

Attendees:

Alastair Corbett	GCVGNP
Stuart Miller	SPT
David Drummond	Glasgow City Council
David Miller	North Lanarkshire Council
David Scott	SEPA
Duncan Robertson	SEPA
Dylan Hughes	Scottish Power
George Rattray	SEPA
Isabelle Glasgow	Firth of Clyde Forum
Jack McAulay	West Dunbartonshire Council
Jim Conlin	Scottish Water
Katriona Lundberg	SEPA
Kemp Meikle	Mid Clyde Angling Association
Kenny Boag	Clyde Advisory Group Chair, SEPA
Kieran Downey	Scottish Water
Nicola Lowbeer	SEPA
Roger Horne	Clydeport
Stewart Marshall	Renfrewshire Council
Raj Kumar	East Dunbartonshire Council
Arthur Keller	SNH
Michelle Carroll	GCVSPA
Joe Quigley	UCAPA

Apologies:

1. Welcome and aims of the meeting (Kenny Boag, SEPA)

KB welcomed the group to the meeting which provided an overview of the wastewater strategy for Glasgow.

2. Presentation session 1: Overview of the Glasgow Strategic Study (Jim Conlin, Scottish Water)

JC provided the group with an overview of the different options SW has considered for the Glasgow Strategic Study. JC stated that the removal of all the discharges from the sewage works along the River Clyde would not necessarily result in Good Status for DO in the estuary. Therefore, one of the options was to use artificial oxygenation in order to enable the estuary to meet the WFD standards for DO. The preferred option for the Lower River Clyde would involve the transfer of flows from Daldowie to Dalmarnock with a new outfall discharging into the upper part of the estuary close to the tidal weir.

JC noted that the current sewerage system within the Glasgow area is not fit for purpose and it is important that the capacity of this system is increased. SWMPs will be essential to maintaining satisfactory systems and avoiding flooding and environment issues into the future. JC stated that we need to consider green

corridors such as ponds etc and separate systems in order to deal with these issues.

JC also talked about implementing the interim solution that is recommended to address the chronic sewer flooding problem at Shafton Road (Dalmuir) as quickly as possible (subject to SEPA and Glasgow City Council agreement).

3. Presentation session 2: RBMP objectives – including draft disproportionate cost assessment on the Glasgow Wastewater Strategy for the Inner Clyde Estuary (Duncan Robertson, SEPA).

DR gave a presentation to the group on the draft cost effectiveness assessment on the Glasgow Wastewater Strategy for the Inner Clyde Estuary. This involved carrying out cost effectiveness analysis (CEA) which compares five different measures that could achieve the WFD objective for the Inner Clyde Estuary of good ecological potential (GEP) which include:

- ICE1 – Decommission existing four WWTWs and transfer flows to a new Outer Estuary WWTW.
- ICE7 – Oxygenation in the ICE: no change to current discharge locations and standards.
- Hydrodynamic measures (relocate the Shieldhall outfall pipe vertically, and/or a revised operating regime for the tidal weir).

The CEA finds that the most cost-effective measure is the one identified in the GSS report, namely artificial oxygenation, although it would have some negative greenhouse emissions impacts. A pilot of this technology during 2011 confirmed that it is likely that this measure could deliver the objective of good ecological potential.

However, it is important to note that there are a number of significant uncertainties relating to the ecological impacts and the recent improvements observed in dissolved oxygen classification. In particular, the baseline for dissolved oxygen has improved from poor status in 2008 (when the GSS was initiated) to very likely moderate status in 2009-11. For this reason, SEPA considers that it would currently be disproportionate to implement artificial oxygenation until there is sufficient certainty in the ecological impacts and dissolved oxygen trend.

The environmental assessments should be reviewed following a period of further monitoring over 3-5 years. If there is sufficient certainty in the ongoing impacts, the artificial oxygenation measure should be reconsidered and a disproportionate cost assessment of this measure completed.

DR stated that SEPA is now inviting views on this draft assessment from key stakeholders.

Questions (All)

Question 1 (KM): In regards to LRC3 (the lower Clyde option), why is there confusion to the timing and positioning of the ultimate effluent discharge to the inner Clyde estuary?

Answer (JC): It was agreed with SEPA and other stakeholders that SW would spend time doing the study to make sure best solution was found. We now believe we have the best solution and hope to get the work started this year.

