District Times.

> GS noted that this had been done following the meeting and a 2 page update had then been published in the following issue of the Gairloch and District Times.

23/02/21 Action 3: Scottish Water to circulate draft minutes of November and February meetings; and to explore whether there was desire from members for a further meeting earlier than an August / September 2021 date, towards the end of the coming bathing season.

> GS noted that this had been done. There had not initially been a desire for an earlier meeting than the current one, which had then been moved from earlier September to suit availability. He explained there had been an ad hoc meeting with himself and KMcL at the request of KB, AG and JP in early August to discuss more urgent concerns, particularly around odour and a visible effect that had been observed at the WWTW outfall. He noted that the odour issue would be covered in Scottish Water's update and the outfall phenomenon had been found to be caused by air bubbles within the final treated effluent. These were caused by temporary additional treatment measures which had been operating this summer, but this had now stopped so the issue should not recur.

4. SEPA / Sampling update

Bathing water samples

PG noted that 2021, unlike 2020, had been a normal bathing season in its duration, running from the beginning of June until mid-September.

He noted the impact of a significant cyber attack on SEPA towards the end of 2020 and that recovery from that was still continuing. By the time the bathing season had started, laboratory capacity and sampling had been back up and running, so SEPA had been able to get 6 samples from each of the Gairloch bathing waters; and had also carried out final effluent sampling at the WWTW. While still less than a normal season, this was significantly more than had been possible in 2020 with the shortened bathing season and tighter working restrictions linked to the pandemic.

The two sets of 6 samples spread between mid-May (pre-season) and early September were all well within the 'excellent' standard at both beaches. He noted that at Sand Beach every single result had been either 10 or <10 for both bacteriological standards. Gairloch had been similar but with one result at 20, which was still well within excellent standard.

PG reflected this continued the pattern that had been seen since regular sampling had first taken place at the Gairloch beaches in 2017, with both beaches achieving a consistently very high standard. He recognised that the dry summer weather would be expected to help, but nevertheless the results were very positive.

PG noted that pre-pandemic sampling had included sampling of the burn at Sand Beach as well. Given restrictions on laboratory capacity, this had not

been done this year and the focus had been on getting the bathing water samples.

WWTW final effluent samples

PG explained that a total of 8 SEPA compliance samples had been taken of the final effluent at the WWTW. He understood that members of the group were already aware that there had been issues with the operation of the WWTW around the very start of the bathing season in mid-May and early June. There had been a single non-compliant sample for E. Coli and a couple of non-compliant samples for Intestinal Enterococci (IE).

PG noted that the CAR licence for Gairloch was a 2-tier licence, with a lower limit and an upper limit. The lower limit was set to guarantee the quality of the bathing waters, but the higher tier allowed any more serious failures to be recognised and dealt with in a proportionate way.

The lower tier limit for IE was 13,000 units and upper tier was 130,000 units. The two exceedances recorded were 32,000 units and 21,000 units, so over the lower tier limit but nowhere close to the upper tier. The E. Coli exceedance was at 36,000 units compared with a lower tier limit of 35,000 units, so only just over the limit.

Following these initial challenges, PG reflected that the remaining 6 samples over the season showed the WWTW working to a much better standard with no further samples close to the lower tier limits.

PG explained that overall, with 6 out of 8 samples being compliant and the 2 exceedances being in the lower tier, SEPA would class the WWTW as a compliant site.

Questions

KB asked if SEPA understood why there had been a change in the site's performance from June onwards.

PG suggested that Scottish Water would be better able to explain what it had done on site. He was aware that a lot of resources and effort had been put in to get the treatment process working better. At one stage there had been a weekly update between Scottish Water and SEPA to keep them updated with the response, which he felt had been delivered swiftly.

KB asked if Scottish Water had been aware of the difficulties the site was having before it had indication from SEPA.

KMcL explained that Scottish Water's own sampling of the final effluent had been starting to deteriorate, particularly with an increase in suspended solids as had been seen for a period in 2020. Action had been initiated quickly to return to using the tannin-based coagulant to improve settlement, as this had been done successfully for a short time in the previous year, but the speed of

the deterioration had been rapid as the load on the WWTW increased and this had resulted in the non-compliances. Other steps had then been taken in addition to ensure the site returned to reliable compliance which KMcL would discuss in more details in her update. Higher loading than 2020 from tourism and the extended very dry period of weather were thought to be contributing factors.

5. Scottish Water update

GS shared some slides with the Group, reflecting Scottish Water's update.

