MEETING MINUTES

MEETING	City of Guelph Organic Waste Processing Facility Public Liaison Committee Meeting #13
DATE	Thursday May 8, 2014
LOCATION	Administration Boardroom, Waste Resource Innovation Centre 110 Dunlop Drive, Guelph, Ontario
TIME	6:30 p.m. to 7.40 p.m.
PRESENT	Committee Members: Elected Chair, Michael Fortin,(City of Guelph resident) Karyn Hogan, (City of Guelph resident) Donna Sunter, (City of Guelph resident), , Tim Fisher, (City of Guelph resident),), Ken Spira, (City of Guelph resident) MOE: Kevin Noll Wellington Organix: Mark Jared City of Guelph: Catherine McCausland, David Gordon
REGRETS ABSENT	Larry Conrad,(City of Guelph resident, Laura Marini (City of Guelph resident)

DISCUSSION ITEMS

ITEM #	DESCRIPTION
1	**Disclosure of Pecuniary Interest:** No disclosures of Pecuniary Interest.
2	**Approval of Agenda** Agenda was approved and accepted by the committee.
3	**Approval of February 11th 2014 minutes** Accepted by the committee.

4	**Review of Action Items from Previous Meeting:** Item 1- The PDO amendment has been submitted. Updates would be given later in the meeting.
5	**Delegations wishing to be heard regarding matters on the agenda:** None
6	**Matters arising from the Delegations:** None
7	**New Business:** **a) Organics Facility update on operations.** From Monday 10th February 2014 until Friday the 2nd May 2014 the plant has processed 4009.66 tonnes of Source Separated organics. The facility has shipped out 950.38 tonnes of finished compost in this time. The amount of screening waste leaving the facility in this time frame is as follows: Screening waste- plastics bin- 64.22 tonnes Screening waste plastics bin as a percentage of incoming source separated organics is 1.60%. Facility has been running taking waste from the City of Guelph and the Region of Waterloo in this 3 month timeframe. **b) Overview of odour complaints since 11th February 2014 meeting** There has been no odour complaint since the last plc meeting. It was requested that the City provide operational data for other site operations. The City agreed but said they would subject to change as records were updated.
8	**Status of current amendment (negative air pressure):** Negative air pressure- We have agreed with the ministry on the wording for the negative pressure condition within the ECA. We will now record negative pressure averaged over 1 hour. We also now record air balance averaged over 30 minutes. This term is to show that more air is being extracted from the building than is being drawn in. It helps to show the system is operating as designed.

	If we lose both of these then there steps the ministry has asked us to follow for reporting and investigating.
9	**WRIC annual Report** Questions were asked to be submitted to Bill Shields. The report will be discussed at the next meeting.
10	**Detroit Contract** There was plenty of discussion around the new contract. The local community felt let down by promises made by the City when the site was built and what the site has grown into. The City will look at getting the sign for reducing engine breaks placed on the other side of the road on Stone Road. The ministry will investigate other ECAs in the province and see what their radius for accepting waste is. However, it was mentioned this might be tricky.
11	**Other Business** **Update on PDO project** The City gave an explanation of the bins that would be used at the new PDO and where they would be emptied. Ken Spira asked for a list of the changes that were made as a result of the input from the PLC. This would be obtained from the consulting engineer **Use of soil from engineering soil pile** The City said it would be using the soil from the engineering soil pile if it proved to be cost effective for the PDO project. The city would be meeting with other departments in the City and would report back at the next meeting.
12	**Next meeting date's** Confirmed as **Thursday July 24th ,2014** The one for October was confirmed for **Thursday**, **October 23rd 2014**
13	**Adjournment** Accepted by the committee. Meeting adjourned at 7.40 p.m.

ACTION ITEMS

ITEM #	ASSIGNED TO	DUE DATE	DESCRIPTION
1	The City of Guelph	Next meeting	Getting the sign for reducing engine breaks placed on the other side of the road on Stone Road.
2	The City of Guelph	Next meeting	A list of the changes that were made as a result of the input from the PLC. This would be obtained from the consulting engineer
3	The Ministry of Environment	Next meeting	Will investigate other ECAs in the province and see what their radius for accepting waste is.
4	The City of Guelph	Next meeting	Use of engineering soil pile in PDO project update.
5			
6			

Responses to Ken Spira's 2nd set of Questions 26th Feb regarding the Storm Water Management Plan submitted in support of the application to amend the Sewage Works Approval

Responses to Ken Spira's Jan 24/14 Questions regarding the Storm Water Management Plan submitted in support of the application to amend the Sewage Works Approval. City Response Feb 7/14. Ken's response to response Feb 9/14. Revised as requested by chair – Feb 26/14.

