

November 6, 2013

Issues, Comments, Questions and Metro Vancouver Responses

Lions Gate Public Advisory Committee (LGPAC) Meeting # 7 *Summary*

October 7, 2013, 9:00 a.m. – 5:00 p.m.
Alex Mahood Room, Capilano Rugby Club
305 Klahanie Court, West Vancouver, BC



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1. Opening Remarks

Chair Christine Banham called the meeting to order at 9:16 a.m. and welcomed the Lions Gate Public Advisory Committee (LGPAC) members. Metro Vancouver (MV) will be providing information on the indicative design and the project delivery value for money analysis during the morning and the afternoon will be dedicated to developing the content of the LGPAC report to be presented to the MV Utilities Committee.

Chair Banham reported that she and Vice-Chair Diana Sollner provided a presentation on the work of the LGPAC at the October 3, 2013 MV Utilities Committee. The presentation was well received. The report will be presented at the November 2013 meeting.

2. Indicative Design

Fred Nenninger, Manager, Policy Planning, Analysis and WWTP Upgrade, MV introduced Rick Bitcon, AECOM, engineering team member and Scott Wolf, Miller Hull, architecture team member.

Mr. Nenninger commenced a presentation titled “Indicative Design” during which he, Mr Wolf and Mr Bitcon highlighted:

- Wet weather flow and peak capacity at the current Lions Gate Wastewater Treatment Plant
- Indicative design capacity staging and components at the new Lions Gate Secondary Wastewater Treatment Plant
- Layout of functional plant components on the site for:
 - Solids management process
 - Liquid treatment train
 - Maintenance and operations building
- Space allocation resource recovery including:
 - District energy system (initially 5 megawatts)
 - Reclaimed water
 - Biogas utilization based on cogeneration
 - Future space for struvite recovery
- Odour control system incorporating biotowers and activated carbon units.
- Basic plant massing, site plan and circulation plan
- Developing civic building and public spaces at Pemberton Avenue and along West First Street to engage the public
- Strategies to minimize the scale of the plant along West First Street:
 - Berm landscape
 - Utilization of glazing the operations level of the plant to allow light through
 - Set back wall of operations level
 - Mass buildings and equipment at the intensive end of the site
- Developing the property at the intersection of the foot of Pemberton and West First Street to further community integration
- Reclaimed water to be featured in the public space
- Pedestrian paths and areas for respite

- Visualizations of the current indicative design.

Break

The meeting recessed at 10:41 a.m. and reconvened at 10:55 a.m.

John Forsdick, Facilitator, Context Research Ltd. highlighted the themes of the comments provided during the discussion of the indicative design:

- Artistic treatment of the building
- Stronger integration and emphasis of the facility with the community
- Flexibility around the building design and future use with compatible community activities
- Technical issues around noise, odour and traffic are being addressed through the design work.

3. Project Delivery

Mr. Nenninger provided a presentation titled “Project Procurement Options Analysis” during which he highlighted:

- Funding from P3 Canada is contingent upon P3 delivery
- The Building Canada Fund and provincial funding may not be tied to P3 delivery, but a P3 business case must be provided
- P3 assessment business case process
- Business case components:
 - Rationale
 - Delivery
 - Procurement options analysis
 - Procurement plan and funding
- Procurement options analysis:
 - Overview of procurement models
 - Qualitative analysis
 - Market sounding
 - Quantitative analysis
 - Recommended procurement model
- Overview of procurement models:
 - Design-Bid-Build (DBB)
 - Design-Build (DB(f))
 - Design-Build-Operate/Maintain (DBOM)
 - Design-Build-Finance-Operate/Maintain (DBFOM)
- Project packages identified for analysis:
 - Single construction package for LGSWWTP
 - Conveyance between existing WWTP and new secondary wastewater treatment plant and outfall utilizing DBB procurement
 - Requests for proposal for decommissioning existing wastewater treatment plant
- Multi-criteria assessment
- DB, DB(f) and DBFOM procurement options were short listed for value for money (VfM) analysis
- Purpose and specifics of market sounding

- VfM assessment components
- Cost basis for VfM analysis:
 - Capital cost of \$590 million (2018 dollars)
 - Annual operating and maintenance costs of \$10.7 million (presented in 2020 dollars)
- Risk assessment:
 - Risk register included 20 key risks were included in the risk analysis as key differentiators between the procurement models
 - Risk workshop
- Efficiency assessment and results
- Financial modelling:
 - Cash flow projections and Net Present Value (NPV) comparison
 - Risk-adjusted cash flow NPV results based on a discount rate of 6%
- Sensitivity analysis and results
- Recommendation made to the MV Utilities Committee to form a sub-committee to review business case and procurement options.

