

Squamish MBC Maintenance, Dredging and Funding Strategy Development

WORKING GROUP MEETING TWO - MINUTES

November 28, 2022 1:00 PM – 4:00 PM (In Person/Hybrid MS Teams)

In Person Meeting Location: Municipal Hall, Council Chambers, 37955 Second Avenue Squamish

Attendees:

Project Team/Staff (4)

- Sarah McJannet (SM), DoS Planner
- David Roulston (DS), DoS Municipal Engineer
- Kate Mulligan, (KM) DoS Economic Development Officer
- Daniel Leonard, (DL), Westmar Consulting

Working Group Members (10)

- Lucas Berube (LP), Director of Development Bosa Properties
- Carlos Zavarce, (CZ) Matthews West
- Brandon Baker (BB), Squamish Chamber of Commerce
- Caroline Lamont, (CL) Development Manager Bethel Corp
- Carl Halvorson, (CH) Squamish Environment Society
- Rebecca McCleery, (RM) Tourism Squamish
- David Crewson, (DC) Canadian Coastal Sailing
- John Zuk, Vancouver Pile Driving Ltd (JZ)
- Nick Knight (NK), Squamish Terminals
- Trevor Chelshwick, Squamish Needs a Boat Ramp Committee

Regrets: Lesley Douglas, District of Squamish, Edith Tobe, Squamish River Watershed Society; Mike Sheehan, Royal Canadian Marine Search and Rescue; Tim Lane, Squamish Yacht Club; Catherine Lea Smith, Squamish Harbour Authority; Richard Avedon-Savage, Squamish Paddle Club; Kerry Neil, Exec Director for Squamish Downtown Business Improvement Association; Maxime LePine, Squamish Forestry; Duane Fluet, Co-owner of Ocean Marine; Allan Barr, West-Barr Contracting

- Welcome, Squamish Nation territory land and water acknowledgments
- Round table introductions
- SM led presentation that included discussion/question breaks as follows:
 - Recap – Meeting 1 Findings + Minutes
 - Guiding Principles (Draft)
 - Preliminary Options Matrix Review + Evaluation

- Key Questions + Discussion
 - Summary and Next Steps
 - Key Outcomes for meeting
- Question: Why isn't Squamish Nation present?
 - SM noted Squamish Nation referral and engagement was initiated early and SN staff to staff initial meeting was held; engagement will largely occur outside working group but they may be able to join for future WG meetings.
 - Question: Clarify water depth at low tide (chart datum)
 - DL – 1.1m at low tide, still flushing and channel depth is getting narrower
 - Question: How do we define water recreation user?
 - SM – not specifically defined yet, trying to consider broadest group of recreational water user (all paddlers, boaters, fishers etc)
 - Question: When channel is dredged will it impact paddlers as area will not be as defined?
 - WG Comment – dredging the channel will reduce the available width for paddlers, presently they have free reign as boats need to stick in the middle.
 - SM – Any other thoughts around what was captured – anything to be added?
 - Comment: Pedestrian bridge will be restrictive
 - Comment that it's challenging to collaborate without all parties involved (e.g. Squamish Nation)
 - Comment - agreed it would be good to have SN presence at the meetings; open invite has been shared

VISION AND GUIDING PRINCIPLES (Draft Principles)

- Comment – re: representation from Squamish Nation; it is difficult to do anything without their involvement
 - SM – we are engaging with representatives from Squamish Nation; while they are not present today, they will be consulted with next steps and preliminary options matrix will be brought to them for input
- Question: What is the scope and vision for future industrial (vessel) use for future economic value? Does it correlate with the marine zoning?
 - DR – we could broaden economic benefit principle in the draft principles
 - Comment that channel be recognized as a community asset
- Question/comment: Tourist side of things: larger 75ft boats coming in, could this be a marine side destination?

PRELIMINARY OPTIONS MATRIX

- Range of preliminary options overviewed with working group (Options A-E) as well as key cost assumptions
 - DL – Do not have full data on range of contaminated soils; there is big cost difference in how you dispose of contaminated or uncontaminated soil. Taken data we have available, have made crude assumption with % splits for what is contaminated or not and have made allowances for how much DFO will require for habitat offsetting. We've had to use our judgement for costs. It's over \$100,000 to have marine dredge contractor come out each time; more efficient to dredge more.
- Question: if we dredge contaminated soils, is that the end of it or will we have dredge contaminated soil again in 5 years? (Is this an actual benefit?)
 - DL – still some baseline copper, and will still be some leaching from creosote piles if

- not removed.
- DR – a lot of the contamination that is there is from historic industrial use. We would be removing a lot but not all contaminated sediments.
- *Question: Any legislation that ties things back to the polluting organization?*
 - DR – Industrial use that began in early 1900 – little recourse to go after original polluters at this time
- *Question: Pricing/costs – does it include today's cost?*
 - DL – confirmed these are today's costs (no prescribed inflation), margin of error plus or minus +/- 30%

