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The Regional Municipality of Durham Council Information Package September 20, 2019

Information Reports

There are no Information Reports

Early Release Reports

There are no Early Release Reports

Staff Correspondence

There is no Staff Correspondence

Durham Municipalities Correspondence

1. [Township of Scugog](#) – re: Resolution passed at their General Purpose and Administrative Committee meeting held on September 9, 2019, regarding Region of Durham Resolution GO East Update and Transit Oriented Development Evaluation
2. [Township of Scugog](#) – re: Resolution passed at their General Purpose and Administrative Committee meeting held on September 9, 2019, regarding Building Permit Activity – First Half of 2019
3. [Municipality of Clarington](#) – re: Resolution passed at their Council meeting held on September 16, 2019, in support of the City of Oshawa resolution, regarding Fire Safety During Construction Period of Wood Buildings

Other Municipalities Correspondence/Resolutions

1. [Town of Newmarket](#) – re: Resolution passed at their Council meeting held on September 9, 2019, regarding More Homes, More Choice Act, 2019 – Bill 108 Proposed Regulations

Miscellaneous Correspondence

1. [Linda Gasser, Town of Whitby resident](#) – re: Commenting on the Deloitte Organics Financial Model Peer Review and the delay in the access to the review.

Advisory Committee Minutes

There are no Advisory Committee Minutes

Members of Council – Please advise the Regional Clerk at clerks@durham.ca, if you wish to pull an item from this CIP and include on the next regular agenda of the appropriate Standing Committee. Items will be added to the agenda if the Regional Clerk is advised by Wednesday noon the week prior to the meeting, otherwise the item will be included on the agenda for the next regularly scheduled meeting of the applicable Committee.

Notice regarding collection, use and disclosure of personal information:

Written information (either paper or electronic) that you send to Durham Regional Council or Committees, including home address, phone numbers and email addresses, will become part of the public record. If you have any questions about the collection of information, please contact the Regional Clerk/Director of Legislative Services.



September 16, 2019

Ralph Walton
Regional Clerk/Director of Legislative Services
Region of Durham
Sent via email to: clerks@durham.ca

Re: Region of Durham Resolution GO East Extension Update and Transit Oriented Development Evaluation (222-19)

Dear Mr. Walton:

At the last regular General Purpose and Administration Committee meeting of the Council of the Township of Scugog held September 9, 2019 your correspondence (No. 222-19) regarding the above captioned matter was discussed.

I wish to advise that the following resolution was passed which will be going forward for ratification at the September 23, 2019 Township of Scugog Council meeting:

"THAT Correspondence No. 222-19, regarding GO East Extension Update and Transit Oriented Development Evaluation, be received and endorsed."

Should you require anything further in this regard, please do not hesitate to contact the undersigned.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'John Paul Newman', is written over a blue horizontal line.

John Paul Newman
Director of Corporate Services/Clerk

cc: The Honourable Caroline Mulroney caroline.mulroneyco@pc.ola.org
Minister of Transportation and Minister of Francophone Affairs



September 16, 2019

Ralph Walton, Regional Clerk
Region of Durham
605 Rossland Road East
Whitby, ON L1N 6A3

Sent via email to Mr. Walton at: clerks@durham.ca

Re: Building Permit Activity – First Half of 2019

Dear Mr. Walton:

At the last regular General Purpose and Administration Committee meeting held September 9, 2019, the above captioned matter was discussed.

I wish to advise that the following resolution was passed which will be going forward for ratification at the September 23, 2019 Township of Scugog Council meeting:

"THAT Report DEV-2019-024, Building Permit Activity – First Half of 2019, be received; and

THAT the Staff Report Building Permit Activity – First Half of 2019 be circulated to the Region of Durham, the Scugog Chamber of Commerce, the Port Perry BIA, the Economic Development and the Tourism Advisory Committees, the Durham Region Home Builders' Association, the Durham Catholic and Durham District School Boards, and the Building Industry and Land Development (BILD) Association of Greater Toronto."

A copy of the Staff Report DEV-2019-024 is enclosed for your records.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'John Paul Newman', is written over a horizontal line.

John Paul Newman
Director of Corporate Services/Clerk

Encl.



Township of Scugog Staff Report

To request an alternative accessible format, please contact the Clerks Department at 905-985-7346.

