

# Virtual Tour

## ULI's Coastal Forum Virtually Tours Toronto's Waterfronts and Floodproofing

### Projects

Date: May 13, 2020

00:00:05 --> 00:00:08: Hey good morning everybody. Welcome to utilize coastal forums spring

00:00:08 --> 00:00:09: meeting webinar.

00:00:09 --> 00:00:12: I'm Leah Shepherd from utilized Urban Resilience program and we

00:00:12 --> 00:00:14: are so glad that you can join us today.

00:00:14 --> 00:00:17: While I'm showing the rules of the road to ensure

00:00:17 --> 00:00:20: our web and R foster respectful and educational environment.

00:00:20 --> 00:00:23: Please feel free to introduce yourself in the chat window

00:00:23 --> 00:00:25: at the bottom of your screen by sharing who you

00:00:25 --> 00:00:28: are and resilient Waterfront Bilton project.

00:00:28 --> 00:00:31: They are interested in learning more about.

00:00:31 --> 00:00:32: Just so a couple words,

00:00:32 --> 00:00:34: the road here. Please keep an eye on your mute

00:00:34 --> 00:00:35: button.

00:00:35 --> 00:00:37: It is at the bottom left hand side of your

00:00:37 --> 00:00:37: screen.

00:00:37 --> 00:00:39: If you have any questions,

00:00:39 --> 00:00:41: please feel free to send them in the chat box

00:00:41 --> 00:00:44: and speakers will answer them at an appropriate time.

00:00:44 --> 00:00:47: If you know you have a distracting background or notice

00:00:48 --> 00:00:50: that the meeting bandwidth may be limited,

00:00:50 --> 00:00:52: please consider turning off your video.

00:00:52 --> 00:00:55: We suggest that users use the side-by-side mode to see

00:00:56 --> 00:00:58: the presentation and speaker at the same time,

00:00:58 --> 00:01:01: you can access the setting by turning on the side

00:01:01 --> 00:01:04: by side mode under the view options button at the

00:01:04 --> 00:01:05: top of your screen.

00:01:07 --> 00:01:11: This webinar will be recorded and uploaded to Knowledge Finder

00:01:11 --> 00:01:15: shortly after the webinar ends and with that I'm going

00:01:15 --> 00:01:17: to hand it over to Jack Smith,

00:01:17 --> 00:01:18: chair of the Coastal Forum,

00:01:18 --> 00:01:21: to kick off the web and R in just about

00:01:21 --> 00:01:21: a minute.

00:01:24 --> 00:01:24: Thank you.

00:01:28 --> 00:01:30: Well yeah, thank you very much.

00:01:30 --> 00:01:34: Welcome everyone to the first virtual convening of the Coastal

00:01:34 --> 00:01:34: Forum.

00:01:34 --> 00:01:37: It may not be our last and certainly we appreciate

00:01:37 --> 00:01:41: the speakers efforts to accommodate this new venue and we

00:01:41 --> 00:01:43: appreciate your efforts to participate.

00:01:43 --> 00:01:47: This way. We want to make it as similar to

00:01:47 --> 00:01:48: our regular.

00:01:48 --> 00:01:51: Convenings as we can there will be a short session

00:01:51 --> 00:01:52: afterwards.

00:01:52 --> 00:01:55: 15 minutes can be allowed after the session for some

00:01:55 --> 00:01:58: questions and answers back and forth with the speakers or

00:01:58 --> 00:02:02: discussion among ourselves as best we could do in this

00:02:02 --> 00:02:05: type of format. Suggestions for the future is what we'll

00:02:05 --> 00:02:06: be looking for as well.

00:02:06 --> 00:02:09: At the end of the program will focus on that.

00:02:09 --> 00:02:12: For now, we want to certainly thank the team in

00:02:12 --> 00:02:15: Toronto that has been able to put together a great

00:02:15 --> 00:02:17: presentation for us of a very.

00:02:17 --> 00:02:22: Significant large multiyear resilience project that I think will

00:02:22 --> 00:02:23: learn

00:02:22 --> 00:02:23: a lot from today.

00:02:23 --> 00:02:26: As you know, the Coastal Forum is a member driven

00:02:26 --> 00:02:27: initiative.

00:02:27 --> 00:02:29: It's up to us to figure out what works and

00:02:29 --> 00:02:31: what doesn't on our waterfront.

00:02:31 --> 00:02:34: What can we do for the long term values that

00:02:34 --> 00:02:37: we're putting into real estate development?

00:02:37 --> 00:02:39: How do we make it more resilient?

00:02:39 --> 00:02:41: How do we deal with the sea level rise?

00:02:41 --> 00:02:45: The climate change? The increasing intensity of storms?

00:02:45 --> 00:02:48: The rain bombs that that make rainfall.

00:02:48 --> 00:02:52: Something harder to deal with and then we have been

00:02:52 --> 00:02:54: dealing with in the past decades.

00:02:54 --> 00:02:56: So today open your notebooks,  
 00:02:56 --> 00:02:59: try to take some notes.  
 00:02:59 --> 00:03:02: This will be recorded so you'll be able to view  
 00:03:02 --> 00:03:05: it again if you miss part of it or need  
 00:03:05 --> 00:03:06: to leave unexpectedly,  
 00:03:06 --> 00:03:09: but we appreciate very much for being here today.  
 00:03:09 --> 00:03:13: We're going to hear from Waterfront Toronto Candy on the  
 00:03:13 --> 00:03:14: project,  
 00:03:14 --> 00:03:18: director of the Portlands integration component will be  
 speaking to  
 00:03:18 --> 00:03:21: us first kind of giving us an overview of the  
 00:03:22 --> 00:03:22: situation,  
 00:03:22 --> 00:03:26: the area, the rather large area on the waterfront in  
 00:03:26 --> 00:03:31: Toronto that this project is confronting these issues on.  
 00:03:31 --> 00:03:34: Peter Preston, civil engineer with a wrap.  
 00:03:34 --> 00:03:38: He's been involved in practice for 13 years and design  
 00:03:38 --> 00:03:44: and construction of major transportation municipal projects in  
 the Greater  
 00:03:45 --> 00:03:47: Toronto Area in Canada as a very.  
 00:03:47 --> 00:03:54: Good background, Anna Green infrastructure stormwater  
 management brownfield development and  
 00:03:54 --> 00:03:56: focus on water intensive development.  
 00:03:56 --> 00:04:00: We also are welcoming Don Forbes and Meryl Schenker with  
 00:04:00 --> 00:04:01: Waterfront Toronto.  
 00:04:01 --> 00:04:03: As you can see their titles there.  
 00:04:03 --> 00:04:06: This is a hard working team that is put together  
 00:04:06 --> 00:04:09: and has already seen success and part of the project  
 00:04:09 --> 00:04:12: and are working towards the next phases of it and  
 00:04:12 --> 00:04:15: we look forward very much to hearing from you.  
 00:04:15 --> 00:04:18: So at this time I believe that Leah will be  
 00:04:18 --> 00:04:21: kind of master of ceremonies in terms of transitioning since  
 00:04:21 --> 00:04:24: she controls the mouse and at this time would ask  
 00:04:24 --> 00:04:26: her to please work with.  
 00:04:26 --> 00:04:28: Canon get going.  
 00:04:30 --> 00:04:32: OK, thank you very much,  
 00:04:32 --> 00:04:35: Peter and Leah wanted to thank everyone for coming out  
 00:04:35 --> 00:04:35: today.  
 00:04:35 --> 00:04:38: A little bit of background on myself before we jump  
 00:04:38 --> 00:04:39: into it,  
 00:04:39 --> 00:04:42: so I've been working on the Portland's project since 2002.  
 00:04:42 --> 00:04:45: The majority of time with the concert Toronto and Region  
 00:04:45 --> 00:04:49: Conservation Authority in partnership with Waterfront  
 Toronto,

00:04:49 --> 00:04:51: and in the last couple of years I've moved over  
00:04:51 --> 00:04:54: to Waterfront Toronto to help with the team.  
00:04:54 --> 00:04:57: With the coordination with larger integration with a variety of  
00:04:58 --> 00:05:00: different types of infrastructure projects,  
00:05:00 --> 00:05:04: public and private. That are occurring in conjunction to all  
00:05:04 --> 00:05:09: the work we're doing here for creating a resilient community  
00:05:09 --> 00:05:11: at the mouth of Toronto.  
00:05:11 --> 00:05:13: So jumping into the project itself,  
00:05:13 --> 00:05:18: this project area has some significant flood considerations we  
have  
00:05:18 --> 00:05:19: to look at.  
00:05:19 --> 00:05:24: It is of course located within Canada's largest urban  
municipality,  
00:05:24 --> 00:05:28: and as such comes with all the typical urban hydrology  
00:05:29 --> 00:05:32: considerations have to do with in the built form.  
00:05:32 --> 00:05:36: It also is at the confluence of the Lake Ontario,  
00:05:36 --> 00:05:40: so we do have the consideration of higher Lake levels  
00:05:40 --> 00:05:43: that we've been recently dealing with.  
00:05:43 --> 00:05:47: And of course it also has a significant River.  
00:05:47 --> 00:05:50: It's not large in comparison to many rivers,  
00:05:50 --> 00:05:53: and throughout the States and Canada,  
00:05:53 --> 00:05:57: but it is a significant urban River system that flows  
00:05:58 --> 00:06:00: right through the middle of the site.  
00:06:00 --> 00:06:05: That does create a significant flood vulnerability.  
00:06:05 --> 00:06:08: Under provincial flood regulations in Ontario.  
00:06:11 --> 00:06:13: So jumping into the first bit,  
00:06:13 --> 00:06:17: we have, sorry you've jumped a little bit ahead of  
00:06:17 --> 00:06:18: the mutant there only.  
00:06:18 --> 00:06:21: Oh, so I just wanted to see if we can  
00:06:21 --> 00:06:25: go back to urban flooding so we do have significant  
00:06:25 --> 00:06:29: amount of high intensity rainfall events that occur throughout  
the  
00:06:29 --> 00:06:32: Toronto area on a regular basis.  
00:06:32 --> 00:06:35: This was an event that occurred back in 2013 where  
00:06:35 --> 00:06:39: we had about 3 hours of intense rainfall that overwhelmed  
00:06:39 --> 00:06:42: all our urban systems and River systems.  
00:06:42 --> 00:06:46: And these types of storms are increasing in frequency,  
00:06:46 --> 00:06:49: so the significant sideration next slide,  
00:06:49 --> 00:06:51: please.  
00:06:51 --> 00:06:55: Lake Ontario. The last two years I alluded to earlier,  
00:06:55 --> 00:06:57: Lake Ontario has.  
00:06:57 --> 00:07:03: Experienced record level conditions. As most of the Great  
Lakes

