CITY OF IQALUIT

SOLID WASTE MANAGEMENT PROJECT
PUBLIC CONSULTATION REPORT

DECEMBER 2018

1 INTRODUCTION

1.1 Purpose of this Document

1.1.1 The purpose of this document is to describe the public consultation that was undertaken by the City of Iqaluit in support of the new Solid Waste Management Project, that includes a new landfill, a waste transfer station and the remediation/ closure of the existing landfill.

1.1.2 The consultation process sought to engage the local community and other stakeholders to become aware of any concerns related to the project that could be considered and addressed during the upcoming detailed design phase.

1.1.3 The public consultation was also a requirement of the Infrastructure Canada Investment Plan (ICIP) funding agreement that stipulated a duty to consult with the Inuit community of Iqaluit in the context of the Project.

1.1.4 This document provides a summary of the questions raised during the public consultation process and an analysis of the main issues that were raised.

1.2 Background

1.2.1 Between 2011 and 2013, the City of Iqaluit prepared their new Solid Waste Management Plan that outlined how the City would manage their waste in the future. This involved extensive public consultation involving three public meetings over the course of approximately 2 years. In 2014, after the public consultation was complete, the input from the community was incorporated with consultant recommendations to create the 2014 Solid Waste Management Plan.

1.2.2 In May of 2017, the City of Iqaluit prepared a business case to modernize their waste management infrastructure, basing it on the recommendations outlined in the 2014 Solid Waste Management Plan.

1.2.3 The business case focused on three areas, the closure of the existing landfill, a waste transfer station to sort and bale the waste, and a new landfill.

1.3 Stakeholders Consulted to Date

1.3.1 During the initial consultations between 2011-2013, the public, Inuit groups and the Government of Nunavut were consulted.

1.3.2 On June 20, 2018, a project steering committee meeting was held that outlined the scope of the project to various Government of Nunavut stakeholders and allowed an opportunity for their comments and feedback in the direction of the project. These

stakeholders included the Government of Nunavut Departments of Health, Community and Government Services and the Environment, as well as the City of Iqaluit.

1.4 Future Consultation

1.4.1 This public consultation focused on the construction of the project only.

1.4.2 Future public consultations will be held to discuss the operations and any impacts on residents such as waste pickup and the sorting of waste.

2 CONDUCTING THE CONSULTATION EXERCISE

2.1 What the consultation was about?

2.1.1 The consultation documentation (Section 2.3 below) set out the background information for the consultation.

2.1.2 Responses were invited from the community and other stakeholders on the three aspects of the project outlined in section 1.2.3.

2.1.3 The consultation invited the public to ask any questions related to the project, while providing a platform to voice any concerns they may have had.

2.2 How the consultation was conducted?

2.2.1 The public consultation was undertaken on two separate days. The first, and primary day for the public to attend was held on November 15, 2018. This was a general meeting with an open invitation, anyone was free to attend. The second meeting was arranged on November 23, 2018 with the Qikiqtani Inuit Association (QIA). During both meetings, simultaneous translation in French and Inuktitut was provided to enable participants to listen and speak in their language of choice.

2.2.2 During the public consultation event, poster boards were set up highlighting aspects for each component of the project with members of the project team present to explain the concept drawings and answer any questions.

2.2.3 After a set amount of time for the informal viewing of the posters, the project team performed a presentation highlighting the project and their various components that was followed by a question and answer.

2.2.4 The project team was available after the question and answer period to answer any media requests.

2.2.5 Both consultation events were recorded to ensure all questions were properly captured.

2.2.6 A Public Service Announcement (PSA) was prepared that included an extensive question and answer package and was translated into Inuktitut and French. The PSA informed residents that they could submit a question or comment directly to City Hall, or at a dedicated project email address, solidwaste@city.iqaluit.nu.ca. The PSA form allowed a place for residents to input their comments on each phase.

2.2.7 The PSA was posted on the City's website, the City's Facebook and Twitter accounts, the Iqaluit Public Service Announcement Facebook page and it was sent to all media in Iqaluit.

2.2.8 A banner promoting the consultation was posted on the City website and several reminders were posted on the City's Facebook and Twitter accounts.

2.3 Consultation Documentation

2.3.1 The public consultation documentation included the 2014 Solid Waste Management Plan that was available on the website and in hardcopy format at the events, an extensive question and answer document available on the City website. The Public Service Announcement Form that contained an area for residents to record their comments was available online and in hardcopy at each event.

INFORMATION PROVIDED

2.3.2 Residents were asked to consider the following information:

- The location of the new landfill and waste transfer station.
- The project components of the waste transfer station and new landfill
- The closure/ decommissioning plan for the existing landfill

2.3.3 The aim of the consultation documentation and public consultation meetings was to obtain information on the concerns of the public and any issues they may have with the proposed project.

2.3.4 Responses were accepted online through the City dedicated email address, dropping off hardcopy responses to City Hall before and after the public event, and accepting hardcopy responses at the public events.

3 RESPONSES

3.1 Format of Responses

3.1.1 The majority of the responses and questions were received during the two public consultation events. Presenters and residents spoke into a microphone to ensure the audio was recorded, and to ensure translation services were provided.

3.1.2 The audio recording of each event was then sent for transcription and is included as part of this report.

3.1.3 One comment card was received through the dedicated email address, no others were received at City Hall or in person at the events.

3.2 Questions – New Landfill

Q1 – What is meant by the Construction and Demolition Area?

A1 – At the new landfill, a section will be designated to received bulk construction and demolition waste once any hazardous material has been removed. This small section of the landfill will follow a traditional landfill design with the waste routinely covered. It would be impractical to bale this waste and would induce a significant amount of wear and tear on the equipment.

Q2 – Will there be public access on the new road to the new landfill?

A2 – A decision will have to be made by City Council to confirm if the road will have public access or not, it is currently undecided.

Q3 – Will the access road be paved, or will it be a dirt road? What are the costs associated with the operation of the road?

A3 – The road will not be paved, it will be a dirt road. The operational costs have not been determined yet, but they were considered in the business case developed for this project. There will be snow removal and grading, and these considerations will be discussed at a later date when the operational details become finalized.

Q4 – How will the City deal with the snow and melt water at the new landfill?

