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Dear Sue

Carron Valley WTW – SR21 Letter of Commitment update

In my letter of 24th June 2020, I set out our commitment to confirm the preferred option for Carron Valley by September 2020. While we have taken longer than expected to reach this point, I can confirm our Investment Group approved our preferred option on the 27th April.

We are determined to improve water quality for customers in the Carron Valley supply zone and Scottish Water provides commitment to deliver the following actions:

1. Maintain the following short term measures until such time as capability improvements are delivered:
 1. Optimise the existing coagulation process with the use of a charge analyser.
 2. Operate the reservoir air curtain to protect the WTW intake from the risk of algae.
 3. In order to improve the resilience of the existing operational response plan we will replace the temporary air curtain system with a permanent set up including power supply and alarms linked to telemetry by 31st December 2022.
 4. Install a silt curtain to the WTW abstraction point by 31st March 2022.
 5. Monitor Carron Valley WTW raw water weekly for algae and Chlorophyll-a and raw and final water twice weekly for Geosmin and Methylisoborneol (MIB).
 6. Follow our current Operational Response Plan for Carron Valley Taste and Odour, which includes triggers for turning on powdered activated carbon (PAC) dosing and enhanced monitoring at the WTW and in distribution.
 7. Notify Lanarkshire Health Board, Greater Glasgow & Clyde Health Board, Forth Valley Health Board and DWQR if the water quality event reporting triggers are breached for customer taste and odour contacts in the Carron Valley water supply zones.

Please note that the dates provided above may be dependent on land, planning and power company delivery times. Where this is the case, we will continue to provide regular updates on progress with our work to mitigate any project risks and any impact they may have on timelines.

2. Develop our preferred option - Option B, summarised below, to the next stage of development and appraisal.

Option B - Source and WTW performance maximisation, including:

- a. Improving reservoir water quality and minimising levels of algae and solids abstracted to improve the quality of water going to treatment.
- b. Upgrading our powdered activated carbon system to maximise algae removal.
- c. Upgrade our coagulation and filtration system to maximise organics removal.
- d. Providing auto shutdown and improved disinfection control, dosing and mixing.
- e. Improving dosing and mixing of lime to support lead minimisation.
- f. Improvements to chemical dosing system to ensure reliable operation across the operating flow range.

Due to the lower technical complexity of the improvement work at the reservoir we will look to deliver this in advance with the aim of delivering early improvements to water quality. As we develop the WTW scope to our next investment gateway we will look to identify opportunities to accelerate delivery.

3. Develop proposals for Ozone and Granular Activated Carbon filtration (GAC), to improve cost certainty and allow quicker delivery should the anticipated performance improvements from the scope set out in Option B is not sufficient.
4. Pilot Ozone and GAC filtration technology at Carron Valley to confirm the capability and benefits of this technology under the range of water quality and temperatures expected. We forecast having a pilot plant operational by November 2021 and will run this through to August 2022.

The timetable below sets out our plan to progress the development of our preferred option. We anticipate most of the work scope will be within our existing site minimising third party risks and therefore expect to be closely aligned with the minimum duration.

Project Stage	Duration Months		Date Range for stage completion		Assumptions and activities
	Min	Max	Earliest	Latest	
Gate 70	5	7	Sep 21	Nov 21	Separate and progress reservoir works under advance works project. integrated wedge - assess Option B and an Ozone GAC filtration stage and project delivery strategy for Option B.
Gate 70 to Gate 80	6	12	Mar 22	Nov 22	Typical activities: Early land negotiations, planning pre app approval, agree target cost, outline design. Note: Min duration – assumes no power upgrades, land or planning requirements.
Gate 80 to 90	4	12	Jul 22	Nov 23	Agree Head of Terms for land purchase, planning approval, detailed design, potential early procurement
Gate 90 to Start on Site (SoS)	1	4	Aug 22	Mar 24	
SoS Site to Gate100	12	20	Aug 23	Nov 25	

We will provide an updated delivery programme, including acceleration options once we reach gate 70 and will continue to provide reports every six months until such a time as the agreed improvement scheme is complete.

Yours sincerely



Simon Parsons
Director of Strategic Customer Service Planning