00:07:03 --> 00:07:07: have in the last particularly last year 2017 was a  
00:07:07 --> 00:07:11: new record and then 2019 was even higher than the  
00:07:11 --> 00:07:15: previous 2017 with the project location being on.  
00:07:15 --> 00:07:19: Lakeville area completed about 100 years ago.  
00:07:19 --> 00:07:23: We don't have a lot of free board over the  
00:07:23 --> 00:07:26: existing Lake level conditions,  
00:07:26 --> 00:07:29: so making sure that. Anything that we put in there  
00:07:29 --> 00:07:31: is a sustainable community in the area.  
00:07:31 --> 00:07:34: Has to consider the influences of Lake directly as well  
00:07:34 --> 00:07:36: as on the stormwater infrastructure.  
00:07:36 --> 00:07:36: Next slide.  
00:07:38 --> 00:07:44: River in flooding. We have unique regulatory conditions in  
Ontario.  
00:07:44 --> 00:07:48: The regulatory floodplain is defined by the province as the  
00:07:49 --> 00:07:53: one in 100 year flood event or the largest rainfall  
00:07:53 --> 00:07:57: event on record within a specific geographic area.  
00:07:57 --> 00:08:01: In our case, Toronto was hit with the remnants of  
00:08:01 --> 00:08:05: Hurricane Hazel in the 1950s and as a result we  
00:08:05 --> 00:08:09: utilized the the precipitation that has was.  
00:08:09 --> 00:08:13: Inundated on the Toronto area and model that throughout our  
00:08:13 --> 00:08:17: various watersheds to determine what is the extent of  
flooding.  
00:08:17 --> 00:08:20: This area. At the mouth of the Don River.  
00:08:20 --> 00:08:24: Into the inner harbor. Toronto is the largest flood vulnerable  
00:08:24 --> 00:08:26: area in the Toronto region.  
00:08:26 --> 00:08:27: Next slide.  
00:08:31 --> 00:08:35: As you can see, our project area is at the  
00:08:35 --> 00:08:37: mouth of the Don River Valley.  
00:08:37 --> 00:08:41: Lived on River itself, has covers about an area of  
00:08:41 --> 00:08:46: about 210 square kilometres and it does start up in  
00:08:46 --> 00:08:51: the oakwood's brain and flows through series of  
municipalities,  
00:08:51 --> 00:08:54: culminating in the highly urbanized area,  
00:08:54 --> 00:08:59: Toronto. The River discharges into Lake Ontario at a right  
00:08:59 --> 00:09:00: hand corner.  
00:09:00 --> 00:09:04: Called the Keating Channel and most of the area surrounding  
00:09:04 --> 00:09:06: it is was Lakefield.  
00:09:06 --> 00:09:10: As I mentioned earlier, covering all going a good distance  
00:09:10 --> 00:09:13: upstream of the River where the previous mouth of the  
00:09:13 --> 00:09:17: River used to occur and as such creates a significant  
00:09:17 --> 00:09:22: consideration on moving forward with the design for any  
works  
00:09:22 --> 00:09:23: next slide.

00:09:23 --> 00:09:28: Extent of the floodplain is.

00:09:28 --> 00:09:31: So what you see here is the results of a

00:09:31 --> 00:09:35: combination of the hydrological modeling and hydraulic modeling.

00:09:35 --> 00:09:38: To determine that under a hurricane Hazel like event in

00:09:38 --> 00:09:39: the Dawn watershed,

00:09:39 --> 00:09:43: we'd have approximately 290 hectares of land at risk of

00:09:43 --> 00:09:47: flooding that would occur through multiple locations at the at

00:09:47 --> 00:09:51: the right hand turn into the Keating Channel just underneath

00:09:51 --> 00:09:54: the railway embankment, which you can see just to the

00:09:54 --> 00:09:57: left of the middle of the screen and also the

00:09:57 --> 00:10:00: ponding of water that occurs near the top of the

00:10:00 --> 00:10:04: screen. There's an underpass. Called Eastern Ave that allows spill

00:10:04 --> 00:10:08: into the residential communities in that area as well.

00:10:08 --> 00:10:11: So the intent of this project is to eliminate the

00:10:11 --> 00:10:12: flood risk to this area.

00:10:12 --> 00:10:14: Up to the regulatory flood.

00:10:14 --> 00:10:17: Plus an additional 50 centimeters of freeboard,

00:10:17 --> 00:10:20: which is actually a significant mental water under a major

00:10:20 --> 00:10:24: flood event given the flow velocities to to deal with

00:10:24 --> 00:10:27: the sustainability and certainly due to climate change and other

00:10:27 --> 00:10:30: factors. Next slide.

00:10:35 --> 00:10:37: What you could also see is to the left was

00:10:38 --> 00:10:41: what used to be the floodplain on the West side

00:10:41 --> 00:10:42: of the Don River,

00:10:42 --> 00:10:45: a project that we worked on with Waterfront GRC in

00:10:46 --> 00:10:48: the city back in the 2000s was lower.

00:10:48 --> 00:10:53: Don River, Western media flood protection project combined with the

00:10:53 --> 00:10:56: West Don lands at Cork Town Commons Project,

00:10:56 --> 00:11:01: which basically established a large landform which will be talked

00:11:01 --> 00:11:01: about.

00:11:01 --> 00:11:04: Later on by Peter combined with the new railway railway

00:11:04 --> 00:11:08: expansion Bridge to deal with the water that would have

00:11:08 --> 00:11:11: been pushed it back into the River as result of

00:11:11 --> 00:11:13: this new land form and so about 10 years over

00:11:13 --> 00:11:16: 10 years ago we illuminated the flood risk to much

00:11:16 --> 00:11:18: of the downtown core of Toronto.

00:11:18 --> 00:11:21: So now we're trying to finish the project off with

00:11:21 --> 00:11:23: the Portland's project.

00:11:23 --> 00:11:26: Eliminate the remaining flood vulnerable area.

00:11:26 --> 00:11:27: Next slide.

00:11:34 --> 00:11:38: The option that we have basically has a different lots

00:11:38 --> 00:11:39: of different components.

00:11:39 --> 00:11:42: We are doing. Basically we're trying to create 3 new

00:11:42 --> 00:11:46: outlets for the River instead of having the River turn

00:11:46 --> 00:11:50: right directly into the Keating Channel as it's also outlet,

00:11:50 --> 00:11:53: we're actually going to be creating a low flow base

00:11:53 --> 00:11:53: flow,

00:11:53 --> 00:11:57: naturalised River channel that continues straight South of the

00:11:58 --> 00:11:58: Channel,

00:11:58 --> 00:12:01: and then veers through meandering wave pattern.

00:12:01 --> 00:12:02: Through the middle of the site,

00:12:02 --> 00:12:06: effectively creating an island called Billiards Island as well as

00:12:06 --> 00:12:07: another island to the South Pole.

00:12:07 --> 00:12:09: Some precinct.

00:12:09 --> 00:12:12: This River naturalized River system will have a series of

00:12:12 --> 00:12:14: adjacent wetlands and an riparian areas.

00:12:14 --> 00:12:16: Tide in with park scapes.

00:12:16 --> 00:12:18: Before you get into development areas,

00:12:18 --> 00:12:20: the third outlet you see goes straight into the ship

00:12:20 --> 00:12:24: channel that's actually going to be a wetland that separated

00:12:24 --> 00:12:25: from the Don River.

00:12:25 --> 00:12:28: Them fast majority of time.

00:12:28 --> 00:12:31: Ann is only fed by water from Lake Ontario through

00:12:31 --> 00:12:32: the ship Channel itself,

00:12:32 --> 00:12:36: but an under major severe events around the one one

00:12:36 --> 00:12:38: and 25 year to 150 year event.

00:12:38 --> 00:12:40: Flood waters from the dawn to be able to go

00:12:40 --> 00:12:42: through that location as well,

00:12:42 --> 00:12:46: acting as a naturalized spillway so it has multiple benefits,

00:12:46 --> 00:12:50: improving ecology, recreation, as well as providing flood

00:12:50 --> 00:12:54: relief so

00:12:54 --> 00:12:55: that we're not putting all the flows erosive flows into

00:12:55 --> 00:12:58: a single location.

00:12:58 --> 00:13:01: The Keating Channel remains in place is a hard.

00:13:01 --> 00:13:06: Deep wide channel. It provides an urban context to the

00:13:06 --> 00:13:07: future communities around the area of prominent Ann and

00:13:07 --> 00:13:11: recreational

00:13:07 --> 00:13:07: space under regular,

00:13:07 --> 00:13:11: frequent flooding, it becomes the main conduit for

00:13:07 --> 00:13:11: floodwaters to

00:13:11 --> 00:13:12: go that way,  
00:13:12 --> 00:13:17: also providing protection against the naturalized components and under a  
00:13:17 --> 00:13:18: regulatory flood event.  
00:13:18 --> 00:13:23: It takes about 60% of the flows as well.  
00:13:23 --> 00:13:23: Next slide.  
00:13:29 --> 00:13:30: This is a bit of a video,  
00:13:30 --> 00:13:33: so this gives you a conceptual idea of what the  
00:13:33 --> 00:13:37: River will look like with the naturalized River wetlands.  
00:13:37 --> 00:13:40: Urban areas with the built form around it,  
00:13:40 --> 00:13:42: and if you could hit the little arrow there,  
00:13:42 --> 00:13:46: Leah that you can see what happens under the regulatory  
00:13:46 --> 00:13:48: floor flow conditions with the storm.  
00:13:48 --> 00:13:51: Just give you context before I sign off.  
00:13:51 --> 00:13:54: Let others chat the base flow conditions we're looking at  
00:13:55 --> 00:13:57: about four cubic meters per second,  
00:13:57 --> 00:13:59: or in the summer for the River itself.  
00:13:59 --> 00:14:03: Under the regulatory storm, events were looking at 5th,  
00:14:03 --> 00:14:07: basically 1600 cubic meters per second of water that we  
00:14:07 --> 00:14:09: have to convey into Lake Ontario.  
00:14:09 --> 00:14:13: The 100 year event is about 500 and 500 cubic  
00:14:13 --> 00:14:14: meters per second,  
00:14:14 --> 00:14:17: so it gives you sort of the magnitude of volumes  
00:14:17 --> 00:14:19: of water we're dealing with.  
00:14:19 --> 00:14:22: So with that I will sign off my portion.  
00:14:30 --> 00:14:34: Right, hi thank you Peter go ahead.  
00:14:34 --> 00:14:37: Thanks, thanks Ken. Thanks Sally and Jack for bringing us  
00:14:37 --> 00:14:38: together today.  
00:14:41 --> 00:14:43: My name is Peter Preston.  
00:14:43 --> 00:14:47: I'm a civil engineer in Arabs in infrastructure practice here  
00:14:47 --> 00:14:50: in the in Toronto and today when we talking about  
00:14:50 --> 00:14:54: Cork Town common is rather a unique park in in  
00:14:54 --> 00:14:56: Toronto. So it's a Cork town.  
00:14:56 --> 00:14:59: Common is 7 Hector signature and an award winning park  
00:15:00 --> 00:15:00: in the West.  
00:15:00 --> 00:15:05: Don Lands neighborhood Ann really formed the cornerstone  
of the  
00:15:05 --> 00:15:09: areas that revitalization at the mouth of the Don River  
00:15:09 --> 00:15:12: and some of the short list of the park amenities  
00:15:12 --> 00:15:15: and. Into the large pavilion water play area.  
00:15:15 --> 00:15:20: Sandy playgrounds dog run, walking trails and and over 700  
00:15:20 --> 00:15:23: trees and thousands of shrubs.