A4 – There will be a program to remove snow, the City has equipment that can be stationed at the facility to ensure snow is removed off site. In terms of meltwater, there will be a containment system planned and the entire landfill site will be lined and have a berm, along with a leachate collection system.

Q5 – Will the wrapping material be able to withstand the extreme cold weather?

A5 – The material used to wrap the bales will be LDP plastic wrap that has a glass transition temperature of -125°C (-193°F) which means the material will remain flexible rather become brittle and will ensure the bales remain contained in the plastic wrap.

Q6 – How much garbage is collected on a daily basis? How frequent will the bales be transported from the waste transfer station to the landfill?

A6 – There is currently approximately 20 tons of waste collected daily and it is anticipated that the wrapped bales will be transported daily to the landfill. The 20 tons currently received is not separated, with the new waste transfer facility, cardboard, wood, metals, and tires will be recycled reducing the amount of waste sent to the landfill by approximately 44%. In the event of a blizzard or other scenario that would prevent the deliver of the bales to the landfill, the waste transfer station will have a designated storage area.

Q7 – What is the distance between the new landfill and the waste transfer station?

A7 – It is approximately 6km between the two facilities.

Q8 – What are the sources of sand and clay? Will the gravel from the new gravel deposit be used for other projects?

A8 – The City is still evaluating where it will source the clay required for the project. The granular material from the new source will likely be able to be used on other projects in the future but the details will need to be sorted out at a later date.

3.3 Questions – New Waste Transfer Station

Q1 – How are the bales secured? How are they wrapped and closed?

A1 – The bales are initially compressed into a cube, then they will be completely wrapped in LDP plastic. A wrapping machine will be used to ensure each bale is completely wrapped the same way each time.

Q2 – Where will the metal go from derelict vehicles?

A2 – Derelict vehicles will be processed at the waste transfer station. They will have the internal fluid and other hazard material drained, and then will be stored on the facility grounds in a designated area until there is a sufficient amount to compact. The waste transfer station will have a separate compactor for scrap steel that will be used to compact the vehicles and prepare them for shipment to a recycling facility in the South.

Q3 – Will residents be charges to dispose of waste?

A3 – It is anticipated that there may be some costs to residents to recoup the facility costs.

Q4 – Will the waste transfer station grounds be lined in a similar manner as the new landfill?

A4 – It is currently not planned to line the grounds, anything stored outside would already have the fluids or hazardous material removed or drained. One area that may be lined would be the temporary storage area of the bales if they cannot be delivered to the landfill; however, the designer will investigate and incorporate if required.

Q5 – Can the shredder accommodate wooden pallets?

A5 – Any type of wooden crates or pallets will go through the shredder. It is anticipated that there is sufficient wood and cardboard waste to heat the facility.

Q6 – Will there be public access to the waste transfer station?

A6 – Conceptual planning is ongoing; however, there will be a section where the public will be able to enter and drop off household hazardous waste or visit the re-use center. Residents will not be able to gain access to the rest of the facility for their own safety.

Q7 – Will the public be able to salvage wood?

A7 – The operational details have not been developed yet however there is a considerable amount of land allocated to the facility and there may be space to accommodate residents to drop off and pick up separated wood.

Q8 – Is there a plan for waste oil as it pertains to storage, being reused or shipped out?

A8 – The facility will contain a biomass burner and there is the potential to use this waste oil as fuel, however given the low quantities that is actually recovered, it will likely be shipped out with the rest of the household hazardous waste to a facility in the South.

Q9 – Will residents be advised that there is a place to dispose of oil?

A9 – Once the operational details of the facility are finalized, residents will be informed of the different types of waste the facility accepts and where to dispose of them.

Q10 – How many staff will be required to run the transfer station and the new landfill site?

A10 – When the original business plan was developed, the waste transfer station required about 5 full-time employees and the new landfill required about 1.5 full time employees.

Q11 – Has the technology for shredding and baling been used in other communities? If so, how long has it been in operation? Has this process been tested long term and are there any problems with it?

A11 – There is a community in New Brunswick that built a similar bale fill facility in 2008 without experiencing any issues. The equipment proposed at the waste transfer station are time-tested and durable, with uses throughout North America and Europe in both the private and public sectors.

Q12 – Will there be a separate building used for old vehicles?

A12 – The detailed design for the construction has not been created yet, only a conceptual drawing has been prepared. It is not yet determined if a separate building will be used or if it will be incorporated into the main facility, but it will be used to drain the fluids and hazardous material from vehicles prior to storage.

Q13 – Residents are currently able to drop off waste at the landfill during the weekend when no staff are present, will residents be able to continue this same practice?

A13 – This will be discussed further when the facility operations are discussed at a later date however a measure to accommodate this would be to have drop off bins for certain items. Security cameras would have to be installed to ensure residents are not dropping off items they are not supposed to, and there is always the possibility of modifying the hours of operation to make it more convenient for residents.

Q14 – Will residents be expected to sort their waste? Will there be a recycling program?

A14 – The prospect of residents segregating their waste would be part of a much larger effort that would involve a lot of planning and public education. This topic will continue to be built on, the facility will be capable of handling a recycling program, it will just be dependent on the programs put in place which would require everyone in the community to participate in the management of waste in the community.

Q15 – What is the timeline for the City to incorporate a recycling and composting program? How will the composting program work?

A15 – The city is unable to give specific timelines however it is something that the City is working towards as part of the Solid Waste Management Plan, which is the mandate that City Council has provided. Staff will begin with what residents are currently familiar with and then slowly incorporate additional elements, starting with composting.

Q16 – Will there be a cost for residents to drop off household hazardous waste?

A16 – Currently there is no cost for residents to drop off hazardous waste, only businesses pay a fee, although that may change based on City Council's future mandates. Hazardous waste included paint, solvents, batteries, cleaners and aerosol cans.

Q17 – Is there an estimated cost for the power consumption of the waste transfer station building?

A17 – Data is not available at this time however there will be a significant savings in heating costs with the waste energy system that is being incorporated in the transfer station which will burn waste wood and cardboard.

Q18 – Is the City concerned about any future residential developments near the waste transfer station?

A18 – The area around the waste transfer station is zoned for heavy industrial uses so it is unlikely that there will be any dense residential growth getting close to the facility. Just to the north of the facility site is the former dump site dating back to the army time and it has its own legacy issues. The combination of these two things led to the selection of this particular site for the transfer station.