Mr. Nenninger provided an update on Metro Vancouver cost allocation discussions. In the mid 1990s, there was a decision regarding the allocation of the costs of plants providing treatment beyond primary treatment. Those costs are allocated 70% and 30% to the region and Sewerage Area, respectively. A report on cost allocation was considered at the October 3, 2013 Utilities Committee. Additional information was requested and will be provided at the November 2013 meeting.

Marie Griggs, Manager, Public Involvement, MV, advised that the following additional information regarding the presentation on the delivery model will be provided in order to allow the LGPAC to comment on the delivery model in its report:

- Presentation provided at the September 24, 2013 Utilities Committee
- Presentation provided during the morning session of the current meeting
- Risk table and explanation of the assumptions used in the VfM analysis.

Break

The meeting recessed at 12:05 p.m. and reconvened at 1:06 p.m.

4. LGPAC Reporting

Marni Robinson, Facilitator, Context Research Ltd. advised that report drafting will be the focus of the afternoon session.

5. Review of Engagement and Decision-Making

Andrea Winkler, Policy Coordinator, MV, provided a presentation during which she highlighted:

- Events included in the political review of the indicative design and project delivery options
- Events included in the public review on the indicative design and project delivery options.

Ms. Robinson noted the deadline for the final draft of the LGPAC report has been advanced by one week to October 21, 2013 from October 28, 2013.

6. Closing Remarks

Ms. Griggs thanked the LGPAC members for their contribution and the hours of volunteer work that they have devoted to this process, to Christine Banham for her leadership and to Diana Sollner for recently volunteering to serve as Vice-Chair. Thanks were also expressed to Tracy Tilscher for having served as Vice-Chair from the beginning of the process until September 2013.

Chair Banham thanked the LGPAC members for their hard work on the report.

The meeting concluded at 3:25 p.m.

7. Issues, Comments, Questions

The following table summarizes MV's responses to questions and concerns provided by attendees, organized by topic, throughout the meeting:

Issue, Comment, Question	MV Response
Integrated Resource Recovery (IRR)	
What will the recovered water be used for?	Initially, the recovered water will fill the needs within the treatment plant. There will be a standpipe that municipalities can utilize to access reclaimed water for their needs, such as street flushing, in place of drinking water. MV is still working with local industries regarding running a "purple pipe" for reclaimed water to their sites. The business case may be positive for those industries located near the LGSWWTP site.
Is heat captured from the odour control system before it is exhausted into the atmosphere?	Most of the air that is extracted will be ambient temperature so there is not a lot of heat energy in it.
What do you currently have to accommodate rainwater outflow from the long roof space?	One concept is to have the roof drainage incorporated into the reclaimed water system in the plant. Another concept currently being considered is having the reclaimed water being used for the water feature as well. We are looking at a number of different strategies for that. Essentially, all of the stormwater that falls onto the roof will be used in one way or another in the plant.