GS recapped that the new treatment process was commissioned during winter 2019/20. Since the turn of flows, the UV had been operating and the performance of the site had generally been good. However, as discussed at previous meetings there had been some challenges with the operation of the disk filter, particularly during dry summer operating conditions. There had been a short period in summer 2020 when a natural tannin-based coagulant had been used to improve settlement of fine particles. As KMcL had noted, the initial response to similar emerging issues in 2021 had been to revert to this approach, but this unfortunately hadn't prevented the lower tier exceedances which PG had described.

In response, a focused 'mission team' had been formed within Scottish Water, under senior leadership from Joanne Kay, General Manager for Waste Water Operations across Scotland. The team had two workstreams, one led by KMcL and focused on returning to and maintaining reliable performance for the current year; and another led by IJ looking at longer term measures to address the root cause of the challenges.

Summer 2021 Response

KMcL noted that before the bathing season began, her team had taken steps to prepare the site by emptying the septic tanks, servicing the UV units and putting trigger levels in place to re-deploy coagulant dosing if it was required. The challenge had been that the deterioration in samples had occurred more rapidly than had been anticipated, meaning that one exceedance occurred before the coagulant dosing was operating and the other very shortly afterwards.

KMcL reflected that when lower level exceedances of the site's licence were detected, and the mission team was established, further measures were initiated immediately to bring the site back into compliance as quickly as possible. The main elements of this response were efforts to monitor and optimise the use of the coagulant; and bringing an additional, mobile UV treatment unit to the site to boost the level of disinfection. Additionally, a unit was brought to the site to enable disinfection with a chemical, hypochlorite, which would be able to provide disinfection if the cloudiness of the effluent had meant that even the enhanced UV was insufficient. Scottish Water had engaged with SEPA about this to satisfy them that it could be used safely and

appropriately, but it didn't ultimately need to be used as other measures succeeded. It had therefore only provided a fall-back on a precautionary basis. This system has since been taken off site.

KMcL explained that, as PG had also reflected, the measures that were used were successful in bringing the site back into compliance quickly and maintaining a consistent high level of performance over the remainder of the 2021 bathing season. With the end of the bathing season and the change in weather and load within the catchment, the additional mobile UV unit was no longer required and was being taken off site.

KMcL noted that the set-up of the additional UV system, which involved a temporary pumping arrangement, resulted in air bubbles being introduced to the final effluent, which she appreciated caused a visible disturbance to the water at the end of the outfall pipe. This should now have stopped and wouldn't be expected to recur – although the only impact on the environment was the visual effect on the sea surface.

KMcL explained that the coagulant dosing system will remain on site, but will only be used when required.

In summary, KMcL reflected that, after initial difficulty, reliable compliance with the required discharge standards has been achieved this year, with significant effort from the local team. Bathing water samples had been consistent with continuing 'excellent' status at both bathing beaches throughout the season

KMcL turned to the wider context of the new treatment process's performance, presenting analysis that had recently been carried out by Scottish Water of spill events at Lonemore pumping station, comparing summer 2018 with summer 2020 (1st May – 30th Sept).

Rain gauge data showed that there was a very similar level of rainfall between 1st May and 30th September in both of these years (just over 500mm in total) so they are believed to present a reasonable comparison. Telemetry data showing the level of the storm tanks at Lonemore allows an estimation that the duration of time spilling was reduced by almost 90% - with the total duration of spills over the 5 month period in 2018 being estimated at over 12 days, while this was reduced to around 1 day in 2020.

KMcL reflected that this was just an initial view based on two years, but it reflected an important respect in which the new WWTW appeared so far to be performing significantly better than the previous Membrane Bioreactor plant had been able to.

KC noted that the additional UV unit at the WWTW was still on site at the time of the meeting, but had been disconnected and was awaiting uplift by the supplier.

Longer Term Response

IJ explained that, in parallel with the local team's work to achieve compliance this year, his team had begun work to identify the best long term solution to the challenge identified with the new treatment process during dry summer conditions. As part of this work Stantec, who are recognised experts in the operation of UV systems worldwide, have carried out some more intensive sampling at the site, seeking as much data as possible about the effluent. The collection of this data was now almost complete and he expected to have feedback from Stantec by mid-November on their recommendations.

IJ outlined that the focus of Stantec's work currently was on 4 main potential options:

1. Adding biological treatment such as a SAF plant
2. Installing a different filter, capable of screening finer particles
3. Installing a different, finer filter alongside use of coagulation after the septic tanks
4. Chemical disinfection

IJ explained that the final option of chemical disinfection was included for completeness, but the primary focus was on identifying a solution that would work with the UV disinfection already installed. Once Scottish Water had Stantec's recommendations, it would hope to reconvene the Stakeholder Group to review this, probably in late November or early December.

IJ reflected that Scottish Water recognised the need for a reliable long term solution and was committed to providing this.