3.4 Questions – Remediation/ Closure of the Existing Landfill

Q1 – Will the existing buildings be relocated to the new landfill site?

A1 – One building will be moved and the City is currently evaluating the other buildings. Two office trailers were purchased that require renovations and will be placed on the site during construction. Once construction has been completed, the office trailers will be given tot eh City Fire Department for their fire training facility.

Q2 – Will the City be upgrading the current containment ponds?

A2 – They City has upgraded the current containment ponds and ditches however they are not finalized. During the closure process, a full design will be completed to ensure the containment ponds and berms meet all regulatory requirements.

Q3 – How will the ditches at the landfill slope towards the containment ponds?

A3 – The ditching will be finalized during the detailed deign phase of the landfill closure to ensure proper functionality.

Q4 – Will the existing landfill be covered in a plastic membrane?

A4 – The existing landfill will be covered in several layers of granular material, a plastic membrane will not be used. The first layer will be approximately 300mm of sand to act as a leveling course and provide a smooth contour. Following this, a 300mm layer of a geosynthetic clay material will form a water proof barrier over the entire landfill. The last layer will be approximately 600mm of crushed rock and native fill material, allowing the landfill to blend in with the surrounding landscape.

3.5 General Responses

Below are general comments from residents regarding the project

3.5.1 The idea to sort, recycle and reuse waste will be very useful for the community. Indeed, the volumes of waste to be buried will be reduced, this will avoid unnecessarily charging the landfill. The reuse of some material will avoid ordering by boat and plane. Congratulations for that project, the environment and the community will be winners.

3.5.2 Mr. Fortier, representative for the Qikiqtani Inuit Association (QIA), indicated that the big concern is the public access on the access road being constructed to reach the new landfill and gravel source. He noted that it would gain access to Crazy Lake and public access is important for hunting and fishing. He does not see any other concerns at this time.

3.5.3 Thank you for the presentation, this looks like it is going to be an amazing facility. Having a reusable space incorporated into the design is a good idea.

4 CONCLUSIONS

4.1 Overall, the responses received were positive and residents are excited about the new project to modernize waste management in Iqaluit.

4.2 There were a significant number of questions related to the operation of the facilities however as previously stated, these details will be confirmed at a later date and will involve an additional public consultation. This consultation just focused on the construction of the project.

4.3 The residents were satisfied with the location of the facilities and the features provided by the new landfill and waste transfer station

5 NEXT STEPS

5.1 Future public consultation on the operation details of the facilities.

5.2 Discussion with City Council to confirm if the access road will be accessible to the public.

6 SUPPORTING DOCUMENTAION

6.1 Transcription from November 15, 2018 public consultation

6.2 Transcription from November 23, 2018 consultation with the QIA.

The Corporation of the City of Iqaluit
Minutes of a Public Consultation
Solid Waste Management Plan

Held on Thursday, November 15, 2018, commencing at 6:30 p.m. at Qajuqturvik Food Centre, Building 655, Mattaaq Crescent.

Welcome everyone. Thanks for coming to this very important meeting. I am, as most of you already know, Romeyn Stevenson, Deputy Mayor for the City of Iqaluit, and I am the moderator for this evening.

It is nice to see that you all made it out in spite of the cold weather tonight to come and talk about what is a very important project for the future of the City of Iqaluit. It is also nice for me, as someone who has worked on this for so long, to see that it is finally coming to a reality. It has been more than five years since the City began consulting with residents and what they would like to see for a new Waste Management Plan and then for the new Waste Management Program. We are here tonight to see the results of those consultations and that process.

Before I begin, I would like to give you a brief overview of this evening's event. We are going to start with a few words from Mayor Redfern, then move to the City's Director of Works and Engineering, Matthew Hamp, who will provide details on the new landfill. We will then move to John Smith, a technical expert and consultant who will provide details of the new waste transfer station. Then Erik Marko, technical expert and consultant, will provide an overview about the remediation of the old landfill.

Once the presentations are over it will be time for the panel, that being these four presenters, to be able to answer any questions about the project. So, I would ask that your hold questions until the end of the four presentations.

Questions will be allowed until approximately 8:20 p.m., and then there will be a wrap-up of the evening. After the meeting, if someone is more comfortable coming up and talking to the panel, they will remain for a little bit to be available for questions. If there is any media present, you can have access to the panel at that time as well.

The washrooms and exists where pointed out for those in attendance.

There will not be a formal break, but there is coffee, tea, and bannock available and attendees are welcome to help themselves at any time.

Deputy Mayor Stevenson asked Mayor Redfern to say a few words.

Mayor Redfern thanked everyone for coming out tonight to hear about the new Solid Waste Management Plan. As Deputy Mayor Stevenson said, it has been in

the works for some time, so it's actually really exciting to see this now getting underway.

Tonight, we are going to focus on the new landfill and how the waste is going to be managed and stored. We will learn about the plans regarding the current landfill, how it will be closed and what it will look like in the future. For those folks who have had a chance to look at the poster boards, you already get a sense of what that will look.

There will also be a reduction of materials in the new landfill, as we are going to have a new recycling program. This again is really exciting.

The facilities will not be operational until 2020. There is a lot of work to be done between now and then. There is going to be more information for you and the community prior to the opening of the new landfill, and we will be discussing how these programs will be managed. At that time, there will also be information on composting, another thing that the residents indicated they wanted to see in the new facility. Composting was strongly advocated for and Council listened and accommodations have been made for composting. These items will not be discussed tonight, but there definitely will be more information about that over the next year.

I also want to take this time to thank the Government of Canada for the $26 million of funding they have contributed for this project from the Infrastructure Canada Investment Plan. This project would not have happened without their support. I also want to thank the Government of Nunavut for their support as well. This is a $35 million project, so three levels of government have cooperated closely together to make this project happen. Again, we are extremely appreciative for this level of assistance.

So, it is my pleasure to turn this back to Deputy Mayor Stevenson, who is facilitating this session for tonight. I am also looking forward to all the presentations that will be presented.

Deputy Mayor Stevenson thanked Mayor Redfern.

New Landfill Site

Deputy Mayor Stevenson asked Matthew Hamp, Director of Public Works and Engineering, to talk about the new landfill. There are some video aids that will accompany the presentation.