SEDIMENT DATA COLLATION – ONGOING

- SM – working with several MBC waterfront owners to get additional data for sampling to assist with high level picture; will report back soon
- DR – Areas noted with elevated mercury and acenaphtene is from 2011 Hemmera testing, 4 different campaigns (not exhaustive summary); will be working with these to determine other contaminated areas. Provides high level first picture.
- *Question: Are there baseline values?*
 - DR – contaminant thresholds are in the chart; if contaminate exceeds thresholds, it would be regulated
- *Question: Do we have actual values?*
 - DR – yes, but didn't want to make the chart too complicated
 - DL – green markers are from 2011, purple from 2013 which only had elevated copper as a problem.
 - SM – detailed testing campaign will be needed before we make any decision to go forward
- *Question: Cost for engineering/environment?*

OPTION A – STATUS QUO

- *Question: What is foreseen as an emergency response vessel?*
 - DR – depends on nature of emergency
- *Question: Who will respond if something happens out there?*
- Comment: There was a situation with impediment in channel due to wind and tides, it couldn't be removed. Coastguard could not have deployed their zodiac in this instance as the channel is too narrow (e.g. assisting an overturned kayaker). If this doesn't speak to depth constraint it should speak to the width constraint.

OPTION B – STOP GAP

- SM – According to the drawing/chart is this an accurate representation of where sediment accumulated?
 - DL – image shows a place holder for sediment
- DR – Research after last meeting, 2013 we dredged down to -2.0 m CD; in the area that has been dredged there has been about 1 meter of sedimentation that has filled in over past 7 years. Current depth in this area as about -1.1m.

OPTION C – FOCUSED DREDGE

No comments

OPTION D – Dredge all to -2.6m
No comments

OPTION E – Dredge all to -3.2m

- *Question: Any federal grants or funding available to offset cost?*
 - DL – provincial and federal funding grants distinctly say not applicable for dredging. Tying in habitat restoration or creation would be a good way to access more funding.
 - SM – aim of today’s meeting to focus on the *what*: benefits and implications of different options. The *how* will be another discussion to come. Please refer to memo regarding depths for different vessels provided for WG meeting 1.
- *Question: What % of vessels can use channel based on current usage?*
 - DL – do not have this information currently
- *Comment* - Recreation users will be wanting to use blind channel at low tide

Preliminary Options Matrix Review Questions and Discussion

Column A – Status Quo

- *Question: would there be an emergency cost to widen channel if we did nothing and then needed to later on? If we did nothing would it increase potential cost if we need to do something later?*
- *Question: Can we use non contaminated material for habitat enhancement?*
 - DR – yes we would look into, marsh creation as example

Column B – Stop Gap

- *Question: What does Squamish Nation want their waterfront to look like and is there a way to capture material, to be used for gravel for one of their developments.*
 - DR – Potentially considering berm that would collect gravel
- *Comment: yes, maintain there but what does SN want, also flood mitigation may be improved if mouth of river is more open.*
- *Comment: depending on suitable fill*
- *Comment: impact and risks – this option would not develop long term plan; impacts and risks is that this would be a bandaid on long term solution. A lot of change taking place in community so it would seem we have opportune time to address terrestrial issue, should think about long term and not short term.*
- DR – all options the intent is to maintain
- *Comment: with option B there is risk, addressing strategically.*
- SM – mobilization/demobilization – opportunity cost, may not be captured here yet
- KM – we are not achieving an efficiency with stop gap from a cost perspective
 - DL – from a time perspective you are not triggering high level environment reviews, you can actually do this option quicker than a larger dredge project.
- *Comment: Right or wrong tide and wave action can move material around significantly. Area to south that is exposed could refill the channel, sediment from Squamish River.*
- KM – Asked for summary of discussion
 - DL – West bank of entrance to channel is dynamic because influenced by storms, so that bank moves in and out depending on wave action. There is question around the changes to the entrance of the channel through development and whether this would this

