Meeting Minutes
IIWWTP – Barge Berth Design
Thursday June 29th, 2023 @ 1:00 – 2:30 PM
Zoom Meeting Link:

https://ca01web.zoom.us/j/63202042722

Agenda Item	Responsible
1. Overview	All
2. Iona Island Wastewater Treatment Plant Projects	All
3. Barge Berth Project	All
4. Next Steps	All

Attended: Daniel LeBlond (Metro Vancouver), Nelson Szeto (Metro Vancouver), Fatima Ansari (Metro Vancouver), Michelle Candido Metro Vancouver), Helen Ambrose (Advisian), Marina Kitt (IIWWTP), Chris Meisl (Advisian), Ian Sandler (Council of Marine Carriers [Chairman]/Harbin Towing), Paul Hilder (Council of Marine Carriers), Ferdi (Council of Marine Carriers/Electrical Marine).

Absent: Tom Sadleir (IIWWTP)

Meeting Minutes:

Agenda Item	Meeting Notes
1	Overview - *Purpose: to share information about the barge berth project, share information on the proposed barge berth locations, understand the barge berth's impact on marine navigation, and better understand how we can reduce our impact on marine navigation.* - Meeting commenced at 1:05 PM - Introduction of the Project team (Metro Vancouver and Advisian) and Council of Marine Carriers' members
2	Iona Island Wastewater Treatment Plant Projects a. Discussion – The Projects - Daniel LeBlond provided an overview of the Iona Island Wastewater Treatment Plant (IIWWTP) project. - Project highlights: ○ Received approval of Project Definition Report in March 2022

	○ Entering preliminary design phase, designing the IIWWTP and projects that support the construction phases. - The IIWWTP is being updated to comply with regulatory requirements. There is a regulatory deadline of 2030. We are governed by the Government of Canada and the Fisheries Act as well as the BC Government and the Environmental Management Act, among other regulations that we must comply with. ○ There are some challenges with meeting the regulatory deadline of 2030. Right now, we are forecasting that we will be online and operational at the end of 2035, but we are trying to accelerate the schedule where feasible. - The IIWWTP upgrade is important for public health and environmental health. - We are engaging government agencies, local residents, businesses, parker users, and Indigenous Nations early to ensure that we are going about project design in a good way. - For the barge berth project, we are engaging Deering Island residents, West Southlands residents, local golf courses, marine users (including the Council of Marine Users), Musqueam Indian Band, 13 other First Nations, municipalities, regulatory authorities, YVR, VFPA, and BC Hydro - The IIWWTP services Vancouver Sewerage Area. In doing the upgrade, we are looking to accommodate population growth (expecting to have just under a million more people in the VSA by 2051) and sizing the plant appropriately for that change in demand. - We are planning to integrate some resource recovery options, including harvesting biogas from our incoming effluent. We are trying to get as much value as we can out of the waste stream. - The IIWWTP is located right at the heart of the Fraser estuary, there are many species that use the Iona Island ecosystem, including birds that stopover as it's along the flyway, Pacific salmon, sturgeon, southern resident killer whales. A main objective of the IIWWTP upgrade is to improve the overall water quality. Alongside the IIWWTP upgrade itself there are a number of ecological restoration projects - **Questions?**
3	Barge Berth Project - For the construction of the IIWWTP, we are looking into importing a fairly hefty amount of sand and construction aggregates. For preload, we are looking for about two and a half million cubic metres of sand and 1,000 cubic metres of crushed stone for stone column. We are also planning to set up a concrete batch plant on site to support the production of about 350,000 cubic metres of concrete and then import sand and gravel to support that component. - There is only one road network to the Project site, and that road is constrained. - One commitment that we made as part of this Project is that the Iona Beach Regional Park will remain open throughout all the construction phases. - We also have broader objectives within the region of reducing greenhouse gas emissions and we are trying to get these materials to site in an efficient and safe manner. - We looked at a marine facility or barge berth facility as being a key tool in being able to achieve some of these objectives. ○ Barging is an efficient means of transportation for high volumes of construction material, reducing the need for about 260-270 dump trucks a day. ○ Barging would help shorten the construction duration. - Some of the work completed to date includes: ○ Completing the conceptual design highlights that we are looking for the barge berth. ▪ Two barge slips ▪ Mooring structures