Matthew Hamp started by speaking about the proposed concept for the new landfill. The landfill will be located approximately six kilometres from the City on an extension of Upper Base Road. So there will be a three-kilometre extension

on Upper Base Road and the entire road will be upgraded to accommodate the increased traffic.

The concept for the site is called a balefill. We have all seen the challenges with the traditional landfill. There are smells, ravens, birds, windblown litter and at the worst, the risk of fire.

The balefill concept works in the way that all of the waste that is collected from the City goes to a central processing facility, where it is tipped onto a tipping floor in a heated environment and all the recyclables are separated out. Then everything gets loaded into a stationary compaction device and compacted and then wrapped in heavy duty plastic. The only vehicle that needs to transport up to the new landfill is a tractor trailer, with a flat deck trailer, loaded with bales. The bales get placed in a working cell within the landfill. A small portion of the landfill will be the working cell. Once that cell is completely done its life, it gets buried in soil.

The landfill is located in a natural depression in the ground. When the life of the landfill is complete after 75 years, it can be blended into the topography, so it is not going to be a big blip on the landscape.

The entire site has a triple containment for leachate. There are the landfill bales themselves, there is an exterior berm to divert surface water from outside the landfill away and also to contain surface water within the landfill, and then the entire site itself will be lined again. There will be a leachate collection system for the entire landfill.

Construction demolition debris must be accommodated in a traditional way. It is inert material that would be received, but buildings do come down from time to time and the material must be accommodated somehow. So the material will be crushed and buried in a designed area.

The area will still be divided into cells and each cell will have its own life span of about three to five years. Each cell will get covered at the end of its individual life span.

For site security or more so worker safety, there will be an emergency shelter next to the site. The entire site will be fenced.

This slide shows an overview of the proposal to blend the landfill into the landscape after the end of its life.

The area north of the site is where the gravel will be extracted in order to complete the extension of the road, to have sufficient gravel and materials to close the existing landfill, build the berms and all the other earth works that are needed for the project.

New Waste Transfer Station

John Smith, technical expert from EXP Consulting, will talk about the new waste transfer station.

Mr. Smith advised that he will be giving an overview of what is going to be the heart of the system, which is the new solid waste management transfer station. His presentation included the use of visual aids.

The transfer station will be located in the North 40 industrial area and is close to the new road that will go up to the landfill site. Once the material has been baled and is ready to go to the landfill, the flat bed truck will exit onto the unnamed road, which will eventually be connected to the road that goes to the new landfill site. This avoids having the trucks go back through the community.

A rendering of what the new transfer station will look like was shown. Using a map, Mr. Smith indicated where the garbage trucks and individuals will enter the site and utilize the two overhead doors to drop their waste. The facility is also designed to accommodate a drop-off for household hazardous waste, which will be through an overhead door and main door.

The conceptual design gives an overview of what the site will look like. Some of the aspects could change in the final design. Basically, the facility has been designed to manage all the waste that is created in Iqaluit.

The garbage trucks will enter the site and go through a scale house to be weighed, which tells the amount of waste being brought into the facility. The trucks will enter the transfer station via one of two doors and deposit the waste. There are two buildings in the back. One building will be used to store reusable materials, which will be material that people want to get rid of but do not want to put in the landfill, as they may be used by someone else. The area will be open to the public. The second building will be used for derelict vehicles.

There will be a number of sea containers on the north side, which will be used to store the prepared hazardous waste prior to being shipped south for proper disposal.

The facility on the end is a storage building that will be used in case of inclement weather and the trucks are unable to get to the new landfill site with the baled waste. The storage building can hold a week’s worth of baled waste. There is an area for a possible greenhouse once the organic program is put in place and composting material is started. There is an area for a compost pad.

Mr. Smith used a schematic diagram of the main building floor plan to explain the flow process when garbage trucks bring waste to the transfer station.

There will be a program for managing separated wood waste and cardboard. That material will be dropped in a separate location from regular waste. The wood waste and cardboard will be picked up using a skid-steer loader and deposited on a conveyor which will go through a shredder. Once the material is shredded, it will be pelletized and stored. There is a biomass burner that will be added to the building and the pelletized material will be used as fuel to help heat the building.

The solid waste will be picked up by a loader and dumped on a conveyor into a hopper and will be compacted 50 percent into rectangular bales. Another machine will wrap the bales as they come out of the baler. A forklift will pick up the bales and put them on a flatbed to ship to the new landfill site or stored in the storage building.

As noted earlier, there will be a storage building for derelict vehicles and there will be a machine to compact vehicles. Once the vehicles are compacted, they will be shipped down south for recycling.

Mr. Smith used pictures to show what some of the systems inside the building will look like.

There is a reuse area that has shelves to store material that can be reused and will be open to the public.

The shredder will also be used to shred tires that have been separated from the waste. The shredded tires can be used as daily cover at the new landfill site.

Remediation of the Old Landfill Site

Erik Marko, technical expert from Colliers Project Leaders, spoke about the remediation of the old landfill site.

Using visual aids, Mr. Marko showed what the landfill will look like once it is closed. There will be a layer of sand one foot thick, followed by a layer of clay. The clay forms a water impenetrable barrier that also helps reduce the amount of leachate. On top of that, there will be two feet of gravel and granular fill. It will look like a large hill that can be found anywhere and will blend right into the landscape.

There will be a leachate collection system, as well as a berm surrounding the entire site. The site will also be fenced.

Any scrap steel that is recyclable, that is in the landfill prior to closure, will be recycled. If the steel cannot be salvaged, then it will be buried along with the rest of the waste.

Currently, the fire training centre is located where the waste transfer station will be located, so it will be relocated near the old landfill site. The training centre is surrounded by a ditch and sloped towards the pond and will be a fenced area.

Any windblown litter surrounding the site will be collected.

A drawing showed what the old landfill site will look like if people were disembarking from a ship. They will see the landfill blending into the landscape and a view of Iqaluit.

Currently, there are no plans for gas monitoring at the landfill. It was felt that there is not a sufficient amount of waste, which is mainly frozen, to generate enough gas to warrant a gas collection system. This matter is still be evaluated.

Any monitoring equipment that is required by regulatory bodies will also be part of the process.

Questions

Deputy Mayor Stevenson thanked the presenters. He advised that this concludes the presentations. He noted that most of the attendees had an opportunity to look at the pictures on the walls.