Questions

AG asked, given the difficulties with the disk filter becoming clogged, if Scottish Water was hopeful that there were finer filters that would be able to operate reliably without similar issues.

IJ indicated that Scottish Water was aware of two other potential types of filters that might be suitable. The focus had been on collecting as much data about the effluent as possible in order to have as much confidence as possible in any decision. He noted that efforts were being made to prepare to deliver a solution as quickly as possible once the best way forward had been determined.

AG asked if a longer term solution could be installed before the beginning of the 2022 bathing season.

IJ indicated that this was Scottish Water's aim. He reflected that the supply chain was a risk to this, especially in current circumstances, but that efforts were being made to explore capacity with potential suppliers.

KC noted that the intention was to keep the temporary coagulant system on site so that this would remain available to support the site's performance if

required, including in the event of any delay in supply of new equipment or delivery of construction work.

6. Proposed winter trial period

KC noted that it had been agreed at the meeting in February that Scottish Water would liaise with SEPA to bring a proposal to the group for the proposed trial period of operating without UV to go ahead in winter 2021/22. This reflected what was envisaged when the trial was deferred last year in light of the impact of the pandemic on SEPA's ability to support winter sampling. He reflected that the winter trial period was agreed as part of the pilot operating period that was originally expected to run for 2 years, to provide clear evidence of whether there is impact on bathing water quality from turning off UV disinfection in the winter months and operating with primary treatment via the septic tanks.

KC explained that SEPA had confirmed that it can support monthly sampling at Sand Beach, which is the nearer of the two bathing waters to the WWTW, over the coming winter from October to April. Given the importance of October and Easter to the community which had been discussed at previous meetings, it was proposed to run the trial from November until March. Scottish Water felt this should give a reasonable number of sample results to reflect the impact of operating without UV.

KC noted that SEPA would still take samples in October and April, but these would function for comparison with the UV turned on during these months for the purposes of the trial period. As originally agreed in 2018, the evidence collected would provide a basis to agree a long term operating regime for the WWTW in consultation with the Stakeholder Group.

Questions

AG asked whether Scottish Water would continue with the trial or take action to reduce the level if sampling showed significant increases in the presence of bacteria.

GS thought that for the purposes of the winter trial period, Scottish Water would want to continue in order to understand if any deterioration in water quality was likely to be connected with the WWTW or with any other short term factor affecting the environment when the sample was taken. Just as a series of samples would be desired to increase confidence even if an initial sample showed excellent water quality, there would be a desire if there was an adverse result to understand if this was consistent or some form of outlier.

AG noted the different topographical situations of Gairloch and Sand Beaches and asked why only Sand Beach would be sampled in the winter trial. He thought the situation could be quite different at the head of the bay than the more exposed location at Sand.

GS reflected that he thought it was accepted that sampling at both beaches would be the ideal, but he understood SEPA was still operating with constraints on their laboratory capacity.

PG reiterated the pressure on laboratory capacity and SEPA's need to balance competing priorities, including some areas of greater concern for water quality than Gairloch. He noted that as well as the differences noted, Gairloch was significantly further from the WWTW outfall than Sand. He felt based on modelling and distances that SEPA would be confident that if Sand was performing well, that was very likely to be the case for Gairloch as well.

IMcW noted that people use water all year round, albeit in lower numbers out of season, but that Christmas and New Year was another busy time. He wondered if there might be opportunity to do sampling around that period to see if higher population in the area had an impact.

GS noted that SEPA envisaged monthly sampling, so he understood samples would be taken in December and January, but he was unsure whether they would be able to commit to dates within the holiday period.

PG thought that this might be challenging, noting both the need for samplers to be available, but also for a laboratory to be in a position to analyse the samples promptly. He reflected that SEPA was seeking to support the trial as far as it could, but it was a non-statutory activity relative to other demands on its resources. He agreed to look at what was possible and noted that SEPA did not pre-announce sampling dates to ensure they reflected normal operation.

GS asked for confirmation that members were content to move forward with the trial on the basis described. This was agreed.

> **Action 1**: Scottish Water and SEPA to proceed with the off-season sampling at Sand Beach, with the WWTW operating with primary treatment via the septic tanks from November 2021 until March 2022 for this purpose.

7. Any other business

a. Odour concerns

GS noted that Scottish Water wanted to provide a very brief update on the odour issue that had been discussed with KB, AG and JP in August. He noted that there had been concerns raised about odour at the WWTW last summer, which had recurred in 2021 despite some measures taken to address this. The recent discussions had also reflected odours being experienced at locations within the village; and odours from the sewer network had also been raised by customers on occasion in the past with localised actions being taken by Scottish Water's local team in response.