Issue, Comment, Question	MV Response
Sensory Impacts – Odour	
The indicative design includes a blower from the odour control system. Will the plant be under negative pressure?	Parts of the plant will be carefully balanced. For example, places where you would not want things like hydrogen sulphide to get into electrical rooms where there is copper would be under positive pressure. The odour sources would be under negative pressure. Most of the plant will be negative, some will be positive.
What is the odour quality of the air from the exhaust stack compared to fresh clean air?	The dispersion modelling is being refined now but it indicates that the impacts that people would experience would be in the range of one to two dilutions to threshold to meet a no odour complaints objective.
What are the risk odour problems at the LGSWWTP during turnarounds when tanks need to be cleaned?	LGSWWTP has two levels of containment built into it. The primary level of containment is that the primary clarifiers will be covered. The air space beneath the clarifiers will be exhausted to the odour control system. The secondary level of containment is a structure and the air in that structure will also go to odour control.
For the exhaust tower, is there an actual fan blower or is it passive release for the exhaust?	There is a blower on the odour control system that would extract the treated air and discharge it under pressure to the atmosphere.
After the second stage of odour control, is the discharge to the atmosphere done with a fan to blow it out?	Yes, it will be under slight pressure. There will be a pressure loss going through the exhaust stack and you will want to project it into the air.
Does the fan that is critical to odour control have backup power in case of a BC Hydro power failure?	Yes. There will be standby power.

Issue, Comment, Question	MV Response
Sensory Impacts – Noise	
What is the noise implication of the fan that is part of the odour control system?	It will be in an enclosure that is acoustically insulated so you will not hear anything coming out of that enclosure. All of the noises from co-generation, motors and standby power will be located in acoustically insulated rooms.
What is the potential for noise coming from the mechanical equipment concentrated in the area where the dewatering equipment is located?	All sources of noise in the rooms will be acoustically insulated to dampen the noise so you will not be able to hear anything on the street throughout the entire plant, including de-watering. De-watering by itself does not generate a lot of noise compared to some of the other parts of the plant.
When trucks enter the site, do doors close before anything happens?	Yes. The noise-making equipment is on the top floor and the trucks come in at the bottom floor. There will be a lot of mass between the centrifuges at the top and bottom. Even when the doors open, you will not be able to hear anything on the street.
What kind of material is on the cladding for the de-watering tanks and how would it behave from a noise reflection point of view? Can it be texturized to minimize the amount of noise reflection?	At the moment, it is concrete. We have some precedent examples of ways that we are considering to texturize and articulate that concrete.
It seems there has been attention paid to minimizing the visual impact at street level. The proposed massing is positive in terms of being a noise barrier for the Norgate community.	It does work at both levels. The massing at the south is much larger and has those acoustic benefits. Visually and perceptually along First Street, we think it is important to begin to reduce that mass.
Traffic Impacts	
Is there any opportunity to utilize the adjacent train transportation system to fill tanker cars instead of trucks?	The problem with rail logistics is that the volumes are too low to make business sense.

Futureproofing	
If you lose BC Hydro power, will the plant be down? Is there a backup generator for emergencies?	There will be standby diesel power that can run all the critical life safety systems and almost the entire plant.
In the event of a major catastrophe such as an earthquake and there is no electric or diesel power, what happens to the plant and the wastewater flow?	The building is designed to post-disaster standard. We are looking at maintaining an eight hour supply of diesel on site for back-up power.
Is there any piece of equipment that there is not a backup available if there is a failure that would result in the plant being down for an extended period of time?	Everything in the plant is either a multiple unit or is available to be put into service immediately.
Sensory Impacts – Visual	
Keep in mind that greenhouses stay lit at night and this might be a community issue.	Comment noted.
Given the height of the vertical elements around the digesters, will strobe lights be required for air traffic safety over the area? This was required at the North Shore Automall sign.	We have not looked into that yet but we will do so.
Can you do anything else to break up the appearance of the maintenance and operations building? It looks a bit like a military bunker. The plants that we visited in Washington State, with the exception of the Brightwater Plant, looked like they could have been a restaurant or an office building.	Our concept is not fully articulated in the rendering. We are looking at texturizing the concrete to make it more attractive. We are looking at surface treatment to break it down a bit.
Could you use wood, murals, artwork in cedar or totem poles along the building to break up its appearance on West First Street? At the Richmond Oval, there is aboriginal art carved into the concrete.	Ken Lum is an artist on our team and he has some similar thoughts on how to integrate things on an artistic and cultural level to begin to connect this facility with the community.
	Consultation will continue into the next phase and we will be working on the design with the community. This indicative design is not the end of the conversation regarding potential treatments of the wall along First Street.

