



## MINUTES

SUBJECT **Multi-criteria Assessment (MCA) Evaluation Workshop**

DATE Thursday, 2<sup>nd</sup> July 2020

WHERE Seaview Meeting Room, Wellington Water Office

ATTENDEES

Anna Hector (AH) – Wellington Water	Mel Wykes (MW) – Connect Water
Chris French (CF) – Connect Water	Mike Medonca (MM) – Wellington City Council
Dan Ormond (DO) – Latitude	Nanne de Haan (NdH) – Veolia
Ezekiel Hudspith (EH) – Dentons Kensington Swan	Phil Garrity (PG) – Wellington Water
Greg Lord (GL) – Connect Water	Sarah Burgess (SB) – Connect Water
Joemar Cacnio (JC) – Wellington Water	Sharli-jo Solomon (SS) – Ngati Toa
Kara Puketapu-Dentice (KD) – Taranaki Whānui	Steve Hutchison (SH) – Wellington Water
Keerthana Rajasekaran (KR) – Veolia	Turi Hippolite (TH) – Ngati Toa
Leah Agustin (LA) – Connect Water	Tristan Reynard (TR) – Wellington Water
Maiora Puketapu-Dentice (MD) – Wellington Water	Zac Jordan (ZJ) – Wellington City Council

APOLOGIES Nicky McIndoe (NM) – Dentons Kensington Swan

Item no.	Description	Comment / Query	In-workshop Response / Action	Post-workshop Actions
1	Introduction and Purpose of Workshop	NA	NA	NA
2	Evaluation Criteria	<b>Feedback on evaluation criteria and weightings presented:</b>		
		<i>Sludge Minimisation</i> and <i>Biosolids Re-use</i> should be evaluated as two separate criteria as opposed to encompassed within the <i>Function</i> criterion [MM]	<i>Sludge Minimisation</i> and <i>Biosolids Re-use</i> have individual sub-criterion weightings and will therefore be assessed separately (baseline weighting 12% and 9%, respectively). [CF / EH]	NA

		Should we specify Southern Landfill in the Interpretation of Sludge Minimisation sub-criterion? i.e. amend as “ <i>The degree to which the solution reduces the mass of sludge going to Southern landfill</i> ” [SH]	It is fine to leave as per the original interpretation. [MM]	NA
			The main concern is regarding the mobility of the sludge. We want to reduce the amount of sludge being transported in general [ZJ]	NA
		Request for additional sensitivity analysis to be done with a 30-40% cost weighting, as baseline weighting for cost criterion looks to be quite low [SH]	Noted that [CF]	Connect Water to undertake sensitivity analysis with higher cost criterion weighting and circulate results to MCA participants
		What is the basis of the <i>Whole-of-life cost</i> sub-criterion? [MM]	<i>Whole-of-life cost</i> sub-criterion interpretation was determined by estimating high-level capital costs and operational costs for a design horizon of 50 years [CF]	NA
		Sensitivity analysis suggestion in relation to <i>Environment</i> criterion amendment (assessing alignment with Part II of RMA) [EH]	NA	EH and CF to discuss additional sensitivity analysis and circulate results to MCA participants
<b>3</b>	<b>Options Analysis</b>	<b>Feedback on process technology options presented:</b>		
		Gasification can also produce ash instead of biochar depending on process [SB]	Noted. In this case, the volume of sludge has the potential to be further reduced, similar to incineration process [NdH]	NA
		Have electric thermal dryers been considered in this analysis? [ZJ]	No, we have assumed natural gas fuel source for the <i>Carbon Emissions</i> and <i>Whole of lie cost</i> analysis [SB]	Connect Water to undertake assessment using other fuel source (electric, natural gas, wood chips)
		<b>Feedback on site options presented:</b>		
		“Area 2” adjacent to the Moa Point WWTP and Miramar golf course has been earmarked for the future expansion of the Moa Point WWTP [AH]	Noted by all	NA
		<b>Feedback on basis of ranking shortlist options against “Sludge Minimisation” sub-criterion:</b>		