- exacerbate the movement of the side of channel through sedimentation, because entrance is changing.
 - *Comment:* Terms of depth, typically running -1.1m below chart datum at pinch point, however it is probably 15 – 20 ft deeper further south. In terms of short term risk, this should be considered, but in terms of immediate risk, it is manageable.
- *Question: Change navigation area?*
 - DL – shared example of timber walls on Fraser river are training walls to speed up the water when tide going out to help pull sediment out, might not be acceptable today
- *Comment:* walls in river with gap at bottom, allows fish to move freely
- *Comment:* regarding a potential berm to help train further sediment, could that play in compensation and be positive opportunity vs the risk?
- *Question: Why are we talking about sediment control?*
 - DL – Dyking/berming in this area – habitat banking area
 - DR – How much sediment is coming around from the Squamish river – not sure if this has been studied on how the sediment is moving.
- *Question: Has there been monitoring in terminals?*
- *Comment:* yes, there is concern with the sedimentation
 - DR – option B might be best option to ensure something gets started as funding may be easier to find.
- *Question: separate options D & E, costs are high and can influence decisions, moderation in estimate due to unknowns. Would be good to fine tune to create better picture. Determine whether material is suitable for re-use. Hasn't been a full overview assessment, could cost be drastically reduced?*
- *Comment:* Stop gap last time was approx. \$100,000.00, inflation may affect this number.
- *Question: Numbers are high but may be due to contaminated materials. Can we determine what material needs to be removed in particular spot?*
 - DR – north & west of area we are looking at, sediment testing would have to occur at time of dredging is proposed.
- *Question: Can more sediment testing happen in advance to inform the dredging? Could influence decision making when we know what contaminants are there.*
 - DR – Sediment collection is further down the line, but there is some budget. Have been relying on past sediment collection data.
- *Comment:* Information sharing that we can glean more information
- SM – permitting and approval windows, does testing need to be within 2-5 years?
 - DL – Within 5 years. We are in what hope is a peak for marine construction, hopeful it will come down. Contractors not responding to tenders as they are too busy.
- *Comment:* Testing is valid for 5 yrs
 - DR – Last testing we have done is from 2013, so we are dealing with older data
 - DL – Biggest recent contaminant concern would have been Squamish terminal fire
- *Comment:* Larger vessels is a misnomer, length is not necessarily a factor, shorter vessels can have a deeper draft. For audience not familiar with maritime usage – worth talking about draft constraints.
- *Question: Clarify depth of north zone – is it necessary for current usage?*
 - DL – currently around -1.6m CD, and width of the channel is not there. Tried limit amount of dredging around the edges in dwgs.
- *Question: Bridge construction require dredging?*

- SM – no
- DL – respecting necessary ground improvement for pilings associated with bridge construction, we want any ground work to be lower than what we plan on dredging in the future
- SM – also note there will be underwater cable, fibre optic to go under ground across the channel
- DL – working with Bosa to determine minimum depths so dredging doesn't damage telcom and power cable (for option D) ~ 1m cover
- SM – Option E – does this make sense?
- Comment: Marina operators/lease holders may have plans beyond current use of marina
 - SM – intend to engage one on one with lease holders – also Province encouraged to engage water lot holders. We do need to do more engagement. At end of presentation we want to discuss broader engagement ideas.
- Comment: When Victoria Street bridge is in, the dredging cost will be higher north of bridge; may reduce future use if we dredge before completion.
- Comment: Bridge construction scheduled for next fall so likely dredge will not happen prior to its installation

Key Question 1: top priorities and needs for channel maintenance activity?

- Unrestricted passage at pinch point (southern)
- This is 85% of the problem
- Smaller commercial vessels should be unrestricted
- Safety economic, anything is better than we have now, Option B addresses 75% of the problem to be solved for the next 5-10 yrs. Bonus 10% taking stop gap
- Option B takes care of majority of issue – can we create a 'B+' option - mitigation of sediment, storm water released into this area, creating problem down the road, when there is a massive flood water could easily flow out.
- *Question: Do we have numbers for sediment input from Stawamus River?*
 - DR – 2500m3 per year based on study
 - DL – more rain than snow in winter time can create land slides
- Maintenance program – 2nd last principle talks about cost – priority should be identifying where costs would be sourced, includes user groups, not fair to put entire burden on public administration. Would support a program where costs are shared between recreation, commercial, industrial users in some capacity.
 - SM – this subject will continue in next meeting
- Users who are directly impacted. Allows time to advance plans with oceanfront, has not been in immediate list of tasks – agrees with everything being said

Key Question 2: Have all potential options been identified, if not, what's missing?

- SM - Is the naming of Option 2 'stop gap' appropriate?
 - Minimum as necessary
- Proven rationale for doing full dredge and get it down to clean ground so habitat could grow back it would be a 20 yr project. If this could be proven to get back to healthy situation could be more sustainable, valuable argument, then you never need to go back to dredge aside from 5 yr maintenance schedule.

- Environment re-assessment, federal funding on environmental clean up: WG would like to know that info before deciding.
- Clean up bottom but sheet piling siding, can still have growth.
- *Questions: Has dredging been used for environmental clean up?*
 - DL – yes north van in ship yards
- Comment: Upper blind channel could be habitat clean up
 - DL – city of Vancouver, false creek, discussion point is whether to dredge to clean up
- SM – Contaminants seen in Squamish, are they similar to false creek
 - DL – yes
- DR – Would like to spend more time to better determine stop gap...