Community Integration	
It is a wonderful engineering layout but the opportunity to fully engage and stimulate the community at a number of levels has not been fully exploited.	Comment noted.
How flexible is the current design for allowing different uses of the plant roof space if the proposed greenhouses were never to occur?	The loading used for the roof structure is the same as what is used inside the plant. Anything we could accommodate within the industrial part of the plant could be accommodated on the roof. The roof of the glazed gallery level where the maintenance and operations functions will be housed is already structured for additional floor load and live load. It can accommodate a greenhouse in the future if partners are identified. It can also accommodate other uses but nothing has been specifically identified so far.
Will there only be access to the roof during the hours that the plant is open? Is there potential for the access to be open 24 hours for the community?	Operationally, there is a need to separate the public space from the operations space. Currently, we are not looking at 24-hour public access.
Rainwater capture is an opportunity to integrate education about the entire water cycle, not just treatment or salmon art.	Comment noted.
You may want to consider looking at Richmond Oval and what they have done with roof water drainage from the concrete. That is what is carved into beautiful columns that the water flows down to and could flow into the watercourses since it is not contaminated.	Comment noted.
I would like to see a more participatory aspect to the water feature, similar to some of the facilities in Washington State that we saw during the study tour where children could play in the water. The fact that it is clean enough to play in makes a statement.	Comment noted.

Public Private Partnerships – Value for Money Analysis	
Based on the Value For Money analysis there is only a difference between the three options (DB, DB(f) and DBFOM) of 3% or less. Did anyone suggest that might be noise depending upon the accuracy of the numbers?	Yes, with a difference of 3%, there is really no obvious preference.
Does MV, as an institution, have a preference for any of three evaluated options (DB, DB(f) and DBFOM)?	The MV Board has had a set of guiding principles on how it would receive and consider P3s since the 1990s. The MV Board will need to consider the options. The business case is required for the grant programs.
Does KPMG agree with MV's Value for Money assessment?	The role of KPMG on the team was to help facilitate the risk transfer workshops and for business use. They are not subject matter experts in wastewater treatment. KPMG has undertaken many business cases and it is not the first time that they have seen a business case that did not show value for money for a P3.
Did you use different costs of financing depending on whether it is treated as a P3 with grant money available? Are they all equal in terms of the amount of money to be raised and the cost?	They are equal in terms of the amount of money to be raised. There is no grant money included in the analysis.
If you re-did the analysis including the grant funding, it would stand out as more than just noise in terms of the difference between the options.	Yes, that is correct.
Every time I have seen a big difference between the P3 and non-P3 option is the operations and maintenance (O&M) costs, not the capital. In this analysis, it shows a negligible difference in O&M costs. Did you assume the plant would have to be operated by MV unionized employees or did you assume private sector wages and benefits?	For a full P3, a private sector contractor would need to have a full staff complement to operate and maintain the facility.
For the life cycle operating costs, if it is a DB, MV has reduced operational costs and its own staff centralized at Annacis. In the DBFOM, it would have to be operated by the private sector operator and you would lose those efficiencies. Why do we not see the costs much higher in the DBFOM model?	There is an overall efficiency of DBFOM over the other DBB, mainly on the design and construction.

Public Private Partnerships – Value for Money Analysis	
MV already has centralized staff and roaming maintenance to manage many plants? It would seem that DB should be the cheaper and more efficient model.	It is, but in a DBFOM other factors enter in when you look at the model and all the complexity of the interaction. DB shows lower NPV over DBFOM unless discount rates are at or above 7.5%.
What is the sensitivity of the outcomes to the 6% discount rate that you used in the analysis? Is there a great sensitivity to the outcomes of the NPVs?	The DB option always stays the lowest until you use a discount rate of 7.5%.
Even if you do this as a P3 and you have the private sector partner come up with part of the capital cost, you still have the general public being the owner of the LGSWWTP. It is not the complete privatization of the asset. It will still be in the public realm in terms of decision-making in the long-run even though you may have a long-term contract for the O&M and for the construction.	Metro Vancouver will own the plant.
If the route is towards a P3, engaging the labour movement at the outset will be very important because the unions do not support P3s very strongly.	Comment noted.
In considering a DBFOM, it does not seem to make sense to have one of the MV wastewater treatment plants outside the system. MV would be running its systems and the LGSWWTP still belongs to MV, however you no longer have the control of the O&M and the staff. To have one of the plants outside the system would seem to fracture the system and seems fundamentally flawed, particularly as MV is really good at what it does when it comes to O&M.	We do have a significant operations force and expertise.
You may have more control of a P3 contractor than over your own employees. You can argue the control issue both ways.	Comment noted.
You should not care about what is happening inside the plant. You should care about what is going in and out of the plant in terms of quality specifications.	Comment noted.