00:15:23 --> 00:15:26: Including the city's first artificial March March,  
00:15:26 --> 00:15:30: which provides a great habitat for birds and phibians,  
00:15:30 --> 00:15:33: and really is a destination within the city.  
00:15:33 --> 00:15:36: Now, what makes at the park unique is that it's  
00:15:36 --> 00:15:40: integrated with the areas flood protection landform as well as  
00:15:40 --> 00:15:45: its ambitious sustainability and stormwater management and  
and water reuse  
00:15:45 --> 00:15:49: strategy. These are the two short stories that I'll focus  
00:15:49 --> 00:15:50: on today.  
00:15:50 --> 00:15:52: You don't mind.  
00:15:52 --> 00:15:53: Flipping Leo.  
00:15:56 --> 00:15:59: So just some very quick facts about the park.  
00:15:59 --> 00:16:02: It's located East of Toronto's downtown,  
00:16:02 --> 00:16:05: adjacent to the Don River.  
00:16:05 --> 00:16:08: And with the Portlands just located to the South,  
00:16:08 --> 00:16:11: it was officially opened in July 2014.  
00:16:11 --> 00:16:15: It was developed by Waterfront Toronto and is now operated  
00:16:15 --> 00:16:17: and maintained by the city's parks,  
00:16:17 --> 00:16:22: Forestry and Recreation. Division was designed by  
landscape architects Michael  
00:16:22 --> 00:16:27: Van Valkenburgh Associates with multi dis engineering  
services by Arab,  
00:16:27 --> 00:16:30: which included civil, structural, mechanical,  
00:16:30 --> 00:16:35: electrical and sustainability design. It was constructed by  
Eastern Construction  
00:16:35 --> 00:16:35: Company.  
00:16:35 --> 00:16:38: At a cost of 16,000,000.  
00:16:41 --> 00:16:44: And we can flip to the next one late.  
00:16:46 --> 00:16:50: So the the Western lands both once a brownfield site  
00:16:50 --> 00:16:53: with a large risk of flooding from the Don River  
00:16:53 --> 00:16:54: as Canada noted,  
00:16:54 --> 00:16:59: and the flood hazard lands could not be redeveloped until  
00:16:59 --> 00:17:04: the Conservation Authority requirements for protecting that  
land for the  
00:17:04 --> 00:17:07: major for the major storms were satisfied.  
00:17:07 --> 00:17:12: And that solution was the flood protection landform.  
00:17:12 --> 00:17:14: And as the name suggests,  
00:17:14 --> 00:17:17: that protects the area from flooding in the Don River  
00:17:17 --> 00:17:21: Valley and so prior to revitalization of the area.  
00:17:21 --> 00:17:24: the West Donlands really was a remnant of the dairy's  
00:17:25 --> 00:17:26: industrial past,  
00:17:26 --> 00:17:28: which was home to factory cement plants,  
00:17:28 --> 00:17:34: hog processing facilities and even munitions work during

World War

00:17:34 --> 00:17:35: One.

00:17:35 --> 00:17:38: Really, as a soil contamination was was also a significant

00:17:39 --> 00:17:41: barrier to the development as well,

00:17:41 --> 00:17:44: and so the the landform as you see on the

00:17:44 --> 00:17:47: bottom left is about four meters high and extends for

00:17:47 --> 00:17:50: over 700 meters from Queen St and in the North

00:17:50 --> 00:17:54: to the rail corridor in the self in required about

00:17:54 --> 00:17:58: 400,000 cubic meters of clean soil that was imported from

00:17:58 --> 00:18:00: across the Greater Toronto area,

00:18:00 --> 00:18:03: in which also acted as a as a clean cap

00:18:03 --> 00:18:05: over the contaminated soils.

00:18:05 --> 00:18:09: And surfing a dual purpose and so the construction of

00:18:09 --> 00:18:12: the land form was completed in 2012 and it removed

00:18:12 --> 00:18:16: well over 200 hectares of land from the Don River

00:18:16 --> 00:18:21: floodplain, which included areas extending as far West as almost

00:18:21 --> 00:18:26: to the downtown financial district and early estimates were that

00:18:26 --> 00:18:30: the landform removed more than 160 million dollars in flood

00:18:30 --> 00:18:34: flood damage risk in the event of a major storm.

00:18:36 --> 00:18:37: Flipping to the next one.

00:18:41 --> 00:18:45: So the flood protection line form itself was developed by

00:18:46 --> 00:18:52: by Infrastructure Ontario and the Toronto Region Conservation Authority with

00:18:52 --> 00:18:57: design and construction by a common and elite construction.

00:18:57 --> 00:19:01: And here you can see a larger section through the

00:19:01 --> 00:19:04: landform with the park above.

00:19:04 --> 00:19:09: Sitting on the landform and the regulatory flood depth for

00:19:09 --> 00:19:11: Hurricane Hazel,

00:19:11 --> 00:19:14: shown in the blue dotted line.

00:19:14 --> 00:19:18: How much extends through the park and the clay core

00:19:18 --> 00:19:20: of the landform,

00:19:20 --> 00:19:24: which prevents water from penetrating through it?

00:19:28 --> 00:19:32: And then flip the next one layer.

00:19:32 --> 00:19:37: So the the flood protection landform enabled the development of

00:19:37 --> 00:19:39: the West Donlands.

00:19:39 --> 00:19:44: I'm extending to beyond the Distillery District to Parliament St.

00:19:44 --> 00:19:48: In the background there, which included the dry side of

00:19:48 --> 00:19:49: the landform,

00:19:49 --> 00:19:52: which is the Cork town common side.

00:19:52 --> 00:19:57: You can see the the delineation line between the flushable  
 00:19:57 --> 00:20:00: wet and the protected dry side of the landform and  
 00:20:01 --> 00:20:03: the great image on the right,  
 00:20:03 --> 00:20:08: showing the successful planting and naturalization elements  
 of the park,  
 00:20:08 --> 00:20:14: including the. The Marsh and the Aspen Grove and the  
 00:20:14 --> 00:20:18: the The Pavilion just on center left.  
 00:20:18 --> 00:20:22: And so the landform really could have been seen as  
 00:20:22 --> 00:20:23: a as a constraint,  
 00:20:23 --> 00:20:29: but instead the landscape architects used it to become.  
 00:20:29 --> 00:20:33: More of an integral part of the park design and  
 00:20:33 --> 00:20:34: and as you can see,  
 00:20:34 --> 00:20:39: it's really enabled. Spectacular views over the Toronto  
 skyline from  
 00:20:39 --> 00:20:42: the the new elevations across the park.  
 00:20:45 --> 00:20:49: Great if you can flip to the next slide please.  
 00:20:49 --> 00:20:54: So moving on from from the parks integration with the  
 00:20:54 --> 00:20:58: flood protection land format onto the bit of the water  
 00:20:58 --> 00:21:02: story for the site and so arups design with water  
 00:21:02 --> 00:21:06: approach places every integrated water cycle at the heart of  
 00:21:07 --> 00:21:09: sustainable design and delivery,  
 00:21:09 --> 00:21:14: and these were some of the guiding principles that were  
 00:21:14 --> 00:21:17: applied in the park design.  
 00:21:17 --> 00:21:22: Including acknowledging water as a valuable resource by by  
 minimizing  
 00:21:22 --> 00:21:23: potable water use,  
 00:21:23 --> 00:21:27: and reusing greywater for the parks irrigation and in March  
 00:21:27 --> 00:21:27: supply.  
 00:21:27 --> 00:21:32: Returning water to the Earth by minimizing impermeable  
 surfaces and  
 00:21:32 --> 00:21:35: promoting at source stormwater control.  
 00:21:35 --> 00:21:38: Supplying water for life by irrigating the plant life,  
 00:21:38 --> 00:21:42: improving microclimate and fostering diversity.  
 00:21:42 --> 00:21:45: Protecting from floods. Of course.  
 00:21:45 --> 00:21:49: Safeguarding the area from flooding in extreme events which  
 other  
 00:21:49 --> 00:21:53: the flood form served and reconnecting people with water by  
 00:21:53 --> 00:21:59: providing a legacy infrastructure offering recreational  
 educational benefits and really  
 00:21:59 --> 00:22:02: adding to the local community.  
 00:22:02 --> 00:22:05: And next slide please.  
 00:22:08 --> 00:22:15: And so, um. A closed loop water recycling system really  
 00:22:15 --> 00:22:20: helps minimize the amount of municipal supplied.

00:22:20 --> 00:22:25: Water is actually used in the parks maintenance.

00:22:25 --> 00:22:30: And the park stormwater management system manage is the majority

00:22:30 --> 00:22:32: over stormwater on site,

00:22:32 --> 00:22:38: which results in a significant reduction of discharge volumes from

00:22:38 --> 00:22:40: the site and outperforms.

00:22:40 --> 00:22:46: Required local criteria and so some of the key components

00:22:46 --> 00:22:47: of the system.

00:22:47 --> 00:22:49: Included.

00:22:49 --> 00:22:53: Collection of grey water from the splash pads,

00:22:53 --> 00:22:56: which is then treated on site before being conveyed to

00:22:56 --> 00:22:57: the parks.

00:22:57 --> 00:23:02: Marsh and irrigation systems. The collective grey water is treated

00:23:02 --> 00:23:08: using microfilters and ultraviolet sterilization equipment that's located beneath the

00:23:08 --> 00:23:12: Park pavilion and the treated water is combined.

00:23:12 --> 00:23:17: With the park, why drainage system that collects stormwater can

00:23:17 --> 00:23:18: convey that to the Marsh,

00:23:18 --> 00:23:23: which also function as a tertiary treatment system and combining

00:23:23 --> 00:23:28: the filtered and disinfected grey water from the play area

00:23:28 --> 00:23:32: and with the natural rainfall provides a more frequent flow

00:23:32 --> 00:23:34: of new water in the Marsh,

00:23:34 --> 00:23:39: which also helps maintain oxygen levels and prevents stagnation as

00:23:39 --> 00:23:40: well.