Report Number: DEV-2019-024
Prepared by: Lindsay Burnett, Administrative Assistant
Department: Development Services - Building
Report To: General Purpose and Administration Committee
Date: September 9, 2019
Reference: Strategic Direction #3 – Economic Development
Report Title: Building Permit Activity - First Half of 2019

Recommendations:

1. That Report DEV-2019-024, Building Permit Activity – First Half of 2019, be received; and
 2. That the Staff Report Building Permit Activity – First Half of 2019 be circulated to the Region of Durham, the Scugog Chamber of Commerce, the Port Perry BIA, the Economic Development and the Tourism Advisory Committees, the Durham Region Home Builders' Association, the Durham Catholic and Durham District School Boards, and the Building Industry and Land Development (BILD) Association of Greater Toronto.
-

1. Background:

This report has been prepared to present the Building Permit Activity for the first six months (ending June 30th) of 2019. It compares building statistics and results for the same time period of 2018.

2. Discussion:

2.1. Permit Activity

Table 1 summarizes the number of building permits issued in the first six months of 2018 and 2019 by type of construction. The results for 2019 are 87 residential, 28 non-residential and 13 demolitions for a total of 128 permits. This is slightly lower than the number of permits issued in the same period of 2018 (81 residential, 43 non-residential and 22 demolitions, equaling 146 permits).

Table 1 – Number of Building Permits by Type of Construction

Type of Construction		2019	2018
		Jan. – Jun.	Jan. – Jun.
<i>Single Detached</i>	New Construction - Urban	12	6
	New Construction - Rural	12	12
	Addition	11	16
	Renovation	26	24
<i>Multi-Dwelling</i>	New Construction	0	0
	Addition / Renovation	2	3
<i>Garages / Decks / Porches</i>	New Construction	14	15
	Addition	2	5
	Renovation	8	0
Sub-Total		87	81
<i>Commercial</i>	New Construction	2	3
	Addition	1	2
	Renovation	5	9
<i>Industrial</i>	New Construction	0	0
	Addition	1	0
	Renovation	0	1
<i>Agricultural</i>	New Construction	6	11
	Addition	0	0
	Renovation	1	6
<i>Government / Institutional</i>	New Construction	1	1
	Addition	2	0
	Renovation	3	3
<i>Misc. Structures</i>	New	3	4
	Temporary	2	2
<i>Signs</i>	All	1	0
Sub-Total		28	43
Demolition		13	22
Total Number of Building Permits Issued		128	146

Table 2 lists the building permits issued in the first half of 2019 for commercial, signs, miscellaneous structures and industrial construction.

Table 2 – Building Permits Issued Between January 1 and June 30, 2019 for Non- Residential Construction (Industrial, Commercial, Signs and Misc. Structures)

Permit Type	Owner	Project Description	Construction Value	Area (sq. ft.)
Commercial	Nestleton Store	Internal renovation	\$120,000	8,611
Sign	Wireless 4U	Wall Sign	\$900	21
Governmental / Institutional	Durham Board of Education (PPHS)	Library and office A/C upgrades	\$200,000	4,000
Governmental / Institutional	Township of Scugog (Town Hall 1873)	Removal of bell tower and replace with temp. roof	\$37,000	151
Governmental / Institutional	Region of Durham (Works Depot)	New wash bay	\$650,000	1,734
Governmental / Institutional	Durham Board of Education (PAPS)	Outdoor classroom	\$35,000	800
Commercial	THMR Development Inc.	Concrete pad	\$750,000	4,300
Governmental / Institutional	United Church of Canada	Accessible interior renovations	\$135,000	374
Commercial	Unity Investment Corp	Interior renovation	\$10,000	30
Misc. Structure	Nestleton Waters Inn	Temp. tent	\$1,500	5,000
Industrial	Bob Briere	Addition	\$340,000	6,400
Commercial	Grumble Hill Ltd. (PP Medical Associates)	Interior renovation	\$200,000	2,960
Commercial	695386 Ontario Limited	Interior renovation – Unit7	\$80,000	1,367
Governmental / Institutional	Region of Durham (Works Depot)	Addition for fleet on west side of Admin. building	\$2,200,000	3,834
Commercial	Canterbury Land Development Corp.	Renovation & expansion of existing building, including new pool	\$1,600,000	24,261
Misc. Structure	Adamson Development Inc.	Temporary tents x 2	\$22,000	13,500
Commercial	Woodland Mills	Warehouse and sales office	\$900,000	12,346
Total			\$7,281,400	

2.2 Construction Value by Sector

Table 3 compares the value of construction of building permits issued between January 1 and June 30, 2019 and for the same time period of 2018, by sector. Construction value in most sectors has significantly decreased over values for the same time period of 2018,

except for the commercial and governmental/institutional sectors. Because of significant increases in both of these sectors, overall construction value has marginally increased (.25%).