Cost Sharing	
Is there a risk that if the MV Board does not choose P3, there may be a reduction in the level of funding from the two senior levels of government?	The policy of the Province of BC and the Build Canada Fund is that the funding would be based upon the business case results. Only P3 Canada will provide funding for P3 projects.
Regina just went to a P3 on their wastewater treatment plant, in large measure because of the federal grant. The decision on the procurement option should be based on strategy and the ability to obtain federal funding.	The VfM analysis is based on capital costs without grant funding. Other than P3 Canada, provided a business case is provided, there has been no indication that only P3 projects will receive grant funding.
When federal legislation is passed, a regulatory impact analysis is required. Is there an obligation on the federal government to provide funding because they are the initiators of the driving force to build this plant regardless of the procurement option?	This is the sentiment of the MV Board. The region will fund one-third but wants senior government funding for the remainder.
If the P3 model is the only way to get additional grants, is there any reason, political or otherwise, not to?	The MV Board has not yet made a decision on design/construction procurement.
Could you run a business case with the scenario with grant funding for one-third of the costs?	It would be a separate analysis.
If there is a grant, will it be based on the lifecycle cost numbers?	No, it will be based on the capital cost of the project.
Why did MV exclude the pipeline from the overall project? It would seem that the creation of an interface increases the risk. Was this done because of the MV cost allocation formula?	We consider that a very low risk. We have kept the plant as one entity. Linear projects are complex in terms of routing and interaction with the community. Metro Vancouver is comfortable with the DBB approach for linear projects.
Was the construction cost of connecting pipes included in the total project costs?	The VfM analysis is only for the treatment plant.
The argument that the public sector can get lower interest rates is false. The lower cost of money can be negated by cost overruns.	Comment noted.

Environmental Impact	
Is there a global net environmental impact assessment before and after the construction of the LGSWWTP?	The Canadian Ministers of Environment have spent much of the last decade developing a Canada-wide strategy for wastewater regulations. The provincial and federal governments decided that from this point forward for Canada, like many other developed countries, the policy will be that secondary treatment is the minimum. The need for additional treatment will be assessed using a risk-based process for the receiving environment.
Public Engagement	
Regina made some errors in the public process and had to redo part of its process.	There was a public reaction to the decision and the City spent many months responding to the community concerns. Eventually it went to a referendum and it passed to proceed with a P3 project.
LGPAC Process	
Will the underlying studies for the VfM analysis be available to the LGPAC?	The reports will be available following review by the new MV Subcommittee
Will the submission of the report be the end of the LGPAC?	We will continue with the LGPAC through design and construction. It will not continue into the operations phase. An evaluation of the complement on the LGPAC will be conducted following the end of the Project Definition phase. It will be an iterative process to ensure that it continues to meet the MV's and community's interests and needs.

Reference Material Distributed

1. Agenda for LGAC Meeting #7 – October 7, 2013 (Orbit No. 7911729)

Attendance

LG PAC Members: Christine Banham (Chair), Diana Sollner (Vice-Chair), Darlene Clarke, Dave Dunbar, John Hunter, Adrian Rowland, Tracy Tilscher, Jan Timmer, Christianne Wilhelmson

Guests: Councillor Trish Panz

Metro Vancouver Resources: Rick Bitcon (AECOM), Tina Chui (MV), Carly Davis (MV), Paul Dufault (MV), Marie Griggs (MV), Fred Nenninger (MV), Andrea Winkler (MV), Scott Wolf (Miller Hull)

Process Facilitators: John Forsdick (Context Research), Marni Robinson (Context Research)

Recording Secretary: Carol Lee, Raincoast Ventures Ltd.