Deputy Mayor Stevenson noted that city councillors are also in attendance, but the panel will have the most expertise for any questions that are asked.

He explained that a microphone will be brought to attendees so that everyone can hear the question and so that translation can be provided.

Question – Are you going to upgrade the current containment ponds at the current landfill? How will the ditches on the far side slope towards the containment ponds?

Using a previous slide, Mr. Marko explained that the existing ditches and berms will be upgraded. They have been updated, but they are not the final result. As part of the closure process, the ditches and berms will be fully corrected and a proper design will be done so they will meet all the regulatory requirements.

Mr. Marko asked for clarification on the second question.

Question - If ditches slope north on one side and south on the other side, how are you going to make the ditches all flow to one side?

Mr. Marko advised that ditching will be sorted out in the design, but ultimately there will be a berm to contain the entire site.

Question – How are you going to deal with the snow and melt water at the new facility?

Mr. Hamp advised that there will be a program to remove snow. The City has equipment that can be stationed at the facility to make sure the snow is removed off the site. In terms of melt water, there is a containment system planned and the entire site will be lined and have a berm. The Request for Proposal for the design will require three options for leachate and run-off collection.

Question – Has the technology for shredding and baling been used in other places? How long has the technology been in operation in other locations? In other words, has this process been tested long-term and are there any problems with it?

There are pieces of technology that is currently not used at the exiting site. The shredder did not last long, or something was wrong with it. The proposed technologies for the transfer station are not technologies that are currently being used here. Are there any numbers on annual down time? It was noted that often getting things repaired in Iqaluit takes longer.

Mr. Smith was not aware of the timeline of the balefill facilities. A balefill facility was designed for New Brunswick in 2008 without any issues. As far the equipment in the transfer station, the baler and shredder, those are time tested pieces of equipment. Every private sector of a facility throughout North America and Europe uses these types of equipment. They are very robust pieces of equipment and they rarely go down. There will be an operating and maintenance program for the equipment and redundant pieces of equipment will be on-hand in case anything happens.

Question – How many staff will be required to run the transfer station and the new landfill site?

Mr. Hamp advised when the original business plan was developed, it was about five people for the waste transfer station and one and a half persons for the landfill.

Question – The tires, dryers, TVs, cardboard and old vehicles that are going to be wrapped, will the wrapping material withstand the -85-degree temperature from the north prevailing winds?

Mr. Smith advised that the packing material for the bales is an LDP plastic that is used around the world for things like hay bales and wrapping boats. The operator will have to work closely with the plastic manufacturer to ensure that the proper specification material is used for wrapping the bales, but there should not be any problem with the bales in the cold weather.

Question – Why is there is a building for the old vehicles?

Using a visual aid, Mr. Smith explained that there will be two buildings. One building for reusable items that the public can go through and find items they may be able to use. The other building will be designed to house the derelict vehicles. There will be an area in the building used to decommission the vehicles before they are stored in the building. When there are enough vehicles to ship down south, the vehicles will be brought to the vehicle compactor to be crushed and put on a barge to ship down south for recycling.

Comment – Currently, old vehicles are stacked outside, which is working fine without a building. It was felt it was not necessary to pay an additional cost to construct a building to house the old vehicles.

Question – In the pictures of the remediation of the old landfill, there is a white sheet. Is the sheet the same material as used in the transfer station for balefill?

Mr. Marko advised that the sheet looking material is actually the way the computer generated the graphic. There will not be any plastic there. The landfill will be covered by sand, a layer of clay-like material, and then the top coat will be a mixture of gravel and earth and just general fill material. When completed, it will look like any other hill.

Question – Currently residents are able to drop off waste at the landfill during the weekend when no staff are present. Will residents be able to continue the same practice?

Mr. Hamp noted from a design perspective, one of the ways to help alleviate that would be to have drop off bins for certain things. Security cameras would have to be installed to ensure residents are not dropping things off that they are not supposed to. There is always the possibility of modifying the hours of operation to make it more convenient for the residents. These things will be considered during the operational discussions.

Comment – Thank you for the presentation. This looks like it is going to be an amazing facility. Having a reusable space incorporated into the design was a good idea.

Question – How big is the derelict vehicle building and how many vehicles will it hold?

Mr. Smith advised that the building is not that large and is not meant to store a year's worth of vehicles. The main reason for the building is to have a space to decommission the vehicles, as all the fuel and liquids must be removed from the

vehicle before they are compacted. There will not be that many vehicles stored in the building. Once the vehicles are decommissioned, they will be compacted and stored outside until they are ready to be shipped down south.

Mr. Hamp explained that the entire area for the waste transfer station is all of the lots shown on the plan. There is a lot of area that can be used for derelict vehicle storage. They need to be processed in order to store them safely so they are not leaking fluids everywhere. The concept of the interior space is for a flow through, bring the vehicle in, process it and it goes out until such time as enough vehicles have been accumulated to crush them and ship them south.

Question – It appears that the transfer station is a baling station and the residents are expected to sort their own waste. Currently the only thing sorted is cardboard. Will the current system continue or will residents be expected to sort out glass, plastics and other items?

Mr. Hamp explained that in terms of residents participating in segregation that is a much longer effort. There is the whole education campaign and residents buying in to do the sorting. In the beginning, the concept will be that current sorting will continue. Residents are pretty good at segregating cardboard, bringing wood separately and larger metal items. This will continue and will be built on. Having residents source separate is the ultimate goal. Everyone will have to participate in the management of waste in the community. In the beginning, we are trying to work with what people are used to and then ultimately what can be sorted in the facility.

Mr. Smith explained that the facility is set up to bale garbage and shred tires, cardboard and wood. The facility has been designed so that there is capacity to add additional equipment when the City wants to start separating additional materials. Things like the baler and shredder can do double duties, so if source separated plastics is added to the program, most likely the material would be shredded in order to save space and the baler would be used to bale the shredded material to ship down south.

Question – It was exciting to have a new facility because it was assumed there would be some sort of recycling component to it. The greenhouse and composting station were mentioned. What is the timeline for the City to incorporate a recycling program?

Mr. Hamp was not able to give strict timelines, but it is definitely something that is being worked towards, as it is part of the Solid Waste Management Plan, which is the mandate that Council has given. Staff are trying to see how the recycling aspect can be incorporated over the coming years. Staff are going to work with what residents are familiar with now, and then slowly incorporate the additional elements, starting with composting. In the beginning, the conversation will be to start to slowly increase the source separating into residents' daily routine.