GS noted that more intensive monitoring at the WWTW had given new insight about the role of sulphides in odour challenges – and this suggested that the primary cause of the problem in summer conditions was unlikely to be saline ingress as had previously been suspected.

He explained that the opportunity had been identified to trial use of an odour dosing chemical which was quite widely used in the water industry in response to odour challenges. A temporary tank and associated equipment had been installed at the Pier Pumping Station in mid-September and Scottish Water was keen to get as much data and feedback as possible on whether this resulted in improvement.

GS noted that initial feedback via email from JP had been positive, where he had previously experienced significant unpleasant odours at the site. Equally GS reflected that it was early days and Scottish Water would reiterate in its communications to the wider community that it was keen to receive reports if people did experience odours.

KMcL was interested to hear the experience of other members present as she knew they regularly walked in areas where odours had been experienced.

AG indicated that he regularly walked between the Golf Course and the Pier and had experienced no smells since the odour dosing arrangement had been in place. He had noticed some sulphur smells in earlier weeks.

KB explained that she had been away recently, but had noticed smells from the sewers before she left, around mid-September. Following her return, she had been out on a few occasions and had not noticed any smells.

KMcL noted that the odour dosing had first been installed on Wednesday 15th September and KB thought this would tally with her experience.

GS said that Scottish Water would assess how long the trial needed to continue for and would keep members updated about this and about any longer term proposals.

> **Action 2**: Scottish Water to update members in due course on the progress of the current odour dosing trial and any proposals for the longer term arising from this.

b. Sewer network at old museum car park

GS noted that KB had raised concern about recurring sewer chokes in this area. He explained that follow-up action had been taken by Scottish Water's trade effluent team to visit food-serving businesses upstream and check on their arrangements for disposing of fats, oils and grease. Room for improvement had been identified and a process had been started to try to get this addressed as it may be a significant contributing factor. He noted that CCTV survey of the pipes was also being arranged to check in more detail on

their condition, including any other factors that could contribute to blockages or any significant build-up of congealed fat which could be remedied.

Action 3: Scottish Water to report back on findings of CCTV investigation and any follow-up action taken.

c. CSO operation at East Strath

GS reflected that KMcL had presented some data about operation of the CSO at Lonemore, which was the final and largest pumping station on the sewer network. This therefore had a direct relationship with the WWTW, which had sometimes had reduced capacity to receive full flows when the previous treatment plant had been operating (e.g. during membrane cleaning or replacement).

There had been particular questions about East Strath pumping station and the data to reflect the performance of this site had been requested.

KC reflected that a remote reset function had recently been enabled at the pumping station, following improvements to Scottish Water's telemetry systems. He noted that a recent spill had arisen from a blip in the site's power supply, after which an operator had to attend to reset the pumps manually. The new system would allow this kind of task to be carried out much faster and with reduced requirement for travel.

AG asked if Scottish Water would now be proactively alerted if the pumps 'tripped out'.

KC explained that the previous system would have raised an alarm at Scottish Water's Intelligent Control Centre (ICC), but they then had to despatch an operator to respond. For transient issues like interruptions to power supply, they would now be able to reset the pumps remotely and resolve the alarm without operator attendance in many cases.

Action 4: Scottish Water to provide data on spills from the CSO at East Strath.

d. Communication

GS proposed that Scottish Water would do a similar update via the Gairloch and District Times, as in the Spring, in order to share the key information about what is happening with the wider community. This could also be shared digitally via facebook and email where helpful.

AG noted there may be an opportunity to publish in colour if that was beneficial as the GDT had recently started producing a sponsored colour centrefold.

Action 5: Scottish Water to draft and circulate a proposed update for publication via the Gairloch & District Times and to contact the editor about potential opportunity to do this in colour.

KB noted that the first meeting of the newly elected Community Council was due to take place on the following Monday, although the focus was likely to be on the election of office-bearers and other procedural business. The following meeting, which might be a better opportunity to report back on the Group's progress, would be on the second Monday in November.

GS reflected that community members of the group had regularly kept the Community Council informed and they had been copied into correspondence over time. If it was ever felt it would be helpful for Scottish Water to attend a Community Council meeting directly, that could always be organised.

8. Date of next meeting

GS noted that IJ had suggested a further meeting in late November or early December. He wondered if the first week in December might help to precede the December Community Council meeting.

AG noted that 6:30pm was very early for him. KB also felt a later meeting time would be easier now that she was joining meetings from home. It was agreed to change the timing of the meeting to start at 7:30pm.

The next meeting would therefore be arranged for **Monday 6th December 2021 at 7:30pm via Microsoft Teams**.