Page one of the draft issued for review 1.0 says that Sco-Terra Consulting group Limited has been retained by the City of Guelph Solid Waste Resources Division. Was there a pre-qualification process put in place to determine the ability of the consultants to design a storm water management plan that requires special attention and expertise to protect the aquifer below the site and buffering of the proposed drop of area from the residential community to the south?

Bullet 1: As identified in various City Reports, the majority of the City is vulnerable to aquifer recharge. The Stormwater Management Master Plan provides the following guidance:-
This site has the least protection above the aquifer than any other area within the City. The majority of the City does not have a waste disposal operation located above the aquifer or is it governed by this C of A. **Was there a pre-qualification process put in place to determine the ability of the consultants to design a storm water management plan that requires special attention and expertise to protect the aquifer below the site and buffering of the proposed drop of area from the residential community to the south?**

"Low Impact Development is the use of source and conveyance stormwater management controls to promote infiltration and pollutant removal on a local site by site basis. These measures rely on eliminating the direct connection between impervious surfaces such as roofs, roads, parking areas, and the storm drainage system, as well as the promotion of infiltration on each development or redevelopment site."

"The City of Guelph has an interest in implementing LID practices not only within new development, but within existing neighbourhoods. For new development, the City of Guelph will be incorporating LID requirements and guidelines as part of an updated Stormwater Management Policy."

"The decision to infiltrate groundwater will depend on the expected contaminant potential within the infiltrating water and the degree of contaminant susceptibility to the local aquifers."

It should be noted that the PDO site will generate run-off from paved surfaces, which are expected to function similar to that of an equivalent size parking lot. As identified in the draft SWM Plan (Report), there is no proposed storage of solid waste within the publically accessible PDO area. Short-term storage of yard waste and brush is proposed at the south limit of the PDO. The frequent removal of this waste, as is required under the current ECA, and which requirement is met and exceeded by the City (i.e. removal occurs more frequently than required by ECA during high usage periods), serves to limit impact to stormwater runoff quality.
I do not agree with the statement: "there is no proposed storage of solid waste within the publically accessible PDO area" Short term storage is storage. .As referenced in MOE SWM Guidelines, parking lots are expected to generate run off with elevated levels of sediment, metals as well as sodium and chloride generated from winter salting activities. MOE SWM planning and design guidelines outline alternative stormwater management facilities which offer water quality treatment function. The Oil and Grit

Separators are proposed as an at-source treatment provision, prior to conveyance to the infiltration basins for additional 'soft' treatment measures and infiltration. This approach has been reviewed with the Ministry through pre-consultation.

In terms of qualifications, Mr. Pellerin has 25 years of experience in the Consulting Engineering Industry in Ontario, including development of Stormwater Management Plans and Remedial Plans for both open and closed Landfill Sites and Community Scale Development projects. Mr. Pellerin has provided evidence before the Ontario Municipal Board, the Ontario Superior Court of Justice and the Minister of the Environment in relation to Municipal Class EA, Municipal Infrastructure and Wastewater Servicing Projects. I have repeated the question below where I have highlighted the major part of my question. **Page one of the draft issued for review 1.0 says that Sco-Terra Consulting group Limited has been retained by the City of Guelph Solid Waste Resources Division. Was there a pre-qualification process put in place to determine the ability of the consultants to design a storm water management plan that requires special attention and expertise to protect the aquifer below the site and buffering of the proposed drop of area from the residential community to the south?**

The Stormwater Management Plan developed for the new PDO, together with value-added stormwater management recommendations in relation to the Transfer Station Site, have been reviewed with the MOE Guelph District, West Central Region and EAAB. The PDO-TS SWM Plan remains subject to issuance of an ECA by the Ministry under section 53 of the Ontario Water Resources Act.