TABLE 3 – Construction Value by Sector

Sector	Jan. 1 – June 30, 2019	Jan. 1 – June 30, 2018	% Change
Residential	\$12,390,100	\$14,188,950	-13%
Single Dwelling	\$11,911,100	\$13,028,950	-8%
Multiple Dwellings	\$30,000	\$88,000	-66%
Garage/Deck/Porch	\$449,000	\$1,072,000	-58%
Non-Residential	\$8,058,400	\$6,212,300	30%
Commercial	\$3,690,000	\$2,253,000	64%
Industrial	\$340,000	\$500,000	-32%
Agriculture	\$733,000	\$2,345,000	-69%
Government/Institutional	\$3,257,000	\$1,039,600	213%
Signs	\$900	\$0	-
Misc. Structures	\$37,500	\$74,700	-50%
Total Value of Building Permits Issued	\$20,448,500	\$20,401,250	.23%

2.3 Permit Revenue

Table 4 compares the building permit revenue (year-to-date ending June 30) for 2019 and 2018. Building Permit revenue during this time frame has increased in 2019 by 17%, or \$33,174 from 2018.

TABLE 4 – Building Permit Revenue

Season	Building Permit Revenue	
	2019	2018
Jan. – June	\$223,195	\$190,021
Projected Permit Revenue for the Year	\$300,000	\$287,028 (actuals)

2.4 Township Development Charge Revenue

Table 5 compares actual Development Charge revenue for the first half of 2019 and 2018. The table illustrates that Development Charge revenue is significantly higher in the first half of 2019 than 2018.

TABLE 5 – Township Development Charge Revenue

Development Charge Account	Jan. 1 – June 30 2019	Jan. 1 – June 30 2018
Gen. Gov Levies	\$11,749	\$4,514
Fire Levies	\$35,643	\$13,684
Public Works Levies	\$18,350	\$7,046
Parks and Recreation Levies	\$78,144	\$28,366
Library Levies	\$7,392	\$2,683
Animal Control Levies	\$528	\$192
Engineering Levies	\$244,235	\$92,779
Total	\$396,041	\$149,264

2.5 Future Building Projections:

The Township's population is projected to increase by 2,186 people during the next ten year forecast period. With that, the Township is also anticipating to see the number of households increase by 1,090. Staff will continue to regularly review the development forecast.

3. Financial Implications: - N/A

4. Communication Considerations:

Electronic copies of Staff Report No. DEV-2019-024 shall be circulated to the Region of Durham, the Scugog Chamber of Commerce, the Port Perry BIA, the Scugog Economic Development and Tourism Advisory Committees, the Durham Region Home Builders' Association, the Durham Catholic and Durham District School Boards, and to the Building Industry and Land Development (BILD) Association of Greater Toronto.

5. Conclusion:

In the first six months of 2019, the Township issued a total of 128 building permits with an estimated construction value of \$20.4 million. Residential development has accounted for 68% of the permits issued and \$12.3 million of the total construction value. Fifty percent of the new residential units will be built within the Port Perry Urban area. Twenty-eight of the 128 building permits issued were for the non-residential sector, most of which saw a decrease in construction value over the same time period of 2018.

Respectfully Submitted by:

Reviewed By:



Lindsay Burnett
Administrative Assistant



Kevin C. Heritage, MES, MCIP, RPP
Director of Development Services

Attachments: - Nil



If this information is required in an alternate format, please contact the Accessibility Coordinator at 905-623-3379 ext. 2131

September 17, 2019

The Honourable Doug Ford, Premier
Via E-mail: premier@ontario.ca

Re: Fire Safety During Construction Period of Wood Buildings

File Number: PG.25.06

At a meeting held on September 16, 2019, the Council of the Municipality of Clarington approved the following Resolution #JC-089-19:

That the following resolution from the City of Oshawa, regarding Fire Safety during Construction Period of Wood Buildings, be endorsed by the Municipality of Clarington:

Whereas in January of 2015, the Ontario Building Code was amended to allow building up to six stories in height to be constructed of wood; and,

Whereas a building permit for the construction of a 14 unit, 4 storey, wood framed apartment building at 143 Bloor Street West was issued on November 30, 2018 in accordance with the regulations of the Ontario Building Code; and,

Whereas during the construction period, a significant fire occurred at 143 Bloor Street West on June 9, 2019 which resulted in the destruction of the building under construction save and except for the concrete stairwell; and,