Question 3: What are the impacts and benefits to community with each scenario?

Any users not well reflected?

- Comment: Paddlers are not mentioned (non motorized users not being captured)
- SM – Have done a lot of engagement work with marine access reviews; will try and bring a lot of that info to bear on this and will bring to community

Question 4: What option(s) should be advanced and why?

- SM - What are the stand out option(s) worthy of more investigation?

Comments:

- Fan of option B – anything beyond diminishing marginal return – should go further south, change navigation channel beyond berm – storm drainage, service, remove material in future Option B++. If there was money to do some sampling would be recommended, to see actual costs.
- Depending on funding, do sampling over larger area
- If option D & E aren't happening, why would be spend more money in sampling towards the main area.
- Option A – needs more info to consider other options. Is there a sense of funding available for dredging?
 - DR - Council decision ultimately as to any public funding – will be difficult to come up with significant funding
 - Group should know this info and what council feels is valuable
 - DR – Would go back to council and present options
- Need to get more funding upfront for more testing, collecting data for more current collection of information. Bosa & Sirocco are developing in the area. Paying up front to dial down the funding, get a more confirmed budget, next meeting on financial aspect, developments and woodfibre should contribute, longer term, ensure funding, annual trends where its going.
- Option C & D would be good to get a frame for doing this work, more analyzed and ready to go to get more win wins.
- Trigger for upland development, will be dredging next year for Sirocco.
- From business stand point: Options C/D possibly E would be most beneficial. Doing nothing makes usability D/T stagner and same with option B. Business and commerce sections are stagnant, surrounded by water but don't utilize.
- KM – spending more time breaking out and making sense of social and environmental consideration and the trade off between those. Future focus of the area, can't separate the area

to dredge and the current usage with what is happening on foreshore.

- Building business case with metric as principles, unknowns, developing using option A through E. Option A is a negative ROI, Option B & C time is associated with costs, more complex the solution, the greater the time and cost
- Option A – clarify impacts and risks if we don't do anything. Option D & E – E serves extremely large vessels that may not even be a factor. Option C-D very similar – need to address user groups to check in to see if necessary
- SM – mixed used marine zoning in MBC – clarification that the zoning does allow for marine transportation service use, but doesn't speak to or prescribe vessel size.
- Option A Status quo is not realistic, if we do nothing, it will become habitat. There is value to do stop gap dredging to prevent habitat, don't let it go too long so things that grow just get ripped out.

Any last words on options?

- DL – Blue ocean economy, there are properties upstream of pedestrian bridge, properties that could be developed based off of ocean use.
- SM – future marine impact assessment – will start to uncover more of what is possible in future

Next Steps:

- Any thoughts on taking out to the public and larger community?
- *Question: Does the public understand broader issue?*
 - SM – I think so, there were two marine access surveys, and there were 500 responses – community is very engaged and cares about marine access, there is high interest.
- *Question: Does Squamish want to embrace the ocean front or continue to ignore it and build with our backs to it?*
 - DR – Next outreach is an opportunity to educate and provide context that is necessary to weigh in.
 - SM – The issue probably won't land on any one group or entity
- Comment: Series of open house, radio, website for engagement suggested. When pop growth happens on ocean front will increase by approx. 8,000. More ppl will be at the water, so there will be more interest/involvement. Increasing focus on waterfront development. Ways to reach community.
- *Question: How many ppl use Lets talk Squamish?*
 - DR/SM – couple thousand, but this project is not currently on Lets talk Squamish yet
 - DR – We heard today what sort of funding will council be willing to contribute as it will impact the feedback from this group, will be important to consider what will be the appropriate touch point to do so, meet with them, obtain feedback and report back to the group.
- Comment: Dredging has to be presented for what it is; it is not a project to allow super yachts to come to Squamish. It is to keep similar use, creating maintenance program, not something new. Project is not trying to turn our community into a playground for the super-rich, simply a maintenance program to be established that really does need to happen. There is potential perception that dredging could be for an elite group.
- SM – Next meeting to be arranged for 2023 – strategy is to deep dive into funding strategy, recommendations to bring back to council, key pieces to take with us for next stage of work. Sediment reuse and disposal, more work to be done around potential sites. Can also depend on sediment contamination results.

- DR – Anyone in the group see anything else we should discuss next meeting?
- Comment: Mitigating costs with on land disposal, barge landings - would this help reduce costs if contaminated material was taken directly to shore and removed by trucks.
- Comment: Raft barge take it out to sea, if not a facility.
- Comment: Watts point disposal at sea cheapest option.
- *Question: Is there a data bank with all testing, Geotech reports for zones with dredging, better idea on material being suitable for fill?*
- DR – We have library for private developments but it is propriety information, so would need approval from landowners to make public in any way.

Meeting adjourned.

draft