The City has a great deal of confidence in Mr. Pellerin and did not and does not feel a pre-qualification process was necessary.

This site receives only solid non-hazardous waste with the exception of the household hazardous waste depot (HHW) and the City goes to great length to ensure our surface water and ground water is protected. All surface water in the vicinity of the HHW drains to storage tanks. Further, frequent surface water and ground water samples are taken to ensure this site is not impacting water quality standards. The results of the sampling are reviewed by a senior Hydrogeologist and all results posted in the annual report which is then further reviewed by Ministry staff.

Is a Storm Water Contamination Assessment being done and if not why?

Bullet 2: The Stormwater Contamination Assessment is considered unnecessary due to the proposed operation of the PDO site – refer to response under Bullet 1 above.
Based on what I believe to be a very real risk of contamination due to the ability of anyone from Ontario, throwing hidden contaminants into the bins, a Stormwater Containment Assessment should be a requirement.

Was the design contract tendered and if it was, why was the tender not publicised on the City website with the results? If not, why was this consultant chosen, how much is their fee and why was the same consultant that did the work for the transfer station, storm and sanitary work not retained?

Your concern regarding the potential for waste disposal bins to degrade stormwater quality within the adjoining transfer station site has been addressed through provision of water quality treatment in the form of a dedicated oil and grit separator, prior to stormwater conveyance to an existing extending detention dry pond serving the Transfer Station site,

which facility is equipped with an emergency by-pass to sanitary in the event of an adverse water quality event.

Bullet 3: The stormwater management design was not tendered out as the cost of this project was under $25,000. Sco-Terra Consulting Group Limited was selected based on the firm's extensive experience with design and regulatory approvals for stormwater management projects related to solid waste sites and development projects of community scale. Sco-Terra Consulting Group Limited has extensive site development experience which includes expansion and remedial works for both closed and operating landfill sites. This project experience includes the implementation of new stormwater management facilities and the remediation of existing stormwater management facilities servicing landfill and other sites.
Can you tell me their fee?

Consulting costs associated with the storm water management design and the ECA application is $19,146.20. These costs do not include attending the PLC meeting, providing responses to the PLC questions or attending the site tour with the Ministry of Environment. These costs will be in addition.

City engineering staff completed the original storm water design and application for the transfer station however the engineering department is no longer used due to their other commitments. Another consultant firm was used for the amendment required for the fuelling station however that consultant was selected by the Contractor who was awarded that project.
Can we be provided with the as built drawings of the original site plan, showing the outside storm and sanitary associated with the construction.

Attached

Can you provide details to the wording in 1.1 "to serve municipalities and businesses of the Province of Ontario"? Is it the intent that anyone from the Province of Ontario could bring their waste to the public drop off area for disposal?

Bullet 4: This is the exact wording taken from the original and current Waste ECA. Waste can be accepted at the site from anywhere in Ontario. This is a standard clause for most landfills and transfer stations in Ontario.

The first paragraph in Section 1.2 of the report references a 1.56-ha tract of impervious surface, while the second paragraph references a 3.50-ha PDO area. The first paragraph in Section 1.4 of the report references a 1.35-ha of impervious surface and the second bullet on page 7 references a 1.36-ha impervious paved area. Please confirm the correct areas.

Bullet 5: The 3.50 hectare PDO site is in reference to the total footprint, including the attenuation berm and landscaped areas south of the paved PDO surface. The developed and largely impervious portion of the PDO is 1.56 hectares. A limited portion (0.21 hectares) of this area including truck access and landscaped slopes drains west to the existing stormwater system proximal to the Maturation Facility. Therefore, the net PDO impervious area contributing runoff to proposed stormwater management works is 1.35 hectares.

Was there a business plan put in place for this project and if so, what did it state?

Bullet 6: A business plan was completed and indicated that constructing a new public drop off area at the Waste Resource Innovation Centre will reduce greenhouse gas emissions as well as improving customer service for residents using the site to drop off their recyclables and waste. The new public drop off design will solve the current problems of wait times for residents, traffic flow, Health and Safety concerns with having larger, industrial sized vehicles operating in a close vicinity with smaller public vehicles and the subjectivity of flat rates. The added space will also allow City staff to easily implement new recycling programs as they arise, resulting in greater diversion of waste and associated cost-benefits to Corporation. Please provide the dollar amounts used in the business plan and can you confirm if the business plan was or was not presented to City Council for their review and approval?