	If Southern Landfill is not a disposal option, which of the process options offers a product that is easier to transport? [ZJ]	Similar level in terms of ease of transport [NdH]	NA
	Is this sub-criterion necessary for the MCA workshop, or has this already been assessed through the fatal flaw analysis? [SH]	The technical fatal flaw assessment filtered out process options which did not meet the requirement of achieving 60% DS content, which indicates significant volume reduction (water content reduction). However, ranking options to compare sludge volume reduction would still be necessary [CF]	NA
	Are there any biohazardous outputs from any of the processes?	None, except for a small percentage from the incineration process [NdH]	NA
	Suggestion to increase score of Thermal Dryer option from 3 to 6, as this process option still fulfils the sludge volume reduction objective set out in brief, albeit less effective than other process options	Agreed by all	NA
<b>Feedback on basis of ranking shortlist options against “Biosolids Re-use” sub-criterion:</b>			
	Reuse potential could be high if you have very small amounts of product, e.g. can mix outputs with asphalt to produce concrete [CF]	Important to note that we will not be able to stop intaking sludge feedstock despite market fluctuations [SB]	NA
		Market is shrinking (composting, agriculture re-use) [MM]	NA
	Can we reframe the basis of ranking as ease of finding a market? [EH / NdH]	Uncomfortable with this suggestion as finding a market for biosolids re-use is not something that WCC will want to actively chase. It is suggested to view sludge minimisation as equivalent to Landfill gate fee [MM / ZJ]	NA
	Suggestion to reduce the score of Incineration process option from 10 to 8. Despite achieving 0% VS (degradable content), there is no re-use opportunity for the end product.	Agreed by all	NA
<b>Feedback on basis of ranking shortlist options against “Mana Whenua Values” sub-criterion:</b>			
	Why is there a big difference between scoring of the Moa Point and Carey’s Gulley sites? Moa Point site (and truck transport route from Western WWTP) is also along coastline –	Moa Point areas has already been established as a site for WWTP processes, whereas the Owhiro Bay area is utilised by the community (mahinga kai sites along stream). It is also important	NA

	would this also have a significant impact from a culture perspective? [AH]	to consider recent 2020 Mt Albert pipeline failures and raw sludge trucking operation [MD / KD / TH / SS]	
		Establishing the facility at Moa Point avoids the need of the sludge transfer pipeline from Moa Point to Carey's Gulley, thus avoiding the risk of pipeline failure and discharge to waterways. [ZJ]	NA
		Failure can still occur with truck transport of processed sludge from Moa Point to Southern Landfill for disposal. Processed sludge (60-90%DS) is not immediately pathogenic if truck spillage were to occur from Moa Point to Carey's Gulley / Southern Landfill site, and this would be a very small amount in comparison to raw 1%DS sludge. [NdH]	NA
	Suggestion to <b>increase all Carey's Gulley process options score by 1 point</b> , i.e establish 2-point difference between equivalent Moa Point and Carey's Gulley process options	Agreed by all	NA
	<b>Feedback on basis of ranking shortlist options against "Operational and Technological Complexity" sub-criterion:</b>		
	Moa Point interested parties are now decreasing; home ownership at Moa Point is decreasing. Number of complaints from Moa Point community have significantly reduced, whereas Southern Landfill complaints have remained constant. Does this have an effect on the overall scoring against this sub-criterion? [AH]	The odour issues and associated community complaints would be assessed against the <i>Community Impacts</i> sub-criterion rather than the <i>Operational and Technological Complexity</i> sub-criterion [DO]	NA
	Do the rankings incorporate analysis of complexity with inclusion of Moa Point to Southern Landfill transfer pipeline? [SH]	Yes [CF]	NA
	<b>Feedback on basis of ranking shortlist options against "Carbon Emissions" sub-criterion:</b>		
	Does this sub criterion include emissions from disposal of any residual waste? [MM]	Yes, this assessment includes the disposal of biosolid product, electricity use, fossil fuel use, combustion of biogas and transportation emissions [CF / SB]	NA