00:23:40 --> 00:23:43: And another kind of hidden element is.

00:23:43 --> 00:23:46: A 900 cubic meter underground cistern,

00:23:46 --> 00:23:50: which has a footprint of about 40 by 15 meters

00:23:50 --> 00:23:54: under the number 4 on the top of the screen

00:23:54 --> 00:23:59: and this sister in stores the collected surface stormwater and

00:23:59 --> 00:24:04: overflows from the Martian is reused for the park wide

00:24:04 --> 00:24:09: irrigation and so in summer the splash pad itself can

00:24:09 --> 00:24:13: consume upwards of 570,000 liters of water.

00:24:13 --> 00:24:16: Each week, and instead of being wasted,

00:24:16 --> 00:24:20: it is UV filtered and reused to help reduce the

00:24:20 --> 00:24:20: parks,

00:24:20 --> 00:24:28: potable water consumption and also helping achieve the parks sustainability

00:24:28 --> 00:24:28: goals.

00:24:28 --> 00:24:33: So it really is successful in that respect and.

00:24:33 --> 00:24:37: Um, and that's it. So that's that's Cork town Commons.

00:24:37 --> 00:24:39: And if you're ever looking for a park to visit

00:24:39 --> 00:24:40: in the city,

00:24:40 --> 00:24:42: it it really is a destination.

00:24:45 --> 00:24:46: Thanks Jeff.

00:24:51 --> 00:24:53: Thanks very much.

00:24:53 --> 00:24:54: Don mirror

00:24:58 --> 00:25:00: hi.

00:25:00 --> 00:25:02: I'm just working to share the screen.

00:25:18 --> 00:25:21: Alright, hi everyone, my name is Don Forbes.

00:25:21 --> 00:25:25: I'm the solar mediation and earthworks project director for the

00:25:25 --> 00:25:30: Portland Flood Protection enabling Infrastructure project and thanks a lot

00:25:30 --> 00:25:31: Peter for that.

00:25:31 --> 00:25:34: That really good description of Cork Town common in a

00:25:34 --> 00:25:38: past life I worked on the environmental remediation and approvals

00:25:38 --> 00:25:42: program for for the flood protection platform Cork Town Common

00:25:42 --> 00:25:45: and the redevelopment of West Palm lined up as the

00:25:45 --> 00:25:48: Pan Am Games athletes Village for 2015.

00:25:48 --> 00:25:52: Great, great talk. So I'm gonna take us through the

00:25:52 --> 00:25:55: rest of the Portland's project.

00:25:55 --> 00:25:59: So let's let's get walking for virtual walking.

00:25:59 --> 00:26:02: Here is the path that we're going to be taking

00:26:02 --> 00:26:03: for our tour.

00:26:03 --> 00:26:06: Peters already talked about Cork Town common.

00:26:06 --> 00:26:09: We're going to head South from from that area through

00:26:09 --> 00:26:13: the sediment and debris management area for the project we're

00:26:13 --> 00:26:16: going to cross Lake Shore Blvd and then hit Villier

00:26:16 --> 00:26:19: St Commissioner St and get down to to the shipping

00:26:19 --> 00:26:22: channel taking various stops along the way to describe the

00:26:23 --> 00:26:27: different features of the Portland Protection project that we're going

00:26:27 --> 00:26:29: to see.

00:26:29 --> 00:26:33: This is a current drone survey photo that they were

00:26:33 --> 00:26:34: using.

00:26:34 --> 00:26:38: You could see we've we've raised most of the area

00:26:38 --> 00:26:41: and are working on earthworks program.

00:26:41 --> 00:26:45: This area of Toronto is about 2 to 2 1/2

00:26:45 --> 00:26:51: kilometers due East of the financial center of Toronto Intersection,

00:26:51 --> 00:26:56: King and King and Bay where Canada's primary financial institutions

00:26:56 --> 00:26:59: are all headquartered so.

00:26:59 --> 00:27:02: We're really close to the downtown core and where we're

00:27:02 --> 00:27:05: open to create a great new community in that area

00:27:05 --> 00:27:08: that is really accessible to all the residents.

00:27:08 --> 00:27:10: This is the future. What we're looking at.

00:27:10 --> 00:27:14: You see the Parkland in the wetland habitat that we're

00:27:14 --> 00:27:17: creating along the New River mouth as well as the

00:27:17 --> 00:27:17: new new streets.

00:27:17 --> 00:27:21: New new Cherry Street Commissioner Street on roadway with new

00:27:21 --> 00:27:22: infrastructure.

00:27:24 --> 00:27:28: Peters walked us through Cork Town common so it'll breeze

00:27:28 --> 00:27:32: right past there and will head down to these sentiment

00:27:32 --> 00:27:34: and debris management area.

00:27:34 --> 00:27:37: This is at the northern end of our our project

00:27:37 --> 00:27:41: area and in order to convey the floodwaters underneath the

00:27:41 --> 00:27:42: Lakeshore Bridge,

00:27:42 --> 00:27:45: which is right here, we need to widen that area.

00:27:45 --> 00:27:48: And of course, when you widen river,

00:27:48 --> 00:27:51: you start dropping out the sentiment.

00:27:51 --> 00:27:53: Currently the settlement drops open,

00:27:53 --> 00:27:55: the Keating Channel an is.

00:27:55 --> 00:27:59: Collected by by dredging the Keating Channel every every year

00:27:59 --> 00:28:01: or every few months in the summer,

00:28:01 --> 00:28:05: and then that that material is disposed of elsewhere.

00:28:05 --> 00:28:07: But as soon as we widen this area,

00:28:07 --> 00:28:10: we're going to have to manage all the sentiment in

00:28:10 --> 00:28:11: this location.

00:28:11 --> 00:28:15: We're also going to have to create debris management because

00:28:15 --> 00:28:19: this this 40 kilometre long River is usually brings a

00:28:19 --> 00:28:22: lot of Woody debris during storms down South.

00:28:22 --> 00:28:25: This area is going to house equipment to dredge.

00:28:25 --> 00:28:31: The settlement and collect the debris that comes down the

00:28:31 --> 00:28:32: Don River.

00:28:32 --> 00:28:33: This is.

00:28:36 --> 00:28:38: An aerial drone survey of this zone.

00:28:38 --> 00:28:42: So right in here is where we're going to have

00:28:42 --> 00:28:43: the debris management area.

00:28:43 --> 00:28:47: We have to remove these buildings and this billboard.

00:28:47 --> 00:28:51: We've already taken down all the vegetation in this area  
00:28:51 --> 00:28:53: in preparation of these activities.  
00:28:53 --> 00:28:57: This this road. Here this is the ramps between the  
00:28:57 --> 00:29:00: Don Valley Parkway and the Gardner Expressway,  
00:29:00 --> 00:29:04: which is a major major commuter route and transportation  
route  
00:29:04 --> 00:29:06: in and out of the downtown.  
00:29:06 --> 00:29:11: Or city. This is obviously during our pandemic time,  
00:29:11 --> 00:29:13: so traffic is really light.  
00:29:13 --> 00:29:16: It's usually significantly busier than this,  
00:29:16 --> 00:29:19: and here we have Lakeshore Blvd,  
00:29:19 --> 00:29:23: again a significant arterial arterial Rd within the City of  
00:29:23 --> 00:29:23: Toronto.  
00:29:26 --> 00:29:30: Now we're going to move from the settlement debris  
management  
00:29:30 --> 00:29:33: area down to the intersection of the Don River in  
00:29:33 --> 00:29:35: the Keating Channel.  
00:29:35 --> 00:29:41: Of course, the Don River was channelized.  
00:29:41 --> 00:29:42: So we're going to back.  
00:29:42 --> 00:29:45: Her daughter was channelized a little bit further North of  
00:29:45 --> 00:29:46: this location,  
00:29:46 --> 00:29:48: and as Ken mentioned earlier,  
00:29:48 --> 00:29:51: when they filled in the Marsh at at the mouth  
00:29:51 --> 00:29:52: of the River,  
00:29:52 --> 00:29:54: they made the water taken 90 degree bend in the  
00:29:54 --> 00:29:58: Keating Channel and of course water doesn't particularly like  
to  
00:29:58 --> 00:30:00: do that in a flooding event.  
00:30:00 --> 00:30:02: So when the flood does occur,  
00:30:02 --> 00:30:04: this is one of the areas where it overtops and  
00:30:04 --> 00:30:07: spills out all through the Portland Zan,  
00:30:07 --> 00:30:08: the South of Eastern area.  
00:30:11 --> 00:30:14: This is the current conditions that we're looking at.  
00:30:14 --> 00:30:16: You see, the dawn overflows down here.  
00:30:16 --> 00:30:18: Here is Lakeshore Blvd and your ramps.  
00:30:18 --> 00:30:22: The sedimentary management area will be up in this zone  
00:30:22 --> 00:30:22: in the future,  
00:30:22 --> 00:30:25: and here you have the 90 degree bend of Keating  
00:30:25 --> 00:30:26: Channel.  
00:30:29 --> 00:30:32: As noted, the Don Don River was channelized up to  
00:30:32 --> 00:30:33: about this point.  
00:30:33 --> 00:30:36: If anyone is familiar with Toronto,  
00:30:36 --> 00:30:38: this is Bloor St and this is Queen St,

00:30:38 --> 00:30:42: both very, very major routes within the city.

00:30:42 --> 00:30:46: So about halfway between that point is where the channelization

00:30:46 --> 00:30:49: began and extends all the way down to the former

00:30:49 --> 00:30:50: mouth.

00:30:52 --> 00:30:55: This area here is the King and Bay Area

00:30:55 --> 00:30:56: that I mentioned earlier,

00:30:56 --> 00:30:59: which is, you know, the financial core of the City

00:30:59 --> 00:31:00: of Toronto.

00:31:04 --> 00:31:08: As we carry on, we're going to move between Villier

00:31:08 --> 00:31:12: St and Commissioner St into the future River Valley.

00:31:12 --> 00:31:16: This area is going to primarily be a an ice

00:31:16 --> 00:31:17: management area.

00:31:17 --> 00:31:20: Of course we have a lot of ice that flows

00:31:20 --> 00:31:24: down the Don River in the winters and this area

00:31:24 --> 00:31:27: is going to capture most of that that I so

00:31:27 --> 00:31:30: it's being constructed with armor,

00:31:30 --> 00:31:35: stone surfaces and very resilient finishes so that we don't

00:31:35 --> 00:31:39: have constant damage to to those those areas that are

00:31:39 --> 00:31:42: in need of consistent repair.