A formal business case was not done for this project. The project was approved by Council during the deliberation of the 2013 Capital Budget process using existing, approved funds. The attached document was provided to Council during that process to answer a number of questions they had relating to this project. The previous comment about there being a formal business case was a mistake.

Has this project been reviewed for compliance with the City of Guelph Source Protection Plan Policies and if so is that report available and if not, why not as this site is a vulnerable area and significant threat to drinking water according to the Grand River Source Protection Plan.

Bullet 7: In reference to the "Grand River Source Protection Area – Approved Assessment Report", the PLC's attention is drawn to Table 8-11: Drinking Water Quality Threats, "An activity that reduces the recharge of an aquifer" is noted (item 20). Given the proposed use and containment of stormwater within the PDO publically accessible area, and the nature of the stormwater runoff expected to be generated, the application of LID methods (i.e. soft BMP measures) is considered appropriate, complimented by upstream structural pre-treatment measures (i.e. OGS). This approach is also consistent with the City of Guelph's Stormwater Management Master Plan.

The PLC's prior encouragement of groundwater recharge initiatives has also been considered in the development of the Stormwater Management Plan and strategies for the PDO and TS sites.

I am not sure if this answers my question of not. Can you simplify your answer to the question; **Has this project been reviewed for compliance with the City of Guelph Source Protection Plan Policies and if so is that report available?**

The City of Guelph Source Protection Plan has been submitted to the Ministry for approval and is therefore subject to change. It is anticipated that the Plan will not be approved until 2016.

In speaking with the City's Source Water Protection officer I was advised that once the plan is approved, it will be up to the issuing body to ensure that any and all potential threats are appropriately managed by adding conditions in the ECA if required. This department is fully confident that all source water protection initiatives are being implemented at this site.

The draft source water plan can be located at:
http://www.sourcewater.ca/index/document.cfm?Sec=7&Sub1=11

Can you provide additional details relating to the sound-noise-visual attenuation berm, such as vegetation etc... Does Sco-Terra Consulting have

any design experience with sound-noise-visual attenuation berms that they can provide or will the design and specifications be provided by others with calculations and specific references to the ability of the berm to maximise the sound-noise-visual attenuation? What design criteria has or will be used to ensure that the barrier will meet or exceed the expectations of the residential neighbourhood to the south? Effective noise barriers typically reduce noise levels by 5 to 10 decibels and to effectively reduce the noise from coming around its ends, a barrier should be at least eight times as long as the distance from the home or receiver to the barrier, can it be verified that this criteria has been met and if not, how many times as long is the distance proposed and can it be increased? What specific guideline and calculation methodologies are or will be used in the design of the barrier.

Bullet 8: The design of the Landscaped Berm Attenuation Buffer has been undertaken with respect for adjacent land uses, including residential and other land uses located south of the WRIC site (i.e. south of Stone Road). A sound attenuation study has not been undertaken and is considered unnecessary.

Based on the continuous concerns of the residents located south and south-east of the site, I would think that this would be a top priority as they have expressed concerns for years on this subject. This has also been a big concern during the Guelph Innovation District Secondary Plan open house sessions and public meetings. In support of those residences on Stone and Watson, I request that a sound attenuation study be completed and be a requirement of the final PDO-TS SWM Plan submitted to the MOE in support of the ECA application. **What design criteria has or will be used to ensure that the barrier will meet or exceed the expectations of the residential neighbourhood to the south?**

- **Effective noise barriers typically reduce noise levels by 5 to 10 decibels and to effectively reduce the noise from coming around its ends, a barrier should be at least eight times as long as the distance from the home or receiver to the barrier, can it be verified that this criteria has been met and if not, how many times as long is the distance proposed and can it be increased?**
- **What specific guideline and calculation methodologies are or will be used in the design of the barrier?**

It is important to note that site operations currently only occur between the hours of 7:00 a.m. to 6:00 p.m. Monday to Friday and on Saturday until 4:00 p.m. There has not been any noise issues related to the current PDO. The new PDO design has the larger trucks that have the ability to create the most noise, now entering the site further away from sensitive receptors. Therefore, this department does not feel that monies spent on a sound attenuations study are warranted.