Whereas the exterior cladding and balconies of neighbouring buildings and several nearby cars were also severely damaged as a result of the fire and residents in nearby buildings had to be evacuated; and,

Whereas current Provincial Best Practice Safety Guidelines for the construction of buildings applies only to five and six storey wood buildings and is not applicable law; and,

Whereas the Province is contemplating permitting 12-storey buildings with wood construction; and,

Whereas both the City's Chief Building Official and the Fire Chief strongly believe that the potential changes need to be reviewed and implemented by the Province to better protect the safety of the public and Fire Services staff for buildings that are 4 storeys or higher that are under construction and made of wood including a requirement for 24 hour security during the construction period;

Therefore be it resolved:

1. That the Province of Ontario be requested to:
 - a. Review the Best Practice Guideline entitled 'Fire Safety during Construction for Five and Six Storey Wood Buildings in Ontario – A best Practice Guideline' to ensure it is current and meets the fire safety needs of Ontario residents and require the Guideline to be mandatory as applicable law for the construction of all wood buildings with four or more storeys;
 - b. Clarify that these requirements would not apply to wood buildings regulated under Part-9 of the Ontario Building Code, such as, townhouses, semi-detached and single detached dwellings that are three storeys or less in height; and
 - c. Consult with the Large Municipalities Chief Building Officials group (LMCBO) and the Ontario Building Officials Association (OBOA) on changes to legislation including the Ontario Building Code to address this safety issue; and
2. That a copy of this Resolution be forwarded to the Region of Durham, all Durham Regional municipalities, all Durham Region M.P.'s and M.P.P's, the Association of Municipalities of Ontario, the Large Urban Mayor's Caucus of Ontario, the Federation of Canadian Municipalities, the Large Municipalities Chief Building Officials group, the Ontario Building Officials Association, the Ontario Association of Fire Chiefs and the City's Building Industry Liaison Team.

Yours truly,



June Gallagher, B.A., Dipl. M.A.
Deputy Clerk

JG/lp

- c. See attached List of Interested Parties
F. Langmaid, Interim Director of Planning Services
G. Weir, Director of Emergency & Fire Services

Interested Parties List

Dr. Colin Carrie, Oshawa
Celina Caesar-Chavannes, Whitby
Hon. Erin O'Toole, MP Durham
Mark Holland, MP Ajax
Jamie Schmale, MP Haliburton-Kawartha Lakes-Brock
Jennifer O'Connell, MP Pickering-Uxbridge
Kim Rudd, MP Northumberland-Peterborough South
Jennifer French, MPP Oshawa
Lindsey Park, MPP Durham
Lorne Coe, MPP Haliburton-Kawartha Lakes-Brock
Rod Phillips, MPP Ajax
David Piccini, MPP Northumberland Peterborough South
Association of Municipalities of Ontario
Large Urban Mayor's Caucus of Ontario
Federation of Canadian Municipalities
Large Municipalities Chief Building Officials group
Ontario Building Officials Association
Ontario Association of Fire Chiefs
Building Industry Liaison Team
Ralph Walton, Regional Clerk, Regional Municipality of Durham
Mary Medeiros, Interim City Clerk, City of Oshawa



Kiran Saini
 Deputy Town Clerk
 Town of Newmarket
 395 Mulock Drive
 P.O. Box 328 Station Main
 Newmarket, ON L3Y 4X7

ksaini@newmarket.ca
 tel.: 905-953-5300, Ext. 2203
 fax: 905-953-5100

SEP 18 11:48:01

September 17, 2019

Sent via email to: All Ontario Municipalities

Attn: Municipal Clerk

RE: More Homes, More Choice Act, 2019 - Bill 108 Proposed Regulations

I am writing to advise that Council, at its meeting held on September 9, 2019, adopted the following recommendations:

1. That the report entitled Bill 108 Proposed Regulations, dated August 26, 2019 be received; and,
2. That following the September 9, 2019 Council meeting, the final version of the report entitled Bill 108 Proposed Regulations, dated August 26, 2019 be formally submitted to the province; and,
3. That it be requested by the Town that the province release final drafts of the regulations associated with Bill 108 with a consultation period of no less than 3 months; and,
4. That a copy of this Motion be sent to all Ontario Municipalities requesting their support; and,
5. That Staff be authorized and directed to do all things necessary to give effect to this resolution.