In terms of positioning, SW preferred option would be to put the outfall just above the tidal weir in order to reduce visual impacts. However, if the impact on oxygenation in the area can not be mitigated then the outfall may be located further down the Clyde.

Question 2 (KM): Concerned that this decision has been taken in advance of finding out whether it would be detrimental to fish proceeding upstream of the tidal weir?

Answer (JC): The effluent will be highly treated and discharged via a newly designed outfall pipe to achieve maximum dispersion. We have also considered water quality standards that are specifically designed to protect fish.

Question 3 (KM): Reservoir for 36% of year may or may not be discharging due to the tide not reaching the impounded water behind the weir. Therefore, have studies been done to determine whether the discharge can have a negative impact?

Answer (DR): Modellers have considered this scenario in terms of the effect on dissolved oxygen and ammonia. In extreme circumstances measures can be put in place by SW in order to mitigate negative impacts.

Question 4 (MC): How will the options identified effect land use planning, for example will this have an impact on the phasing of strategic areas?

Answer (JC): It is important that we develop agreed SWMPs so that when new development takes place this does not increase the impact on the sewerage system. It is important that we work together with GCVSPA and different agencies now, in order to create long term plans for green networks/corridors.

AC indicated that GCVGNP are involved in creating the Blue Green vision which will supplement and support the development of the Blue Green corridors and encouraged members to get involved.

Question 5 (SM): Will there be flexibility within the SWMPs and Wastewater Management Strategies so that they fit in with the National FRM Strategy and Local Plans?

Answer (KD): Some of Scottish Waters plans are not fixed and they can be changed and adapted, and we are working with the Flood Risk Management Act in order to determine whether we can find joint solutions or put two solutions in beside each other.

JC stated that SW Commission has a greater understanding of flooding issues and there is more flexibility with money spent on flooding and SWMPs.

Question 6 (RH): Concerned that taking single figure for dissolved oxygen could mask bad figures in the city stretch of the Clyde?

Answer (DR): SEPA had to adopt the single figure for dissolved oxygen in order to go forward. Also, dissolved oxygen is only an indicator, and it's the fish and invertebrates that determine the status and quality of the estuary.

JC stated that SW and SEPA have monitored the Clyde Estuary in order to understand it and the science around it, and will share this data with Clydeport.

Question 7 (AK): Has a SEA been carried out on the proposed strategy for waste water treatment?

Answer (KD): A scoping study of the strategic drainage plan was carried out.

Question 8 (AC): For the different options, to what extent did you look at the capital costs and long term revenue costs and impacts in terms of energy use?

Answer (JC): This has been considered all the way through the process. Scottish Water have looked at the CAPEX and OPEX and NPV present value and the trade offs between these values, in order to find the lowest whole life costs in terms of the development. SW will test the sensitivity of parameters including electricity against whole life values of 25years, 40years and 100years.

Question 9 (KM): Have you identified an approximate location for the new overflow into the River Kelvin?

Answer (KD): Yes its near Shafton Road but this is only a short term measure, which will be put in place until 2018.

Question 10 (SM): Publications from SW indicate that Erskine WWTW is top priority, is there any flexibility so that the work on the Erskine WWTW fits in with National FRM strategies and Local Plans?

Answer (KD): Erskine WWTW has minimum impact on the estuary but CSO impacts on the catchment, local water bodies and flooding need to be addressed. A Flood Risk Assessment will be carried out and flooding and flood risk management will be considered within the whole network in order to find the best outcome.

KD noted that Glasgow wide represents a quarter of SW waste water operations across the whole of Scotland, therefore prioritises and investment periods need to be set.

4. AOB

KB thanked the group for their participation and questions and closed the meeting.

Actions arising from Clyde Area Advisory Group meeting

Action Number	Action	Owner	Completion Date	Update
1	Share River Clyde Estuary data with Clydeport	Scottish Water/SEPA		
2	Provide views to DR on the draft cost effectiveness assessment on the Glasgow Wastewater Strategy for the Inner Clyde Estuary.	All (by 14 June)		
3	To work on the membership for the groups as some organisations attend both.	DS/KL		
4	To send emails out soon to clarify membership	DS		

Abbreviations

SW	Scottish Water
DO	Dissolved Oxygen
WFD	Water Framework Directive
SWMPs	Surface Water Management Plans
FRM	Flood Risk Management
SEA	Strategic Environmental Assessment.