00:31:42 --> 00:31:45: The rest of the River is going to have very

00:31:45 --> 00:31:47: resilient finishes as well,

00:31:47 --> 00:31:50: but those are softer in nature because the flows are

00:31:50 --> 00:31:54: a little bit more dissipated the further you get along

00:31:54 --> 00:31:55: the River,

00:31:55 --> 00:31:58: and we don't have the ice buildup to deal with

00:31:58 --> 00:32:02: so various various finishes of gravel and some of the

00:32:02 --> 00:32:06: bends will contain exposed root wads from trees that have

00:32:06 --> 00:32:10: been harvested from from elsewhere in the province of Ontario

00:32:10 --> 00:32:12: to protect and preserve.

00:32:12 --> 00:32:16: The channel that we're creating.

00:32:16 --> 00:32:20: This is the local, the intersection of Villier St and

00:32:20 --> 00:32:22: the Dawn roadway looking Southwest,

00:32:22 --> 00:32:26: so we're looking this way right here as this is

00:32:26 --> 00:32:30: an old former industrial property was used for some stockpiling

00:32:30 --> 00:32:33: of soil from other developments,

00:32:33 --> 00:32:38: and we're busy addressing all of those past contamination issues

00:32:38 --> 00:32:42: and excess soil issues at the moment.

00:32:42 --> 00:32:45: This is the view that you'll see from there in

00:32:45 --> 00:32:46: the future.



00:32:46 --> 00:32:50: Here you have your your New River Valley cutting across  
00:32:50 --> 00:32:54: and then the new Villagers Island precinct with mixed use  
00:32:54 --> 00:32:57: residential developments throughout.  
00:33:05 --> 00:33:08: So here you have your Keating Channel and the River  
00:33:08 --> 00:33:11: Valley is going to cut through here across failures.  
00:33:13 --> 00:33:15: And this is Commissioner St.  
00:33:15 --> 00:33:18: It'll run along Commissioner St.  
00:33:18 --> 00:33:21: Before sweeping to the West and heading North,  
00:33:21 --> 00:33:26: this is newly excavated soil that we are stockpiling here  
00:33:26 --> 00:33:29: for future future remediation and reuse.  
00:33:29 --> 00:33:31: This is rocky, the rock Ripper.  
00:33:31 --> 00:33:35: This is a very large excavator that we're using to  
00:33:35 --> 00:33:39: construct a slurry wall cut off wall down to bedrock  
00:33:39 --> 00:33:41: to allow us to do water.  
00:33:41 --> 00:33:46: The River Valley excavation this this piece of equipment is  
00:33:46 --> 00:33:49: one of the largest excavators I've ever seen in my  
00:33:50 --> 00:33:50: life.  
00:33:50 --> 00:33:54: And the stick and the boom are able to extend  
00:33:54 --> 00:33:55: about 95 feet,  
00:33:55 --> 00:34:00: and the bucket that's on this is is able to  
00:34:00 --> 00:34:01: get about.  
00:34:01 --> 00:34:04: About 30 or 40 centimeters.  
00:34:04 --> 00:34:06: So a foot to a foot and a half into  
00:34:06 --> 00:34:10: the competent shale bedrock that we have at depth.  
00:34:10 --> 00:34:14: Very significant piece of equipment and you can follow it  
00:34:14 --> 00:34:15: on Twitter.  
00:34:15 --> 00:34:17: At at Rocky the Ripper.  
00:34:21 --> 00:34:26: So from here we're moving down to the Dawn Greenway  
00:34:26 --> 00:34:27: and spillway.  
00:34:27 --> 00:34:29: Yeah, we're just up here.  
00:34:29 --> 00:34:32: We move down the future River will cut through failures  
00:34:32 --> 00:34:36: through commissioners before sweeping along this  
00:34:36 --> 00:34:37: alignment,  
00:34:36 --> 00:34:37: out to the Poulson slip.  
00:34:41 --> 00:34:43: Don't think we're getting another video here.  
00:34:45 --> 00:34:50: So here's, Commissioners will have a new bridge  
00:34:45 --> 00:34:50: constructed on  
00:34:50 --> 00:34:55: Commissioners crossing the New River Valley and will  
00:34:50 --> 00:34:55: extend through  
00:34:55 --> 00:34:58: the Greenway and the Don Greenway will be home to  
00:34:58 --> 00:35:02: a very significant wetland that will not have a lot  
00:35:02 --> 00:35:04: of easy human access,  
00:35:04 --> 00:35:08: so this provides a lot of really high quality habitat

00:35:08 --> 00:35:11: as well as the sort of 3rd relief valve for

00:35:11 --> 00:35:15: floodwaters that it can noted earlier as floodwater.

00:35:15 --> 00:35:19: Exceeds the capacity of the Keating Channel and the new

00:35:19 --> 00:35:20: naturalized River.

00:35:20 --> 00:35:24: It'll overflow through the wetland and then out into the

00:35:24 --> 00:35:25: shipping channel,

00:35:25 --> 00:35:27: which is right down here.

00:35:27 --> 00:35:31: We're protecting the new wetland from the influx of carp.

00:35:31 --> 00:35:35: Another large fish species by installing carp gates along that

00:35:35 --> 00:35:37: that shipping channel dock wall.

00:35:41 --> 00:35:45: Here you see one of the old factories that was

00:35:45 --> 00:35:47: in the portlands in this area.

00:35:47 --> 00:35:52: So right now we are looking looking SW again towards

00:35:52 --> 00:35:55: the shipping channel in this direction.

00:35:55 --> 00:35:58: This building was removed last summer.

00:35:58 --> 00:36:01: And this is the rendering of what this will look

00:36:01 --> 00:36:02: like in the future.

00:36:02 --> 00:36:04: You have the shipping channel down.

00:36:04 --> 00:36:07: Here you have this high quality wetland habitat that's being

00:36:07 --> 00:36:11: created and the only access for human interaction with the

00:36:11 --> 00:36:13: wetland is on the on the perimeter.

00:36:13 --> 00:36:16: So let me trails and boardwalks in the perimeters,

00:36:16 --> 00:36:18: but they won't be able to get in so that

00:36:18 --> 00:36:19: we can.

00:36:19 --> 00:36:21: We can leave this area to the bugs in the

00:36:21 --> 00:36:22: bunnies and the fish.

00:36:26 --> 00:36:28: This is another drone shot.

00:36:28 --> 00:36:32: This is our pretreatment pond for dewatering effluent.

00:36:32 --> 00:36:34: So any any water that we pump out of the

00:36:34 --> 00:36:35: ground.

00:36:35 --> 00:36:39: Today water goes through here to separate free phase.

00:36:39 --> 00:36:42: A hydrocarbon or an Apple and settlement from that water

00:36:42 --> 00:36:46: before it's conveyed to our water treatment plant.

00:36:46 --> 00:36:49: Right here we have a 1,000,000 gallon in fluent holding

00:36:50 --> 00:36:53: tank and a 2 million gallon effluent holding tank but

00:36:53 --> 00:36:56: the water is pumped from the pretreatment pond.

00:36:56 --> 00:36:58: To the influence tank there,

00:36:58 --> 00:37:00: it's pumped into our treatment system,

00:37:00 --> 00:37:02: which is a multi phase treatment system.

00:37:02 --> 00:37:06: To remove hydrocarbons and metals and volatile organic

00:37:06 --> 00:37:09: compounds and

00:37:06 --> 00:37:09: polyaromatic hydrocarbons from that way stream.

00:37:09 --> 00:37:12: Then it goes into the 2 million 2 million gallon  
00:37:12 --> 00:37:16: holding tank before we ultimately discharged shipping  
channel and we  
00:37:16 --> 00:37:19: have to meet what's called the provincial water quality  
objectives  
00:37:19 --> 00:37:23: before we can discharge, which are very stringent the the  
00:37:23 --> 00:37:26: Lake in Lake Ontario doesn't even meet the provincial water  
00:37:26 --> 00:37:27: quality objectives.  
00:37:27 --> 00:37:31: To work. We have a very significant system in place  
00:37:31 --> 00:37:36: that's designed to treat between one and 3 million liters  
00:37:36 --> 00:37:36: per day.  
00:37:38 --> 00:37:42: I mentioned the slurry wall cut off walls in the  
00:37:42 --> 00:37:44: northern portion of the property.  
00:37:44 --> 00:37:48: This sinuous line that you see here and here.  
00:37:48 --> 00:37:51: Those are structural secant pile walls that extend all the  
00:37:51 --> 00:37:52: way to to bedrock,  
00:37:52 --> 00:37:55: and those and the story walls form our cut off  
00:37:55 --> 00:37:57: wall to allow us to do water.  
00:37:57 --> 00:38:01: The excavation to build all these new finishes back up  
00:38:01 --> 00:38:02: in a dry environment,  
00:38:02 --> 00:38:05: but in this area we needed to construct with the  
00:38:05 --> 00:38:08: structural secant pile walls so that we can.  
00:38:08 --> 00:38:12: We can support the side walls of the excavation.  
00:38:12 --> 00:38:15: We will also be reconstructing.  
00:38:15 --> 00:38:19: Commissioner St about 2 meters higher than it currently sits,  
00:38:19 --> 00:38:21: and we're building a new Cherry Street again about 2  
00:38:21 --> 00:38:23: meters higher than it currently sits,  
00:38:23 --> 00:38:26: and this will allow us to install all new utilities  
00:38:26 --> 00:38:29: and services to support the future redevelopment.  
00:38:32 --> 00:38:36: This is a shot of our water treatment system being  
00:38:36 --> 00:38:36: constructed.  
00:38:40 --> 00:38:44: Some more on site activities you see to sort of.  
00:38:47 --> 00:38:50: Identifiers in these shots. One is the CN Tower right  
00:38:50 --> 00:38:51: here.  
00:38:51 --> 00:38:54: This is the Atlas Crane which was used when this  
00:38:54 --> 00:38:58: was an industrial port to move boats and other materials  
00:38:58 --> 00:39:00: in and out of the Polston slip.  
00:39:00 --> 00:39:04: It's been listed as a heritage element of the Portland,  
00:39:04 --> 00:39:07: so it's being preserved through this process and will be  
00:39:08 --> 00:39:11: integrated into one of the parks and then here you  
00:39:11 --> 00:39:13: see the Lafarge Silos cement plant.  
00:39:16 --> 00:39:18: And this is what this area is going to look

00:39:18 --> 00:39:20: like in the future.

00:39:20 --> 00:39:23: Here you have the. The Atlas cream.

00:39:23 --> 00:39:26: And the Lafarge Silos for reference purposes.

00:39:26 --> 00:39:30: And you can see how the River Valley is going

00:39:30 --> 00:39:32: to snake through that area.

00:39:32 --> 00:39:36: Under the new Cherry Street Bridge and out into Lake

00:39:36 --> 00:39:37: Ontario.