- Dolphin pilings or something similar to tie the barges to
- Spud barge

- The actual location of the barge berth has not yet been confirmed, all images show conceptual design.
- We are trying a two-stage implementation of the barge berth.
  - Stage one is looking into whether there is a way to facilitate the import of preload materials and implementing that as soon as we can. We want to keep the design simple and easy to install and get permits and we want to try to keep the impacts related to that work small to make the construction a little bit easier and to smooth permitting.
  - Stage two is to support the export of those same preload sand materials as well as the import of other materials to support construction.
- Three potential sites have been identified.
  - Site 1 is to the west of the IIWWTP, on Vancouver Fraser Port Authority land, and there are some existing berthing structures in that area. There is an existing tenant at this site, so this site would require some discussions with the current Water Lot owner to see if we could make arrangements for this particular site.
  - Site 2 is closer to where the new plant will be built and there is a legacy barge berth area that was used to construct the original plant back in the 1950-1960s. For this site, we would have to have the berths as far out into the channel as possible to avoid having to dredge to install them. We do not want to prevent navigation so we need to understand how far into the channel these could be installed. We are aware that there is an active shipping channel in this area so getting some feedback on where vessels actually transit that would be helpful in terms of planning where we could feasibly put this facility. This location also has the biggest impact on neighbouring residents.
  - Site 3 is similar to Site 2, but on the McDonald Slough side. We do not believe there is necessarily the draft available from the entrance of McDonald Slough into this location to allow for the transit of barges so to make this location work we would likely have to do some significant dredging. Another challenge is that this area is quite actively used for log storage, which will be difficult to for barges.
- Phase 1 would start Q3 2025, around the time when the in-water window opens, until Q1 2026 (February)
- Phase 2 Q3 2026 – Q3 2027 (actual timelines are still being evaluated)
- Current plan to import one to two barges per day, the barge sizes are to be confirmed.
- Offloading barges mostly during regular weekday working hours, but barge movements would be slightly more variable, dependent on tides and weather/wind.
- Metro Vancouver hired Advisian in March 2023 to do an assessment of the three proposed facility assessment locations.

a. Discussion – Barge Berth Project

- Paul Hilder – Questions/Comments:
  - For Site 2, we would be concerned about any encroachment on the navigational channel, especially if barges were left overnight. The VFPA has its navigational channel and safety zone mapped out. *A concern would be anything that comes out too far into the channel because it is very tight there at the best of times.*
  - DL Response: We tried to be outside of that safety zone, so we would be about 10 m outside of the safety zone, but we do recognize that it is pretty tight in that section of the river.

	○ Are you anticipating a tie-up berth in addition to the discharge berths so you can bring in other barges and ship barges out safely without any drifting around? ○ DL Response: Yes, in the conceptual design there is a collection of mooring dolphins, we do not envision any additional tie-up space. We may look into something like that for Phase 2 if there is an advantage to it, but we are also looking to keep the design relatively simple to start. ○ You mentioned Site 1 was VFPA land, would Site 2 and 3 require dealing directly with the province? ○ DL Response: Yes, that is my understanding. We did a little bit of work with the province on Site 2. Site 2 does encroach on existing log tenures. We have had some preliminary discussions with the holders of those existing log tenures and the province. ○ That was my next question whether or not you have already talked to the leaseholders or storage tenures. ○ DL: That is a good point for discussion, I think it might make sense for us to potentially talk to some of those groups about Site 2 and Site 3 and see if they have a preference between the two. ○ There are some definite challenges with Site 3. A lot of dredging will have to be done in Site 3 in order to get a 5,000-8,000-tonne barge in there. I know from experience that it is a challenge to take a barge that size up the North Arm. ○ DL Response: That is valuable feedback. ○ Out of interest, will the outfall for the IIWWTP go out where the existing outfall does? ○ DL Response: Yes, we are currently doing the condition assessment of that outfall pipe and if we find it to be deficient, we are going to go back and do some relining repairs to make sure that pipe is serviceable to support the new plan. ○ It said somewhere that the spud barge is going to manage the hopper and all of the power and everything for the conveyors. Is that the plan or is there something else? ○ DL Response: The power would come from shore for the conveyor and any equipment on the spud barge that would need to operate. The assumption that we had for the material barge itself is that there will be a pile balance stern and a piece of mobile equipment in the middle that would be able to transfer material to a hopper, so a front-end loader or something similar. - Ferdi – Questions/Comments: ○ Site 3 does not seem like it will be feasible just because the draft restrictions. ○ DL Response: One consideration we had for Site 2 is that if we did have to pull the barges closer to shore or we did not have the draft that we thought we did, we might have to look at doing a tidally assisted unload or offload for a period before we get that dredge pocket done. The preference is that we would have enough draft where under normal conditions we can manage a barge fully loaded at that slip regardless of tide. - Ian Sandler – Questions/Comments: ○ What size material would you be starting with? You are going to be starting in the fall, which is typically the rainy season. What size material are you going to be trying to move, like 6-inch rocks, 3-inch rocks, three quarter inch rocks? ○ DL Response: Initially it will be a sand. We will start construction in Fall 2025 and do not anticipate that we will not be operational until Spring 2026. For our ground improvements project, we are planning to install stone columns then preload. We are