Question – How many loads of garbage is brought into the current landfill on a daily basis? The storage space that has been designed to store baled garbage, how frequent do you foresee the baled garbage being transported from the transfer station to the new landfill?

Mr. Hamp explained that approximately 20 tons of waste is collected a day. It is anticipated that baled waste will be transported daily to the new landfill site.

Deputy Mayor Stevenson pointed out that the 20 tons of waste that is going into the landfill is not separated waste and includes cardboard, metal and household waste. At the transfer station, the cardboard and metal will be removed and someday soon, the organic waste will be removed. The amount that is remaining to go into landfill will be a lot smaller, as these items would have been removed.

Mr. Hamp thanked Deputy Mayor Stevenson for the clarification. Currently, the 20 tons goes into the landfill, with the exception of the small amount of hazardous waste that is shipped down south, and occasionally tires and bulky metal is also shipped out. With the segregation of cardboard, wood, metals, compost and hazardous waste, there will be approximately a 44 percent reduction in what is disposed of in the new landfill.

Question – The new landfill will be six kilometres away and an additional three kilometres of road will have to be constructed. What will the maintenance cost of the road be as it will be used daily? How often will it be graded? Will it be a dirt road? What are the costs associated with the operation of the road?

Mr. Hamp advised that operational costs have not yet been determined. He explained that the operational costs were considered in the business case. There is snow blowing, snow removal and grading, and they are all considerations in the discussions on operations. At a later date, there will be more information.

Question – A household hazardous waste drop off was mentioned. Do you know the cost for a resident to drop off a load and what sort of hazardous material does it include?

Mr. Hamp advised that currently there is no cost for residents to drop off hazardous waste, only businesses pay a fee; although that may change based on Council's future mandates. Hazardous waste will include paint, solvents, batteries, types of abrasive cleaners and aerosol cans.

Question – The large transfer station seems to be a fairly large building and will consume a considerable amount of power. Is there an estimated cost for the power consumption for the building?

Mr. Hamp advised that data is not available at this time, but there will be a significant saving in heating costs with the waste energy system that is being incorporated into the transfer station.

Question – Will homeowners or residents see an increase in their garbage charge?

Deputy Mayor Stevenson felt that, yes, in the end there will be a cost. At this time, the cost is not known. Everyone knows that garbage is not done well in the city. It was explained earlier that in the beginning, garbage will be sorted in the same way, but after that, new sorting standards will be introduced. It will cost money to provide a better garbage service to the community.

Question – Thank you for the presentation. What is the distance between the landfill and the transfer station?

Answer – Six kilometres.

Question – What is the distance from the city to the transfer station?

Mr. Hamp advised the transfer station is within the city limits. It is at the edge of Federal Road. Using the maps and drawings, the location of the transfer station was shown.

Question – The city has been expanding with a lot of different subdivisions for the past few years. Do you think the city will grow fast and get close to the transfer station very soon? Will that be a problem?

Mr. Hamp advised that the area where the waste transfer station is slated to go is zoned heavy industrial. It is not likely that there will be any dense growth getting close to the transfer station. Just to the north of the transfer station is a former dump site dating back to army time and the site has its own legacy issues. The combination of those two things led to the selection of this particular site for the transfer station.

Question – Garbage, wood and shredding material has been explained. What about loose metal? What will be done with that?

Mr. Smith advised that any separated metal will be set aside and that material will be baled and shipped down south for recycling with the vehicles. He explained that a metal recycler considers all metal the same.

Question – Understood that the city trucks will be collecting garbage, but if there is something else that is waste like an old refrigerator, washer or dryer, will there be a drop off station where residents can take it for free or will they have to take it to the transfer station? Will there be a fee to dispose of these items?

Mr. Hamp advised that residents would have to take their disposal items to the transfer station and residents will never go to the landfill. Currently, there are problems with residents taking waste to the landfill. Part of the solution is that staff can control access to the transfer station and also have a place that is clean and accessible for residents to drop off their waste or pick up reusable items.

Question – Is a metal baler the same as a regular baler?

Mr. Smith advised that there are two types of balers. The one is called a vehicle logger, which is sized to accommodate an entire vehicle and crush it. Most likely that equipment will be used for large metal items like appliances and other metal. The other baler will be able to handle smaller volumes of metal.

Comment – From experience, a vehicle compactor has a difficult time compacting loose metal.

Mr. Smith noted that the small metal items will go through the small baler, which is the same baler that will be used for waste.

Question – Where on the site will loose metal, dishwashers and other small metals be kept?

Mr. Smith explained, using a diagram, the door that residents will use to drop off their washer, dryers and other small metal items. The staff will then take the material to be stored in the building with the derelict vehicles or on another parcel of land, as shown on the map.

Deputy Mayor Stevenson pointed out that operations have not all been finalized. And based on the design of the transfer station, they are anticipating the operation of the facility. Would the loose metal be stored until there was enough to bale?

Mr. Smith explained that the metal would be kept until there is enough to bale.

Question – Will there be a good security fence around the whole area to keep illegal dumping from happening?

Mr. Hamp used a plan to show that the entire site is fenced and gated on two ends. The whole site will have security cameras.

Question – Where will the bioreactor be installed in the building?

Mr. Smith indicated on the plan the portion of the building that will be designed to hold both an aerobic digester to compost the organic material, and a biomass burner for the pellets that would heat the building.

Question – If the digester and burner are delayed, where will the sludge go?

Mr. Hamp advised that the sludge will be accommodated in two ways. Partly on the existing landfill and partly in the baled waste itself.

Question – Will the new road be accessible by the public?

Deputy Mayor Stevenson advised that public access to the new road has not yet been decided. In terms of maintenance, it will be easier to maintain if only one city vehicle was using it.

Deputy Mayor Stevenson asked if there are other questions. Seeing none, he thanked Mayor Redfern, Matthew Hamp, Erik Marko and John Smith for their presentation tonight and the great job of fielding all the questions.

Deputy Mayor Stevenson was looking forward to the project moving forward. He is excited about the financial assistance the Federal Government gave the City and it is now a real project.

For anyone who still has questions, there is a comment sheet you can complete and place it in the box at the back of the room. You are welcome to take a comment sheet to complete and send or take to City Hall. If you have a question or comment and don't have a comment sheet, you can contact staff at City Hall.