00:39:37 --> 00:39:40: And this gentleman needs to improve his posture.

00:39:42 --> 00:39:46: So next, we've gone through the whole River Valley and

00:39:46 --> 00:39:50: we're going to end up in Promontory Park.

00:39:50 --> 00:39:53: This area right up here is what we refer to

00:39:53 --> 00:39:56: as the Cherry St Lake filling project.

00:39:56 --> 00:40:00: This is all lakefill that was put in between the

00:40:00 --> 00:40:04: existing slips that were there to expand the overall footprint

00:40:05 --> 00:40:09: of Promontory Park and allow us to create some interesting

00:40:09 --> 00:40:15: new habitat features that will talk about momentarily.

00:40:15 --> 00:40:17: As you can see, here is your Atlas Crane,

00:40:17 --> 00:40:19: so the New River Valley is going to cut right

00:40:19 --> 00:40:22: through into what's referred to as pohlson slip.

00:40:22 --> 00:40:25: This is the Cherry St Lake filling area and this

00:40:25 --> 00:40:28: will be Promontory Park South.

00:40:32 --> 00:40:36: New Cherry Street will run along this alignment and you

00:40:36 --> 00:40:40: can see the search charging material that's been placed here

00:40:40 --> 00:40:43: to Geo technically improve the ground conditions.

00:40:43 --> 00:40:47: We also have surcharge in this area to improve the

00:40:47 --> 00:40:50: ground conditions in future Promontory Park,

00:40:50 --> 00:40:53: but also as a soil stockpiling area.

00:40:53 --> 00:40:57: We have one point. 3,000,000 cubic meters of soil that

00:40:57 --> 00:41:01: we're going to be excavating from the River Valley and

00:41:01 --> 00:41:03: we need to reuse that soil to create.

00:41:03 --> 00:41:07: All of these landforms and raise grades to achieve flood

00:41:07 --> 00:41:08: protection.

00:41:08 --> 00:41:10: Some of it can be used directly,

00:41:10 --> 00:41:14: other others have to be remediated before we can reuse.

00:41:14 --> 00:41:16: This is existing Cherry Street here,

00:41:16 --> 00:41:20: which will remain for the time being until until redevelopment

00:41:20 --> 00:41:21: occurs.

00:41:25 --> 00:41:27: Here we have again Cherry St.

00:41:27 --> 00:41:31: This is looking East along the New River Valley.

00:41:31 --> 00:41:34: Here is your soil management area.

00:41:34 --> 00:41:40: Sorry, little stockpiling area we have liners that we've put

00:41:40 --> 00:41:41: down to ensure that.

00:41:41 --> 00:41:46: Contaminated soil they were stockpiling for future remediation doesn't impact

00:41:46 --> 00:41:48: the existing ground surface.

00:41:48 --> 00:41:50: This is the future of Promontory Park.

00:41:53 --> 00:41:56: The site is was formerly Marine Terminal 35 M T-35,

00:41:56 --> 00:42:01: and so it actually has heritage significance to the City

00:42:01 --> 00:42:01: of Toronto,

00:42:01 --> 00:42:06: so it is being commemorated through the through some art

00:42:06 --> 00:42:10: installations that are that are occurring.

00:42:10 --> 00:42:14: This is the Cherry Street Lakeville area that identified earlier

00:42:14 --> 00:42:18: and here we have one of the new habitats that

00:42:18 --> 00:42:18: was created.

00:42:18 --> 00:42:21: In that.

00:42:21 --> 00:42:23: Area so here we go.

00:42:23 --> 00:42:25: So this is.

00:42:25 --> 00:42:28: One of the one of the new habitat coves that

00:42:28 --> 00:42:32: was created to allow birds and other fish to have

00:42:32 --> 00:42:33: a high quality,

00:42:33 --> 00:42:38: high quality habitat. This was the concept that was created

00:42:38 --> 00:42:42: by the landscape architects and this is the reality you

00:42:42 --> 00:42:47: see these these trees that have been placed there not

00:42:47 --> 00:42:50: there, not live trees or dead trees to allow bird

00:42:50 --> 00:42:54: habitat and then you have fish gates here and here

00:42:54 --> 00:42:55: to prevent.

00:42:55 --> 00:42:58: The influx of carp, another large fish species,

00:42:58 --> 00:43:01: to allow the smaller sufficient fish species to thrive in

00:43:01 --> 00:43:01: this area.

00:43:05 --> 00:43:10: So this is last summer.

00:43:10 --> 00:43:12: Year and a half ago or so you see the

00:43:12 --> 00:43:15: outlook screen in this area and you see the preferred

00:43:15 --> 00:43:18: silos in the River will cut with the two of

00:43:18 --> 00:43:20: them.

00:43:20 --> 00:43:23: And this is the artist rendering of what this area

00:43:23 --> 00:43:25: will look like.

00:43:25 --> 00:43:28: We call this Canoe Cove and it's a series of

00:43:28 --> 00:43:32: small islands and little channels that run between those

00:43:32 --> 00:43:36: islands

00:43:32 --> 00:43:36: to allow to allow a great interactive experience for for

00:43:36 --> 00:43:42: the users with other wildlife that will exist in the

00:43:42 --> 00:43:42: area.

00:43:42 --> 00:43:45: Lastly, we're going to pop over to the new Cherry

00:43:45 --> 00:43:49: Street and Cherry Street Bridge area course to Orient ourselves

00:43:49 --> 00:43:49: here.

00:43:49 --> 00:43:52: You have the Don River and the Keating Channel.

00:43:57 --> 00:44:01: We're going to keep moving in our drone survey past

00:44:01 --> 00:44:03: the West Cove Habitat area.

00:44:05 --> 00:44:08: And the North Cove habitat area.

00:44:08 --> 00:44:11: This Swale will be illuminated in the future.

00:44:11 --> 00:44:15: Right now it's conveying storm water out through the area

00:44:15 --> 00:44:17: and this is our location of Cherry Street.

00:44:17 --> 00:44:21: You can see the surcharge pile that's there.

00:44:21 --> 00:44:25: Bridge foundations are already underway as you can see

00:44:25 --> 00:44:26: here

00:44:25 --> 00:44:26: and here.

00:44:26 --> 00:44:31: We've had to reconstruct the dock wall in this area.

00:44:31 --> 00:44:35: And eventually this will tie into Lakeshore Blvd just a

00:44:35 --> 00:44:37: little bit North of the picture.

00:44:41 --> 00:44:44: And this is a rendering of the new Cherry St.

00:44:44 --> 00:44:48: Northbridge. All three of the bridges Cherry St N Cherry

00:44:48 --> 00:44:51: St South which crosses over the River mouth as well

00:44:51 --> 00:44:54: as the new Commissioner Street Bridge,

00:44:54 --> 00:44:56: are all designed very similarly.

00:44:56 --> 00:45:00: Similarly, they are currently being manufactured on the East

00:45:00 --> 00:45:02: Coast

00:45:00 --> 00:45:02: of Canada and Halifax,

00:45:02 --> 00:45:05: and they'll be they'll be shipped by.

00:45:05 --> 00:45:08: My ship through the got out of the Great Lakes

00:45:08 --> 00:45:12: starting next fall for for the beginning of installation.

00:45:14 --> 00:45:17: And I'm going to pass it off to mirror to

00:45:17 --> 00:45:19: take over the rest of the show.

00:45:19 --> 00:45:23: Thanks Don. So now that we've all walked through and

00:45:23 --> 00:45:27: hopefully everyone's a little bit more oriented to the site

00:45:27 --> 00:45:30: and the portlands and broader Eastern waterfront,

00:45:30 --> 00:45:33: we thought it might be worth to end by.

00:45:36 --> 00:45:39: Just zooming out and taking a look at what all

00:45:39 --> 00:45:41: of this work means.

00:45:41 --> 00:45:44: You want to just go back really quickly done for

00:45:44 --> 00:45:45: one second.

00:45:45 --> 00:45:48: Think what this all means for the potential to revitalize

00:45:48 --> 00:45:51: the rest of the designated waterfront area,

00:45:51 --> 00:45:55: which Waterfront Toronto was mandated to revitalize so you

00:45:55 --> 00:45:57: can.

00:45:55 --> 00:45:57: You can see here on this plan.

00:45:57 --> 00:46:02: View all of the white massing that represents future

00:45:57 --> 00:46:02: neighborhoods

00:46:02 --> 00:46:05: that are either in the midst of being planned or  
00:46:05 --> 00:46:06: approved so.  
00:46:06 --> 00:46:09: Millers Island there in the center which is created as  
00:46:09 --> 00:46:11: Don just walked us through by carving out the new  
00:46:11 --> 00:46:15: rumor that messing represents the approved precinct plan  
that City  
00:46:15 --> 00:46:18: Council approved in 2017 for mixed use community on what  
00:46:18 --> 00:46:21: will become an island failures island to the North of  
00:46:21 --> 00:46:22: that.  
00:46:22 --> 00:46:26: That massing represents another potential future precinct  
which is heating  
00:46:26 --> 00:46:29: channel precinct that gets enabled by the shifting of the  
00:46:29 --> 00:46:33: Lakeshore Blvd in Gardner Expressway that John pointed out  
early  
00:46:33 --> 00:46:36: on further North to create that extra space there.  
00:46:36 --> 00:46:39: And then to the East of addon roadway,  
00:46:39 --> 00:46:43: that additional massing, those are future precinct to be  
planned,  
00:46:43 --> 00:46:46: not as much residential in the mix,  
00:46:46 --> 00:46:47: but.  
00:46:47 --> 00:46:50: More film uses an light industrial uses to build on  
00:46:50 --> 00:46:52: to the existing film industry in the Portland,  
00:46:52 --> 00:46:55: so that's the bigger picture in the Portland,  
00:46:55 --> 00:46:57: in Eastern waterfront. And if you go to the next  
00:46:57 --> 00:47:00: slide you can see kind of that same approach was  
00:47:00 --> 00:47:03: taken in previous precincts at Waterfront Toronto worked on  
so  
00:47:03 --> 00:47:05: you can see the potential of spaces.  
00:47:05 --> 00:47:07: So this is what the West on lines look like  
00:47:07 --> 00:47:10: before the development of Cork Town common.  
00:47:10 --> 00:47:12: And if you go to the next slide you can  
00:47:12 --> 00:47:13: see that West Online.  
00:47:13 --> 00:47:16: So development for the the original Pan Am Athletes Village  
00:47:16 --> 00:47:18: all ringing out spreading out.  
00:47:18 --> 00:47:21: From Cork Town common, sort of catalyzed by the creation  
00:47:21 --> 00:47:22: of that park in public space,  
00:47:22 --> 00:47:25: that neighborhood is still being built out.  
00:47:25 --> 00:47:28: Another mixed use neighborhood, and if you go to the  
00:47:28 --> 00:47:31: next slide you can see early aerial image of another  
00:47:31 --> 00:47:34: big precinct that waterfront work with data plan that's East  
00:47:34 --> 00:47:37: Bayfront. So there's a Parliament slip on the edge and  
00:47:37 --> 00:47:40: the port lines would be just to the right East  
00:47:40 --> 00:47:41: of where we're looking here,

00:47:41 --> 00:47:44: so that's what it looked like it before.