	likely not going to have the barge berth ready in time to import the crushed stone for the stone columns. ○ *My request moving forward would be to provide Automatic Identification System (AIS) data for commercial traffic moving through that area, mainly on the proposed Site 2.* I think you will see a significant commercial traffic moving through that area that far out. - Discussion ○ Paul Hilder: None of this area has been dredged in decades. The port abandoned that and so the typical navigation channel may not be the preferred channel now because of the infill. On that topic, not necessarily related to this work but might be relevant to some of our other modelling efforts for what our technical designs will look like introducing resilience. ○ DL Response: Do you see a need for it to be pre-dredged in the future and do you know who we could even talk to, to see what the plan for that would even look like? ○ Paul Hilder: We will gladly collaborate with you and the province in the future and facilitate that because we have been working with the port and anyone we can in the province and a big problem is turnover in the province and changes in the ministries responsible. We are working with the province and Musqueam on the port tie-up down at the south end of the North Arm (i.e., the Point Grey tie-up). ○ DL: Another question that came up is that if we are planning to use this facility for ten years, are we going to have the channel depth for those ten years to actually do it? ○ Paul Hilder: We can pass along some information about who we have talked to. ○ DL: That information would be good to better understand what the landscape looks like, it is hard to understand because there is not just one owner. ○ Paul Hilder: Site 1 would have a much easier permitting process and permitting timelines. ○ Paul Hilder: *You may consider doing a traffic density project for that area.* ○ Paul Hilder: As far as concerns or impacts on us, I do not see any. We agree on barge transportation being more efficient than using land transportation. ○ Ferdi: Another thing to consider is timing. They are doing tunnel replacement in main arm and that will deviate a lot of local traffic to the northern arm, which may increase the amount of traffic going through that area.
4	Next Steps • At minimum, we will have to talk to the Council of Marine Carriers again for permitting requirements but there is an opportunity as well to meet again and go through some more details about what our design would look like and potentially fine tune some more details about location spacing. Would you like to see something between now and when we have selected location? • Paul Hilder: I do not think we need to unless anything changes immensely. We do not have too many concerns right now, just that you make sure the leaseholder is aware of the plans. *One thing that you may want to do is to reach out to the recreational boating industry (e.g., Boating BC) to get their input and concerns.* • MC: In terms of future engagement, is it better to do engagement activities outside of work hours? • Paul Hilder: No, I do not think so. It is a bit difficult the day before a long week, but we will make sure to get the word out to others. The other big company is seaspan. • DL: Would it be helpful for us to share some materials beforehand?

	• Paul Hilder: Yes, that is not a bad idea. Other projects have provided pre-read materials and members are able to review it and raise questions. Meeting adjourned at 2:00 PM

Action Items:

Action Item	Responsibility	Due Date
Consider a marine traffic density analysis, using AIS data, for the proposed barge berth locations		
Engage the recreational boating industry (e.g., Boating BC) to get their input and concerns		

Next Meeting

TBD