Can you provide additional, specific details regarding the unnamed watercourse that is referenced and how it is required to be protected and how specifically that protection is proposed?

Bullet 9: The unnamed watercourse is understood to originate south of the Guelph Airport. As it is tributary ultimately to the Eramosa River, Enhanced Protection (> 80% TSS removal) Water Quality "at-source" treatment measures are proposed in relation to the PDO and remedial works planned for the existing Transfer Station site.

Does this comply with the City of Guelph Source Protection Plan Policies?
Is a report available?

http://www.sourcewater.ca/index/document.cfm?Sec=7&Sub1=11

The purpose of directing stormwater runoff generated from the rear of the existing waste transfer building to the sanitary sewer system, was to ensure that any contaminated runoff resulting from the material(s) being delivered to the site, was directed to the sanitary system and not the existing stormwater management facility. The disconnection of the storm sewers at the rear of the existing waste transfer building from the sanitary sewer system is not recommended.

Bullet 10: Stormwater (or floor) runoff associated with materials being delivered to the Transfer Station will continue to be directed to the transfer station floor drains and a dedicated OGS unit discharging to the City's sanitary system. The quantum of runoff generated in association with materials delivered to the transfer station is expected to be insignificant.
I assume that the above is referencing the floor inside the building?

Yes

The proposed separation of stormwater generated within the paved area south of the Transfer Station, and redirection of this stormwater to the existing Transfer Station dry pond, with provision to by-pass to sanitary pump station, is in accordance with Provincial and City Guidelines. The current practice of discharging substantial peak runoff and volumes of stormwater to the sanitary system under wet weather events, compromises the capacity of the City's sanitary collection, conveyance and treatment facilities. The re-direction of this stormwater runoff to independent "at-source" treatment and existing end-of-pipe extended detention facilities is believed to be in the financial interests of Corporation, which is understood to be a key interest of the PLC.
I agree that a key interest of the PLC is the financial interests of the Corporation, however the financial information has not been provided. The purpose of directing stormwater runoff generated from the rear of the existing waste transfer building to the sanitary sewer system, was to ensure that any contaminated runoff resulting from the material(s) being delivered to the site, was directed to the sanitary system and not the existing stormwater management facility. This design was put in place to protect the environment and is more important now than in the past with the increase of activity proposed and should not be modified based on financial concerns.

This concern has been considered in the Stormwater Management Plan through provision of water quality treatment and additional polishing of stormwater generated within the Public Drop-off area through a bioretention filter, prior to infiltration in end-of-pipe bioretention-infiltration facilities.

The existing catch basin that is adjacent to bins 8/9 should remain connected to the existing sanitary to the north and grades should be modified so that this catch basin would pick up any spillage/contaminants from the bins. The two catch basin man holes to the north can then be diverted to the storm system if modified to suit additional concerns. This would take two thirds of the rain water currently going to the sanitary to the storm and would maintain better protection of the aquifer from the possible

contamination from the public drop off bins. If additional rain water must be diverted from the sanitary, a roof structure could be placed over the drop off bins. Please note that I am against any change that would convert the sanitary catch basins to storm as this change goes against the original risk mitigation strategy.

Bullet 11: The 3 existing catch basins located south of the Transfer Station are "stormwater" catchbasins. The localized storm sewer system in this area was previously directed to sanitary based on the type of solid waste storage previously anticipated in this area. The potential use of this area for open solid waste storage will be considerably limited by the development of the new PDO and associated WD truck ingress-egress for bin placement and removal, at a relatively high frequency. The re-direction of stormwater runoff generated within this area to "at-source" treatment and end-of-pipe extended detention facilities equipped with "by-pass" provision to the City's sanitary system, is considered appropriate.
As previously stated, the risk of contamination based on the many public vehicles, is more of a risk to contaminants than what was previously anticipated in this area and I believe that the sanitary connections should be maintained.

Our response remains the same.

The existing stormwater management facility was designed and constructed with emergency bypass piping to direct flows to the sanitary sewer system in the case of an adverse water quality event. The design of the proposed infiltration basin should also include for an emergency bypass system.