Anyone who has questions or wishes to talk to anyone on the panel, please feel free to do so.

Deputy Mayor Stevenson appreciated and thanked everyone who came to the meeting tonight. He also thanked the interpreters for their help as well.

MINUTES
CITY OF IQALUIT
ENGINEERING AND PUBLIC WORKS MEETING
NOVEMBER 23, 2018
CITY COUNCIL CHAMBERS

PRESENTER

Matthew Hamp, Engineering and Public Works Director

PARTICIPANTS

Deputy Mayor Romeyn Stevenson
Joel Fortier, Qikiqtani Inuit Association – Environmental Assessment Coordinator

Matthew Hamp, Engineering and Public Works Director, advised that there are three components of the project:

- A new waste transfer station at the end of Federal Road where the fire training ground is currently located.
- The new landfill, which will be situated at the end of an extension of Upper Base Road. Three kiolmetres will be added to the end of Upper Base Road.
- Decommissioning the West 40 landfill.

Mr. Hamp used diagrams and maps to aid in providing information on the new landfill:

- The concept is a balefill facility. All of the waste will get compacted and baled at the waste transfer station and then loaded on a flatbed trailer and taken to the landfill site.
- The rendering shows how the landfill will fit in the landscape.
- The whole site is divided into a number of cells.
- The entire life of the site is designed for 75 years.
- Each cell will have a three to five-year life span.
- The balefills will be stacked in the cell and once the cell is filled in three to five years, it will be covered.
- The waste itself is packaged individually which helps in preventing leachate generating, any type of vandalism, and wildlife attraction.
- The whole site itself is lined again as a secondary containment.
- There is a berm around the whole site as well to capture any leachate.
- The landfill has a triple containment.
- There will be an operator's shelter at the site, just in case of bad weather, staff will have a place to go.
- It is not anticipated that there will be full-time staff at the landfill site.
- The whole site is fenced.
- No one from the public will have to go to the landfill for any reason.
- Trying to separate the re-use scrounging from the landfill.

- The one component of the site that will be operated in a more traditional manner is the construction and demolition management area. This area will be divided into cells.

Mr. Fortier asked what is meant by the construction area.

Mr. Hamp explained that construction and demolition debris from the demolition of a building, once the hazardous material is removed, will be disposed of in the defined area.

Mr. Fortier asked if excess construction materials would be disposed of in the area.

Mr. Hamp advised that any excess construction material would be handled at the waste transfer station.

Mr. Fortier asked if there is any public access on the road.

Mr. Hamp explained that a decision will have to be made by Council if they want the public to have access.

Deputy Mayor Stevenson advised that public access to the road is currently undecided. He explained that it would be difficult to stop people, but access could be curtailed with boulders at the entrance. Any four wheeler access will be difficult to police and may not be worthwhile.

Mr. Fortier explained that they would want a public access to the road for hunting purposes, as the whole area is being opened up. He noted that the site will be a fenced compound.

Deputy Mayor Stevenson noted that the actual landfill site will be fenced, but the road to it would not, so it could be an access road.

Mr. Fortier noted that other examples of access roads could be viewed such as Meadowbank, Mary River and log roads.

Mr. Hamp showed where the access road would be and the location of the gravel site, which is just past the landfill. The gravel being extracted is specifically for the purposed of this project; however, in the future it will be the City's long-term gravel source.

Mr. Hamp used a diagram to show the finished contours at the end of 75 years which blends into the landscape. There will not be a mountain like the West 40 landfill.

Deputy Mayor Stevenson noted at each presentation, it was explained that Upper Base Road would be extended, when actually the gravel pit road that forks off the Upper Base Road will be extended. Mr. Hamp agreed.

Deputy Mayor Stevenson noted the contours in the site form a natural depression, which is why the site was chosen. Mr. Hamp agreed.

Deputy Mayor Stevenson noted that in terms of the 75-year projection, there is sufficient room to extend the site.

Mr. Hamp felt if this is the same method for waste disposal at the end of 75 years; it would be determined how to extend the landfill site.

Mr. Hamp explained that the natural contours of the land eliminate the need for a lot of excavation.

Deputy Mayor Stevenson asked if the plastic material that is being used to wrap the bales is biodegradable.

Mr. Hamp advised that the plastic material is not biodegradable. It is meant to be a permanent barrier.

Deputy Mayor Stevenson noted that a cell would be covered every three to five years, but asked if a cover will be placed on the bales as they are placed in the cells.

Mr. Hamp advised that the bales will be left exposed and they will be covered at the end of the lifecycle of the cell. The operational plan could include a daily or weekly cover, but that is not the intent. The construction and demolition area would have ongoing cover.

Mr. Fortier asked how the bags are secured. How are they wrapped and closed.

Deputy Mayor Stevenson advised that the waste is compacted in cubes and wrapped in plastic.

Mr. Hamp showed the rendering of the waste transfer station at the end of Federal Road, which is where the fire training ground is located.

Mr. Hamp noted that the configuration may change, but the rendering is to give an idea of what the waste transfer station would look like. It is a large facility, approximately 20,000 square feet, plus some outbuildings. The whole property will be fenced. He indicated access to the facility by using a map. There likely will be a connecting culvert for a bridge for road access from the waste transfer station to the landfill site, which will avoid going back through the City to access

the landfill site. There is a considerable amount of land so there could be some changes. The rendering is to give a concept of what it could look like.

Mr. Hamp advised it will be an industrial looking building. There will be a processing building to remove waste from derelict vehicles, which will then be stored outside before they are crushed.

Mr. Fortier asked where the metal will go from the derelict vehicles.

Mr. Hamp advised that the derelict vehicles will stay on the lot and will be shipped out periodically. When there are enough vehicles to be compacted, they will be brought inside to be crushed.

Mr. Hamp advised there is a temporary bale storage building on the site in the event of inclement weather and the landfill site cannot be accessed.

The facility will be designed to accommodate an in-vessel composting system, as well as other recycling programs. These programs will be put in place over time. There will be a public access for a reuse centre.

There is a scale to weigh the waste entering the site.

Mr. Fortier asked if residents will be charged to dispose of waste.

Mr. Hamp advised it is anticipated to recoup some of the cost.