00:47:44 --> 00:47:46: In the early 2000s. If you go to the next

00:47:46 --> 00:47:49: slide you can see that the development of that.

00:47:49 --> 00:47:52: Community is now ongoing with the generous water waters edge

00:47:52 --> 00:47:53: promenade.

00:47:53 --> 00:47:54: With the role of trees.

00:47:54 --> 00:47:56: We've got parks including Sugar Beach,

00:47:56 --> 00:47:58: which is to the left there at the Jarvis slip

00:47:59 --> 00:48:02: and we've got mixed use development starting to come along.

00:48:02 --> 00:48:04: So this just gives you a sense of kind of

00:48:04 --> 00:48:06: the potential that sprouts up.

00:48:06 --> 00:48:10: From running this investment now into remediating these sample test

00:48:10 --> 00:48:14: real faces and starting with public realm like we're doing

00:48:14 --> 00:48:14: in Portland.

00:48:14 --> 00:48:16: And that's it, I think.

00:48:16 --> 00:48:19: Well, this is actually to end with our aspiration to

00:48:19 --> 00:48:21: bring Ryan Gosling to Portlands in Toronto.

00:48:21 --> 00:48:23: This is what the view will be like in the

00:48:23 --> 00:48:24: future,

00:48:24 --> 00:48:27: hopefully from Promontory Park when we're complete.

00:48:27 --> 00:48:28: When we're finished building it,

00:48:28 --> 00:48:30: and you can see that CN Tower,

00:48:30 --> 00:48:33: which Don pointed out a number of times to sort

00:48:33 --> 00:48:36: of ground you to that Westward view into the Toronto's

00:48:36 --> 00:48:37: downtown and financial center.

00:48:37 --> 00:48:40: So from Promontory Park, this would be the experience that

00:48:41 --> 00:48:42: people will have in the Portland.

00:48:45 --> 00:48:48: Great mirror hundon. Thank you very much for that and

00:48:48 --> 00:48:49: Peter,

00:48:49 --> 00:48:50: thanks for yours and Ken.

00:48:50 --> 00:48:52: Thank you again as well.

00:48:52 --> 00:48:54: Will have some questions now.

00:48:54 --> 00:48:58: Hopefully we can ask them from the audience as well

00:48:58 --> 00:49:00: as we look at our time here.

00:49:00 --> 00:49:05: It's been a very long project and I think it

00:49:05 --> 00:49:07: is an industrious.

00:49:07 --> 00:49:10: An advanced thinking type of project.

00:49:10 --> 00:49:14: One of the questions is where did the \$16,000,000 come

00:49:14 --> 00:49:15: from?

00:49:15 --> 00:49:19: What were the sources of income for the Cork town



00:49:19 --> 00:49:20: common?

00:49:20 --> 00:49:22: Peter, do you know?

00:49:22 --> 00:49:26: Um, for perhaps when you wanna front runners up on that,

00:49:26 --> 00:49:26: that,

00:49:26 --> 00:49:29: but I assume it's it was probably a combination of

00:49:29 --> 00:49:31: provincial and federal funding.

00:49:31 --> 00:49:34: And then I can give a little detail on that,

00:49:34 --> 00:49:36: and also for the larger project,

00:49:36 --> 00:49:39: Portland's too, is that a separate funding source?

00:49:39 --> 00:49:42: So how did? How did all this come together?

00:49:42 --> 00:49:44: Yeah, so for Cork Town Commons,

00:49:44 --> 00:49:47: that was just for the the Cork Town common split.

00:49:47 --> 00:49:50: The cost for the landform in the railway bridge,

00:49:50 --> 00:49:53: which didn't really get into a lot of discussion.

00:49:53 --> 00:49:58: That brought the total cost in excess of.

00:49:58 --> 00:50:02: Hundred \$1,000,000 when it's all said and done that was

00:50:02 --> 00:50:06: funded by the three levels of government with the initial

00:50:06 --> 00:50:10: contributions put in back in 2002 by all three levels

00:50:10 --> 00:50:14: of government. The Portland's Flood Protection Project itself was a

00:50:14 --> 00:50:17: separate contribution agreement,

00:50:17 --> 00:50:20: established in two phases, one in 2016 for the Cherry

00:50:20 --> 00:50:22: Street Lakeville,

00:50:22 --> 00:50:26: which was funded entirely by the federal government and that

00:50:26 --> 00:50:27: cost \$65,000,000.

00:50:27 --> 00:50:29: That work is now done.

00:50:29 --> 00:50:33: It came under budget. And then the remaining portions of

00:50:34 --> 00:50:36: the work was 1.2 billion dollars.

00:50:36 --> 00:50:40: For to do all the other works that Don was

00:50:40 --> 00:50:41: working through.

00:50:41 --> 00:50:46: That is contribution between all three levels of government split

00:50:46 --> 00:50:50: three ways and that was assigned in in 2018.

00:50:53 --> 00:50:58: Very good, very very ambitious and it looks like it's

00:50:58 --> 00:51:00: going very well.

00:51:00 --> 00:51:03: Peter, I guess it's been several years since the park

00:51:03 --> 00:51:04: is open.

00:51:04 --> 00:51:07: If you had to change anything after seeing how it's

00:51:07 --> 00:51:08: been operating,

00:51:08 --> 00:51:10: would you make any changes?

00:51:10 --> 00:51:12: How is how is it performed based on expectations?

00:51:17 --> 00:51:20: Yeah, so I guess I suppose overall.

00:51:22 --> 00:51:26: You know the the park is is really satisfying the

00:51:26 --> 00:51:29: Parkland requirements for for new community,

00:51:29 --> 00:51:34: providing you know successful recreational facilities and amenities for the

00:51:34 --> 00:51:39: for the mixed residential development and providing opportunities for for

00:51:39 --> 00:51:44: community stewardship and and heritage interpretation as well.

00:51:44 --> 00:51:47: But I think some of the the challenges that remain

00:51:48 --> 00:51:52: are around the extensive of planting and naturalization and.

00:51:52 --> 00:51:56: With over 700 trees and thousands of.

00:51:56 --> 00:52:00: Um of aquatic plants and in ground covering's the amount

00:52:00 --> 00:52:04: of maintenance that is that is needed is is.

00:52:04 --> 00:52:09: It's really quite intensive and with you know the horticulture,

00:52:09 --> 00:52:14: maintenance, weeding, pruning. An actually quite a few issues with

00:52:14 --> 00:52:18: with invasive species as well being so close to the

00:52:18 --> 00:52:23: to the Don River and post to migratory flyway routes.

00:52:23 --> 00:52:26: And I think that that may be a key takeaway

00:52:26 --> 00:52:27: that may.

00:52:27 --> 00:52:32: Um baby a lesson for the for the Portland's development

00:52:32 --> 00:52:37: and their approach to the to the naturalization of that

00:52:37 --> 00:52:37: area.

00:52:37 --> 00:52:39: Yes, so nature can always be a challenge.

00:52:39 --> 00:52:42: That's what we're trying to deal with in terms of

00:52:42 --> 00:52:44: resilience to start with,

00:52:44 --> 00:52:48: where there any unexpected remediation surprises.

00:52:48 --> 00:52:50: Either in that or the portlands.

00:52:52 --> 00:52:54: Not that not that I know of for for Cork

00:52:55 --> 00:52:55: Town,

00:52:55 --> 00:52:56: but it's a good one.

00:52:56 --> 00:53:00: Can around Don could pick that one up discuss that.

00:53:00 --> 00:53:04: Both both the West on lands and the Portland's have

00:53:04 --> 00:53:06: under gone very,

00:53:06 --> 00:53:11: very expensive organization of soil and groundwater conditions.

00:53:11 --> 00:53:15: I wouldn't say anything was unexpected.

00:53:15 --> 00:53:20: There's a significant amount of contamination on both sites.

00:53:20 --> 00:53:24: Both sites are going through a risk assessment process because

00:53:24 --> 00:53:25: it's not.

00:53:25 --> 00:53:30: It's not technically or financially feasible to full scale remediation

00:53:30 --> 00:53:31: of those sites.

00:53:31 --> 00:53:33: Before we do it, nor is it,

00:53:33 --> 00:53:37: nor is it necessary, because the way we're constructing these

00:53:37 --> 00:53:42: things where we're placing barriers to the existing site contaminants

00:53:42 --> 00:53:46: to prevent exposure of human and ecological receptors.

00:53:46 --> 00:53:48: So these barriers include, you know,

00:53:48 --> 00:53:52: clean cap thickness is for trees and plants to be

00:53:52 --> 00:53:53: to be planted in.

00:53:53 --> 00:53:56: They include in the bottom of the River Valley,

00:53:56 --> 00:53:58: Geosynthetic clay liner and Geomembranes.

00:53:58 --> 00:54:02: To prevent the influx of contaminated groundwater into the River

00:54:02 --> 00:54:06: Valley on the sides of the River Valley we're putting

00:54:06 --> 00:54:06: in.

00:54:06 --> 00:54:10: We have those structural seeking file walls in some areas

00:54:10 --> 00:54:13: and in other areas we have a Claiborne that prevents

00:54:13 --> 00:54:18: the the lateral influx of contaminated groundwater into the River.

00:54:18 --> 00:54:21: All of these systems that we're putting in place are

00:54:21 --> 00:54:26: fairly common practice in in the redevelopment of brownfield sites,

00:54:26 --> 00:54:32: and they're all they're undergoing significant review through the Ontario

00:54:33 --> 00:54:35: Ministry of Environment.

00:54:35 --> 00:54:39: Conservation parks the City of Toronto soil and Groundwater Management

00:54:39 --> 00:54:39: Unit,

00:54:39 --> 00:54:41: the Toronto Region Conservation Authority,

00:54:41 --> 00:54:44: as well as our own team of internal experts and

00:54:44 --> 00:54:46: 3rd party peer reviewers.

00:54:46 --> 00:54:49: So we're taking these well established concepts and combining them

00:54:49 --> 00:54:53: into the implementation of 1 very very significant project.

00:54:53 --> 00:54:55: But you know, we do have to remediate some of

00:54:55 --> 00:54:58: the soil before we can reuse it because it's too

00:54:58 --> 00:55:01: contaminated and some of it is going to have to

00:55:01 --> 00:55:03: go on site because there's no.