Bullet 12: Agreed. The design of the upstream storm sewer system includes an emergency by-pass provision to sanitary by way of the Transfer Station Dry Pond by-pass. This feature was added subsequent to circulation of the draft SWM Plan; and prior to receipt of the PLC's comments.
Can you please ensure that the PLC is kept up to date with revisions and as previously requested, could these revisions be specifically indicated on the drawings?

A final version of the Stormwater Management Plan will be emailed to the PLC.

The existing extended detention SWM pond is lined with a geosynthetic clay liner (GCL) to prevent the infiltration of any runoff. Based on the existing groundwater system, as well as the increased potential for contamination from the public drop off area and the use of the site, the provision of an infiltration facility is not appropriate.

Bullet 13: The statement: "… increased potential for contamination from the public drop off area and the use of the site …" is an assertion that is not defined or quantified. The use of infiltration measures with appropriate upstream stormwater quality treatment is supported for the reasons stated above, and consistent with prior PLC comments relating to water balance and groundwater recharge initiatives.
The existing extended detention SWM pond is lined with a geosynthetic clay liner (GCL) to prevent the infiltration of any runoff. In my opinion, the provision of an infiltration facility is not appropriate.

Noted

Please confirm that the proposal has been reviewed by the City of Guelph Fire Prevention office and that specifically, the additional fire hydrants, fire

department access and fire extinguishers will be in place in accordance with subsection 3.2.2 and 3.2.3 of the Ontario Fire Code.

Bullet 14: The requirement for review by the City of Guelph Fire Prevention Office will be determined through the City of Guelph's Planning Division in conjunction with Site Plan Control approval pursuant to section 41 of the Planning Act. The PDO facility design has had regard for emergency vehicle access.

Please confirm that any engineered fill that may be required in or adjacent to the project will not be used from the non-native soil that was imported to the site that contains possible contaminants.

Bullet 15: Only engineered fill meeting project specifications and Ontario Provincial Standards (OPS) will be utilized for construction of the PDO facility. This precludes the use of contaminated materials.
Please confirm that no soil will be used from the non-native soil that was imported and stored to the south of the project.

All contaminated soil has been removed from the storage pile south of the facility.

Can the drawings be changed to include clouded areas with a revision number so that the changes and revisions made to the drawings from specific reviews such as 1. Client Changes, 2. Building Department changes, 3. MOE changes, 4. PLC Changes..... could be identified on the drawings?

Bullet 16:

This would provide an invaluable method of keeping track of changes and a path of revisions made.

No.

Is a full Geotechnical Report available to the PLC for review? No geotechnical details related to the design of the infiltration facility have been provided (i.e. geotechnical investigation report, depth to groundwater, permeability / hydraulic conductivity of native soils, Guelph Permeameter Test Results for native soils, etc.)

Bullet 17: The Geotechnical Report will be included in the final PDO-TS SWM Plan submitted to the MOE in support of the ECA application. A copy of the IFA submission will be provided to the PLC.

The Wilkinson Model #25 Oil and Grit Separator does not look like it will adequately protect the environment from potential contaminants such as water salable liquids. These interceptors should be replaced with a better filter system that will catch all possible water salable contaminants or best of all, the catch basins should remain on the sanitary system.

Bullet 18: The Water Quality protection afforded by the OGS units is detailed in the final PDO-TS SWM Plan to be submitted to the MOE in support of the ECA application. Additional filtration measures provided in the first cell of the infiltration basin are also detailed in the final PDO-TS SWM Plan. A copy of the IFA submission will be provided to the PLC.

The report references that oil/grit separator units will be designed to provide enhanced (80% total suspended solids (TSS) removal). However, sizing details of the OGS units have not been provided.

Bullet 19: The Water Quality protection afforded by the OGS units is detailed in the final PDO-TS SWM Plan to be submitted to the MOE in support of the ECA application. Additional filtration measures provided in the first cell of the infiltration basin are also detailed in the final PDO-TS SWM Plan. A copy of the IFA submission will be provided to the PLC.

The OGS units have been designed to treat runoff generated during the 2 year design storm. In general, storm sewers are designed to convey the 5 year design storm event. Therefore, the OGS units should be sized to treat the 5 year design storm event.