Mr. Fortier asked if the waste transfer station grounds are lined as well.

Mr. Hamp advised that it is not planned to line the grounds. He noted that anything that will be stored outside, like the derelict vehicles, will already have the fluids drained.

Deputy Mayor Stevenson pointed out that all of the hazardous material will be removed from the vehicles prior to storing them outside.

Mr. Hamp explained that the garbage trucks will bring the waste to the facility and tip onto the floor. Some waste will be sorted, like batteries. The waste will be dumped onto a conveyor, which goes through a hopper, compressed and then baled. With the baler being operated inside, it is easier to have continuous operation and there is less chance for breakdowns. There are also better compaction rates when the material is warm.

The bales that come off the compactor are wrapped in LDP plastic, which is heavy duty and flexible.

A shredder will be used to shred wood and cardboard. It will then be pelletized and fed in a unit to heat the facility.

Mr. Fortier asked if the shredder could handle pallets.

Mr. Hamp advised that any type of crates and pallets will go through the shredder. It is anticipated that there is sufficient wood and cardboard waste to heat the facility.

Deputy Mayor Stevenson clarified that there will not be a lot of separation of waste on the tipping floor. Any separation will be carried out by the consumer and programs will be put in place at a later date. For instance, if any item is dumped with the cardboard, it would be removed from the tipping floor before the cardboard is shredded. The same on garbage collection days; any anomalies would be removed. When the time comes for other recycling, separation of food waste or plastics, the material will be source separated. There will never be staff to sort the waste.

Mr. Fortier noted that in order for any recycling or composting programs to work, it relies heavily on the consumer to do source separation.

Mr. Fortier asked about public access to the waste transfer station.

Mr. Hamp advised that conceptual planning is ongoing, but explained that there will be a section where the public can come in, however, they will not be able to gain access to the rest of the facility for their own safety.

The shredder can also shred tires, which will be used as an interim cover for the construction and demolition waste area.

A diagram was used to show what the reuse store would look like.

Mr. Fortier asked about salvaging wood.

Mr. Hamp advised that all the operational details have not been developed. A space will be needed and will be designed in the facility.

Mr. Hamp explained that there will be another public meeting regarding operations.

Deputy Mayor Stevenson pointed out that there is a considerable amount of land at the front of the building and it has not been determined what it will be used for. He noted that there would be some place on the site that residents will be able to drop off separated wood waste like crates and pallets. In addition, hopefully any wood that can be reused will be set aside for people to access. How people will access it will have to be determined.

Mr. Fortier noted that before the wood dump caught on fire, it was an amazing spot for salvaging wood.

Mr. Hamp showed a rendering of a concept of what the existing landfill will look like once it is covered and capped. It is benign looking. He noted that a lot of complaints are received regarding when you are getting off a ship, the first thing you see is the landfill. The idea is to properly close the site with ditches and berms. A picture showing the closed landfill looking from the deep-sea port showed only a blip on the landscape.

Mr. Fortier commented that the cover on the old landfill is smooth and a nice transition.

Mr. Hamp noted it was discussed about turning the closed landfill green. He advised that the wastewater treatment plant is going to produce a significant amount of sludge that potentially could be used as fertilizer for the closed landfill.

Deputy Mayor Stevenson noted that the solid sludge from the wastewater treatment plant could be trucked to the waste transfer station compacted and baled.

Mr. Hamp noted that the solid sludge could be used as a final greening cover on the cells. He explained that it would be a shame to bale the waste, because it is a resource that has nutrients and is the same as fertilizer. The waste needs to be stabilized, which can be done by raking it out over land and allowing it to freeze and thaw a couple of times.

Deputy Mayor Stevenson pointed out they visited a waste facility outside of Montreal where the solid waste was in rows and it was turned every day until it was ready to be used as a fertilizer to grow grass.

Mr. Hamp advised that there is sufficient land at the new landfill to accommodate that process.

A map was used to show the proposed location of the new fire training ground with a pad and berm around it. There will be a pond in the middle that would be used to draw water for training exercises. This site would also be fenced.

Deputy Mayor Stevenson asked if the existing buildings on the landfill will be moved to the new landfill site.

Mr. Hamp advised that originally one building would be moved, but the existing buildings on the landfill are currently being evaluated.

He noted that two office trailers were purchased and requires renovations, but they will be placed on the site and used during construction. Once the construction has been completed, the office trailers will be turned over to the fire department. The sea can used for training at the current fire training site will be dismantled and moved to the new fire training ground.

Mr. Fortier asked if there is a plan for waste oil as it pertains to storage, being reused or shipped out.

Mr. Hamp advised that there is a potential to use it in the biomass burner, but given the low quantities that is actually recouped, it will probably be shipped out with the rest of the household hazardous waste.

Mr. Fortier was uncertain if people know where to bring waste oil.

Mr. Hamp noted that most people take their vehicles to garages to have the oil changed and the garage disposes of the oil.

Deputy Mayor Stevenson guessed that most homeowners dispose of the oil in their garbage and it ends up in the landfill. He felt that residents would be happy to bring the old oil to the landfill if they could do that.

Mr. Hamp noted that the current household hazardous waste facility ships out several sea cans of material yearly.

Mr. Fortier suggested that residents be advised that there is a place to dispose of oil.

It was noted that there are people who do burn waste oil.

Deputy Mayor Stevenson suggested that if the waste oil is accepted at the site, there may be places that burn the waste oil and it would not have to be shipped south.

Mr. Hamp explained that the City wanted to make sure that Qikiqtani Inuit Association was aware of what the project entailed. He noted that there are conceptual drawings on the project, which may change in the final design. He advised that if there are any questions, concerns or comments regarding the project, now would be the time to address them.

A city staff member provided Mr. Fortier with a question/answer handout that was developed, as well as a comment/question form that can be completed and submitted to the City.

Deputy Mayor Stevenson advised that Mr. Fortier can circulate the forms as well.

Mr. Fortier indicated that the big thing is the public access on the additional three kilometres of road that is being constructed. He does not see any other concerns at this time.

Mr. Hamp commented that based on the activity being carried out at the landfill site, there is no reason why anyone would want to go there.

Deputy Mayor Stevenson pointed out that public access of the road will probably provide better access to the river than what is currently being used.

Mr. Fortier also noted it would gain access to Crazy Lake. Public access is important for hunting and fishing.