	Did you consider electrical thermal dryer? [ZJ]	Electrical power source for thermal drying option was not considered in the scoring. The fuel source used for the basis of scoring for most process options is natural gas. For gasification, the fuel source is diesel for start-up based on reference site / project. [SB / GL]	Connect Water to undertake additional sensitivity analysis to incorporate alternative power / fuel source for thermal drying option.
<b>Feedback on basis of ranking shortlist options against “Ecological Effects” sub-criterion:</b>			
	Noted GHG (basis of Thermal Drying down scoring) has already been considered in Carbon Emissions sub-criterion [EH]	Agreed by all to increase the scoring of the Thermal Dryer option from 6 to 8.	NA
<b>Feedback on basis of ranking shortlist options against “Community Impacts” sub-criterion:</b>			
	Should Landscape and visual impacts be incorporated under <i>Community Impacts or Consenting and Planning</i> sub-criterion? There are noted concerns with removal of bluff and the associated effects on the coastal environment, from an RMA coastal policy perspective. [EH]	Agreed by all to incorporate this into <i>Consenting and Planning</i> sub-criterion	Connect Water to liaise with Kensington Swan to undertake high-level landscape and visual assessment for Moa Point and Carey’s Gulley site options. CF to circulate revised MCA scoring to participants for feedback.
	Noted that composting option still remains in assessment list – should this have been fatally flawed earlier? [MM]	We have kept it in the options list but have placed a big penalty in scoring due to current perceptions and previous challenges with consenting the composting facility. [CF]	NA
	Carey’s Gulley community is incredibly mobilised and well-coordinated, whereas the Moa Point area is increasingly being bought out by WIAL and is transitioning into a more commercial space. What is the justification for having a 2-point difference between the Moa Point and Carey’s Gulley sites? [ZJ]	We need to be careful when we get into discussion about the (subjective) anticipated level of community mobilisation surrounding Moa Point and Carey’s Gulley [EH]	NA
From a local community perspective, Carey’s Gulley option(s) may receive more community agitation, but there may be a wider community concern at Moa Point. Carey’s Gulley would be in an isolated, residential valley whereas Moa Point is adjacent to international airport and golf course. [DO]		NA	
Noted that Carey’s Gulley community extends all the way into Island Bay. It is a wide community to consider [ZJ]		NA	

		Agreed by all that the 2-point difference between site location remains. Noted that sub-criterion weighting is minimal (3%)	NA
<b>Feedback on basis of ranking shortlist options against “Consenting and Planning” sub-criterion:</b>			
	Specific regulations note that incineration processes are prohibited unless incineration is part of a high waste to energy plant. This may be a fatal flaw. [ZJ]	Noted. NES for Air Quality has specific restriction around high temperature incineration [SB]	NA
	Discharge to air permit requires no discernible odour from plant operation at or beyond the boundary – is this incorporated in the scoring? How have we captured the management of this risk? This needs to be factored in, especially with the Moa Point site [AH]	This has been factored in the <i>Ecological Effects and Operational and Technological Complexity</i> sub-criterion ranking. [NdH / SB]	NA
<b>Feedback on basis of ranking shortlist options against “Whole of life cost” sub-criterion:</b>			
	What is the approximate range of TOTEX? [MM]	The analysis for 50-year design horizon shows an NPV range of between \$140-\$485 million. The Carey’s Gulley options take into account the rebuild and maintenance of the pipeline. [CF]	NA
	Important to note that current dewatering system (SDP) will have an effect on overall existing network. Moa Point will be a better option for network due to close proximity of WWTP from where centrate is discharged for treatment. [PG]	Noted.	NA
<b>Feedback on basis of ranking shortlist options against “Staging to meet budget” sub-criterion:</b>			
	NA	NA	NA
<b>Summary of MCA results (Refer to Attachment 3 for scoring pre and post-MCA workshop)</b> <i>Top option: Digestion-Lysis Digestion + Thermal Dryer Option at Moa Point</i>			
	Noted clear preference with Moa Point site [DO]	This avoids the re-debate the nuances with regards to community agitation between Moa Point and Carey’s Gulley residents [ZJ]	NA

		Have there been any discussions regarding the relocation of the existing Cyclotek facility? [EH]	There have been discussions with WIAL (landlord) and they have a lease with a renewal which will take it beyond Stage 1 of development, but not subsequent stages. [CF]	Connect Water to assess staging and organise a follow up discussion with WIAL to provide an update on the preferred option and discuss way forward.
		TOTEX needs to incorporate stranded asset at Carey's Gulley. Residual depreciation to be taken into account. [MM]	Noted. Facility will need to be replaced within the 50-year design horizon [CF]	Connect Water to further refine NPV analysis to incorporate residual depreciation of Carey's Gulley assets.
4	Next Steps	NA	NA	<ul style="list-style-type: none"> <li>• Wrap up post-workshop actions noted above by end July 2020</li> <li>• Connect Water and Veolia to develop Concept Design report for preferred option</li> <li>• Connect Water to present preferred option and cost to WCC</li> </ul>

## KEY:

Wellington Water (WWL) representative

Wellington City Council (WCC) representative

Veolia representative

Ngati Toa / Taranaki Whānui representative

Connect Water / Latitude representative

Dentons Kensington Swan representative