Bullet 20: OGS unit are commonly designed for a 25mm (1 inch) water quality design event pursuant to MOE Guidelines. The Water Quality protection afforded by the OGS proposed for the PDO-TS SWM Plan exceeds this requirement based on selection of the 2 year return storm. The OGS units are also designed to treat peak runoff under a 5 year return storm, through restriction or 'over-control' of 5 year peak flows to 2 year peak flow levels, using localized surface attenuation within the PDO. This approach has the further benefit of reducing peak flows discharged to the infiltration basin, thereby optimizing its ability to infiltrate treated stormwater.

The on-site storm sewers have been sized to convey runoff generated during the 2 year design storm. In general storm sewers are designed to convey the 5 year deign storm event. Therefore, the storm sewers should be re-sized to convey the 5 year design storm.

Bullet 21: Refer to comments under bullet 20 which explain the inherent benefits to over-controlling 5 year storm peak runoff to 2 year post-development levels, for optimization of end-of-pipe SWM facility infiltration performance.

The report references that localized attenuation on paved surfaces will occur for events less frequent than a 2 year storm. Therefore, surface ponding will occur during the 5 year design storm. What is the depth of surface ponding during the 5 year design storm? What is the duration of the surface ponding during a 5 year deign storm? The elimination of surface ponding during the 5 year storm should be investigated.

Bullet 22: The localized attenuation, depth of inundation and drawdown time are detailed in the final PDO-TS SWM Plan to be submitted to the MOE in support of the ECA application. Localized surface attenuation must achieve safe ingress and egress conditions in accordance with Provincial and Municipal requirements. A copy of the IFA submission will be provided to the PLC.

The fifth bullet on page 7 of the report references a bypass provision from the infiltration basin to the receiving watercourse, however no bypass system for the infiltration basin has been provided, nor has a bypass system been provided to direct runoff to the sanitary sewer system in the case of a spill and/or contamination.

Bullet 23: The by-pass referred to is a major system by-pass, wherein the extended detention capacity of the infiltration basin is exceeded. This by-pass provision (armoured spillway) is detailed on the IFR Civil Drawings previously provided to the PLC.

What is the anticipated draindown time for the infiltration facility?

Bullet 24: The drawdown time of the infiltration basin varies under each design storm event. Stage-storage-discharge characteristics are detailed in the final PDO-TS SWM Plan to be submitted to the MOE in support of the ECA application. A copy of the IFA submission will be provided to the PLC.

Based on the site use, only "clean" runoff (i.e. runoff from rooftops and/or grassed surfaces) is recommended to be infiltrated. A method for ensuring that only "clean" runoff is infiltrated should be investigated.

Bullet 25: Stormwater runoff of suitable quality for infiltration is to be achieved through responsible operation of the PDO, provision of at-source stormwater quality pre-treatment and 'soft' filtration measures employed in the first cell of the infiltration basin. This approach is consistent with pre-consultation discussions with the Ministry of the Environment and the PLC's prior concerns around water balance and groundwater recharge initiatives.

Section 3.2 identifies that thermal (temperature) treatment of runoff is required. No provision and/or discussion with respect to temperature controls and/or mitigation measures have been provided. Please provide these details.

Bullet 26: Thermal control is achieved through the infiltration and recharge of stormwater to the shallow aquifer under first flush events. Due to the pervious nature of sub-soils on a site-specific and regional basis, and observation of seasonal base flow conditions in the receiving watercourse, it is potentially a "gaining reach" which receives base flow contribution from the shallow aquifer. Infiltration versus direct surface water discharge serves to mitigate thermal impacts to this receiver, which is tributary to the Eramosa River (i.e. classified as a warm water stream with cold water rehabilitation potential).

Section 4.2 identifies that the Guelph Arboretum AES rainfall intensity-duration-frequency (IDF) has been used. The City of Guelph 5 year design storm event (Chicago distribution – 170minute duration) should be utilized.

Bullet 27: The City's current intensity-duration-frequency (IDF) parameters, as set out in the Guelph Stormwater Management Plan (AMEC, February 2012) have been utilized. These IDF parameters are derived from 16 years of rainfall data (1954-1970) from the Guelph Arboretum station. The 5 year design storm referenced is also derived from the rainfall data collected at the Guelph Arboretum station. This 5 years design storm is in fact that utilized by Sco-Terra in the PDO-TS SWM Plan.