00:55:03 --> 00:55:06: There's no viable way to remediate it.

00:55:06 --> 00:55:10: Economically, the Portland's was the subject to significant amount of

00:55:10 --> 00:55:12: petrochemical storage over the years,

00:55:12 --> 00:55:15: and there is actually a refinery on site.

00:55:15 --> 00:55:18: So in the worst areas we really have no choice

00:55:18 --> 00:55:19: but to remove it.

00:55:19 --> 00:55:22: But Luckily we have to raise all these grades by

00:55:22 --> 00:55:25: on average 2 meters around the entire site,

00:55:25 --> 00:55:28: so that gives us the opportunity to take that soil

00:55:28 --> 00:55:30: and reuse it sustainably,

00:55:30 --> 00:55:34: to which protection and to create all the great landforms

00:55:34 --> 00:55:36: that are being designed into parts.

00:55:36 --> 00:55:40: Very good, I said great Brownfield project on a slightly

00:55:40 --> 00:55:43: different bent on that same question about was there anything

00:55:44 --> 00:55:47: unexpected found in addition to looking at the soil quality

00:55:47 --> 00:55:51: conditions were also very cognisant that this is sort of

00:55:51 --> 00:55:54: the juncture of past River and coastal Marsh at Lake

00:55:54 --> 00:55:55: Ontario,

00:55:55 --> 00:55:59: so we have a significant archaeological study component that has

00:55:59 --> 00:56:02: to be done as we excavate through these layers so

00:56:02 --> 00:56:05: the majority of the materials in the top five meters

00:56:05 --> 00:56:08: or so is. Recent place fill but we are going

00:56:08 --> 00:56:11: to be cutting into the native soils that were in

00:56:12 --> 00:56:15: the wetlands and some of the past or for logical

00:56:15 --> 00:56:19: structures in there. There's beaches and sandbars and spits,

00:56:19 --> 00:56:23: so we'll be having archaeologists going out every day when

00:56:23 --> 00:56:27: we get into the deeper excavations of the River Valley

00:56:27 --> 00:56:31: to ensure that we are looking for past indigenous activities

00:56:31 --> 00:56:35: as well. Is more recent activities such as locations trying

00:56:35 --> 00:56:39: to find the old foundations for past governor breakwaters.

00:56:39 --> 00:56:43: Foundations for cottages that were placed along the spit back

00:56:43 --> 00:56:47: in 1800s and other interesting artifacts throughout the process,

00:56:47 --> 00:56:50: and we did that also for the Cork town common

00:56:51 --> 00:56:52: pieces as well.

00:56:52 --> 00:56:54: Very elaborate on unexpected. Well,

00:56:54 --> 00:56:58: we were kind of let me ask accommodation question and

00:56:58 --> 00:56:59: we have some time.

00:56:59 --> 00:57:03: After this we will have at least 15 minutes to

00:57:03 --> 00:57:04: ask additional questions,

00:57:04 --> 00:57:07: but I wanted to get one out right now in

00:57:07 --> 00:57:11: terms of the kind of design criteria that were used.

00:57:11 --> 00:57:12: This is a multi year,

00:57:12 --> 00:57:16: if not, you know decades long project and what were

00:57:16 --> 00:57:18: the Lake level rise?

00:57:18 --> 00:57:20: Or is future storm conditions.

00:57:20 --> 00:57:23: You know what benchmarks were being used?

00:57:23 --> 00:57:26: For Cork Town are the same ones being used now

00:57:26 --> 00:57:29: or are you updating that as you go?

00:57:29 --> 00:57:32: How does this fit into the kind of overall resilience

00:57:32 --> 00:57:35: efforts in Toronto from that perspective?

00:57:35 --> 00:57:38: And if we're lucky to get to Toronto in 2023

00:57:38 --> 00:57:40: for the spring meeting with you alive,

00:57:40 --> 00:57:44: then would any of the Portland's projects be up and

00:57:45 --> 00:57:47: available for viewing at that time?

00:57:47 --> 00:57:50: So the primary purpose of the project,

00:57:50 --> 00:57:52: of course, is reverting floodings,

00:57:52 --> 00:57:55: and we also have an extremely conservative design standard

00:57:55 --> 00:57:58: when

00:57:58 --> 00:58:00: we're developing our flood protection works.

00:58:00 --> 00:58:03: As we mentioned early, it's right,

00:58:03 --> 00:58:07: hurricane sized events with some additional freeboard.

00:58:07 --> 00:58:12: So yes, Lake Ontario has gone up.

00:58:12 --> 00:58:13: Much higher than past recordings of the curtain as result

00:58:13 --> 00:58:19: of that,

00:58:19 --> 00:58:23: local conservation authority has re established the frequency

00:58:23 --> 00:58:25: curves for

00:58:25 --> 00:58:29: what would be denoted as the one in 100 year

00:58:29 --> 00:58:34: Lake level condition.

00:58:34 --> 00:58:37: All the previous design until last year was on the

00:58:37 --> 00:58:40: basis of 75.8 meters above sea level as our basis

00:58:40 --> 00:58:42: of what is anticipated be the one.

00:58:42 --> 00:58:47: The 1% chance occurring at any given time and all

00:58:47 --> 00:58:51: the design for the public realm,

00:58:51 --> 00:58:52: stormwater infrastructures, bridge crossings, an and

00:58:52 --> 00:58:55: hydraulic modeling for the

00:58:55 --> 00:58:58: River component where it interfaces with that is based on

00:58:58 --> 00:59:03: that as a result of 2017,

00:59:03 --> 00:59:06: the new Lake levels had gone up last year in

00:59:06 --> 00:59:08: May and we were in the process is comedy in

00:59:08 --> 00:59:13: the design,

00:59:13 --> 00:59:17: particularly with regards to the storm urban stormwater

00:59:17 --> 00:59:20: components which

00:59:20 --> 00:59:23: we didn't get into it all in this really other

00:59:23 --> 00:59:26: than briefly touched at the beginning.

00:59:26 --> 00:59:29: Where some additional infrastructure works are required to

00:59:29 --> 00:59:32: deal with

00:59:32 --> 00:59:35: the fact that we have potentially higher Lake levels and

00:59:17 --> 00:59:20: not very steep sloped adjacent lands to be able to  
00:59:20 --> 00:59:24: convey flows from the rainfall from the future development land.

00:59:24 --> 00:59:28: So there was some accommodation of that and of course  
00:59:28 --> 00:59:30: when we had 2019 Lake levels,  
00:59:30 --> 00:59:33: it bumped up the 100 year Lake level again up  
00:59:33 --> 00:59:34: to 76.2.

00:59:34 --> 00:59:37: So there's some additional work that May or may not  
00:59:37 --> 00:59:38: be done.

00:59:38 --> 00:59:41: We're currently working with the city.

00:59:41 --> 00:59:45: What is? The design expectations for this storm water management  
00:59:45 --> 00:59:45: components.

00:59:45 --> 00:59:48: We did an analysis of other aspects of the project,  
00:59:48 --> 00:59:52: particularly with ecological public ground components,  
00:59:52 --> 00:59:54: but also groundwater bit controls.

00:59:54 --> 00:59:57: Donna mentioned is secant pile walls to hold up the  
00:59:57 --> 01:00:01: Valley system and some of the constructability components which we  
01:00:01 --> 01:00:02: didn't get into as well.

01:00:02 --> 01:00:07: For the most part, that there is sufficient conservatism to  
01:00:07 --> 01:00:10: deal with these new Lake level conditions.

01:00:10 --> 01:00:12: And so really, it's you know,  
01:00:12 --> 01:00:14: how do we move forward with the storm?  
01:00:14 --> 01:00:19: What urban stormwater runoff infrastructure requirements given that we're about  
01:00:19 --> 01:00:22: to start construction on some of these pieces now?

01:00:22 --> 01:00:24: And how do we, you know,  
01:00:24 --> 01:00:26: are we going to? And how are we going to  
01:00:26 --> 01:00:29: dive to modify the infrastructure of this?  
01:00:29 --> 01:00:31: This point to the construction process?  
01:00:31 --> 01:00:35: So those discussions are currently ongoing?  
01:00:35 --> 01:00:38: And by 2020 three we won't be fully done,  
01:00:38 --> 01:00:41: but there would definitely be significant pieces of work that  
01:00:42 --> 01:00:43: would be in place.

01:00:43 --> 01:00:45: Most of the River Valley would be in place,  
01:00:45 --> 01:00:49: though not depends what time of year you come into,  
01:00:49 --> 01:00:51: whether it's fully flowing from the Don River,  
01:00:51 --> 01:00:55: who will be at least connected to Lake Ontario to  
01:00:55 --> 01:00:58: allow the vegetation of period of years to establish before  
01:00:58 --> 01:01:01: we open it up to the challenges of dealing with  
01:01:01 --> 01:01:04: the urban flows from the Don River.

01:01:04 --> 01:01:07: Thank you, thank you very much for that.

01:01:07 --> 01:01:10: I wanted to just quickly as we've reached the formal  
 01:01:10 --> 01:01:14: end of our coastal forum session offer a virtual round  
 01:01:14 --> 01:01:16: of applause to our speakers.  
 01:01:16 --> 01:01:17: Mira, Dahnken, Peter and Jack,  
 01:01:17 --> 01:01:20: of course, as Jack mentioned earlier,  
 01:01:20 --> 01:01:23: some of the speakers are willing to stay for a  
 01:01:23 --> 01:01:28: few extra minutes if people are interested in asking  
 questions.  
 01:01:28 --> 01:01:31: To them personally. Otherwise thank you again for joining us.  
 01:01:31 --> 01:01:34: The recording will be available on Knowledge Finder shortly  
 after  
 01:01:34 --> 01:01:35: this session is over.  
 01:01:35 --> 01:01:39: Thank you guys. Thank you and also you know sending  
 01:01:39 --> 01:01:41: your ideas for our next session.  
 01:01:41 --> 01:01:45: We certainly want to continue the conversation looking at  
 other  
 01:01:45 --> 01:01:49: opportunities to learn from projects like this around the coast  
 01:01:49 --> 01:01:51: of the North America in particular.  
 01:01:51 --> 01:01:54: Again, thanks and certainly applause to our speakers.  
 01:01:54 --> 01:01:57: Thanks for the time and effort to join us today  
 01:01:57 --> 01:02:00: and to share this is unique and fabulous project.  
 01:02:00 --> 01:02:02: I'm sure it will be successful.  
 01:02:02 --> 01:02:06: If there are additional questions you know,  
 01:02:06 --> 01:02:09: certainly now is the time to raise your hand and  
 01:02:09 --> 01:02:12: see if we can answer any more of them here.

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