Maintenance requirements and anticipated time line, for the proposed infiltration basin should be provided.

Bullet 28: Maintenance requirements for the infiltration basin are detailed in the final PDO-TS SWM Plan to be submitted to the MOE in support of the ECA application. A copy of the IFA submission will be provided to the PLC.

All heavy duty silt fences installed on site should be as per the City of Guelph Standard (SD-74b), not OPSD 219.13.

Bullet 29: The City of Guelph has not opposed the use of OPSD 219.13 which is the Provincial Standard for Heavy Duty Silt Fence" with wire mesh reinforcement. This specification has due regard for protection of the receiving watercourse.

Section 8.2 identifies that the infiltration basin will be inspected and monitored regularly. What is the frequency and timing of the inspections and/or monitoring?

Bullet 30: The PDO infiltration basin will be in plain view so will be monitored constantly by site staff. As per all on-site infrastructures, routine maintenance and monitoring will be done on a regular basis and as needed.

Can you provide the training details that will be given to site staff that will be specific to this monitoring? Will this be specific staff or all staff?

Trained competent persons will be inspecting the area during the daily site inspections.

Competent Person" or "Competent People" means a person or people who has/have training and knowledge of the following:

i relevant waste management legislation, regulations and guidelines;
ii. major environmental concerns pertaining to the waste to be handled;
iii. contents of the *Facility's* Design and Operating Report;
iv. the terms, conditions and operating requirements of the *Certificate;*
v. the applicable Fire Code and how it applies to proper storage and handling of waste that may be reactive, oxidizing, explosive or flammable;
vi. the *WRIC Environmental Emergency Plan,* including exit locations and evacuation routing, and location of relevant equipment available for emergency situations;
vii. procedures for recording and responding to public complaints;
viii. record keeping procedures as outlined in Conditions 51 and 63 of this *Certificate;*
ix. occupational health and safety concerns pertaining to the wastes to be processed;
x. specific written procedures for the control of nuisance conditions;
xi. operation and management of the *Site,* in accordance with the specific job requirements of each individual operator;
xii. procedures for the identification and refusal of unacceptable wastes;
xiii. proper handling of waste, and
xiv. proper procedures for the storage of waste and proper maintenance of the *Site;*

Section 8.2 identifies that any remedial actions in the event of a failure will be completed by the Contractor. What is the timeline required for the completion of any remedial actions? Who is responsible for the completion of any remedial actions after all construction has been completed?

Bullet 31: The remedial action relates to erosion and sediment control during construction. This is in reference to such potential circumstances such as a breach of perimeter silt fencing. The timeline for corrective works would be immediately upon identification by Contractor or the City's Construction Observation personnel. Once the Contractor's contractual obligations have been met and Engineering Certification has been issued, confirming that the PDO-TS stormwater management works have been

implemented in accordance with the approved plans and specifications, the City will be responsible for ongoing operation and maintenance of the facilities.

Drawing 06 – How will access to the infiltration basin be provided for maintenance purposes?

Bullet 32: Maintenance access to the infiltration basin is detailed in the final PDO-TS SWM Plan to be submitted to the MOE in support of the ECA application. A copy of the IFA submission will be provided to the PLC.

Drawing 16 – The infiltration basin has been designed with 3:1 side slopes. As per the City of Guelph standards all stormwater management facilities (including infiltration facilities) are to be designed with 5:1 slopes.

Bullet 33: The infiltration basin has an active storage depth of approximately 0.55 metres (22 inches). The requirement for 5:1 side slopes pertains to safety concerns in relation to extended detention ponds (wet or dry) and other end-of-pipe SWM facilities of greater permanent pool and extended detention storage depth.

Due to the large concentration of salt found in the annual reports, increased vehicle traffic and asphalt areas proposed for the public drop off area, can the City prepare and implement a salt management plan that contains best management practices to protect the environment from the negative impacts of road salts. The management plan should cover all activities which may result in release of road salts to the environment, such as salts on roads, and disposal of snow containing road salts.

Bullet 34: You were provided with a copy of the City's Salt Management Plan on October 9th, 2012 by email.