Yours sincerely,

Kiran Saini
 Deputy Town Clerk

KS:aw

C.S. - LEGISLATIVE SERVICES

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From: Clerks
Subject: FW: Deloitte Organics Financial Model Peer Review - recvd today
Attachments: Deloitte Organics Mgmt Project-Draft-Financial Model Peer Review Report dated June 24. 19 (provided Sept 12.19).Horizontalpdf.pdf

From: Linda Gasser <gasserlinda@gmail.com>

Sent: September 12, 2019 2:22 PM

To: Debbie Bath-Hadden <dbathhadden@townshipofbrock.ca>; Shaun Collier <shaun.collier@ajax.ca>; Marilyn Crawford <marilyn.crawford@ajax.ca>; Joanne Dies <joanne.dies@ajax.ca>; Sterling Lee <sterling.lee@ajax.ca>; Ted Smith <tsmith@townshipofbrock.ca>; Granville Anderson <ganderson@clarington.net>; jneal@clarington.net; Dan Carter <dcarter@oshawa.ca>; Bob Chapman <bchapman@oshawa.ca>; Rick Kerr <rkerr@oshawa.ca>; Tito-Dante Marimpietri <tmarimpietri@oshawa.ca>; John Neal <jneal@oshawa.ca>; Brian Nicholson <bnicholson@oshawa.ca>; 'Dave Ryan' <mayor@pickering.ca>; Kevin Ashe <kashe@pickering.ca>; Bill McLean <bmclean@pickering.ca>; David Pickles <dpickles@pickering.ca>; Bobbie Drew <bdrew@scugog.ca>; Wilma Wotten <wwotten@scugog.ca>; 'Dave Barton (Mayor of Uxbridge)' <dbarton@town.uxbridge.on.ca>; 'Gord Highet' <gghighet@town.uxbridge.on.ca>; Don Mitchell <mayor@whitby.ca>; Chris Leahy <leahyc@whitby.ca>; Rhonda Mulcahy <mulcahyr@whitby.ca>; Elizabeth Roy <roye@whitby.ca>; Steve Yamada <yamadas@whitby.ca>; 'Adrian Foster' <mayor@clarington.net>; John Henry <John.Henry@durham.ca>

Cc: Orono Times <oronotimes@rogers.com>; kgilligan@durhamregion.com; cjones@oshawaexpress.ca; Elaine Baxter-Trahair <Elaine.Baxter-Trahair@durham.ca>; Ralph Walton <Ralph.Walton@durham.ca>; Don Beaton <Don.Beaton@durham.ca>; John Presta <John.Presta@Durham.ca>; Mirka Januszkiewicz <Mirka.Januszkiewicz@Durham.ca>; Nancy Taylor <Nancy.Taylor@durham.ca>

Subject: Deloitte Organics Financial Model Peer Review - recvd today

Good afternoon:

I had requested the Deloitte peer review from the time I saw it referenced in report 2019 COW -17 before COW June 12th, with decision at Council June 26th. It was not provided. I don't know if any councillor actually requested the Deloitte peer review and actually got the document.

Though I requested multiple times prior to June 26th council, it was not provided so I submitted an FOI request for this on June 27th. I only received the document today – Sept. 12th.

Your Works Department appears to have adopted a cute delaying tactic - i.e. by asking the third party that produced the document (Deloitte in this case) if they object to the release of the document they produced for the Region paid for by public dollars.

The Deloitte draft review provided to me is dated June 24th, so earlier drafts were likely available to produce Report COW 2017 for June 12th, but certainly this June 24th draft could have been provided to councillors and the public on June 25th.

Deloitte is Durham's auditor. Who really thinks that Deloitte would object to the release of a business/financial model review they were commissioned to produce on a public project? There's another question – as the Region's auditor, should Deloitte also be providing project consulting services to the Region? ALL consultants except those providing specific legal advice should expect that their work would be provided to council and the public and scrutinized accordingly.

Delay in access to information can have the same detrimental effects as information denied and among other things, call into question the Region's commitment to transparency, something which I hoped the new political and staff leaders at the Region would address this term.

Business case documents, including preliminary business cases such as the one for the incinerator, used to be provided in the past under the previous Works Commissioner and were actually on Works or Joint Committee agendas and debated, something that hardly ever happens any more.

For reasons that continue to elude me some Durham councillors appear to be okay with flying blind and NOT getting key documents and therefore not really understanding project risks and potential costs.

Where is Durham's Finance Committee on this? Some of you seem to pride yourselves on paying attention to how public dollars are spent. That should be all public dollars, all the time and especially for complex and problematic expensive projects where council has an obligation to actually understand what's contemplated before charging ahead.

Making informed decisions is very much about councillors caring about the people they have been elected to serve and in your role as regional councillors, that includes ALL residents of the Region.

I can assure you that given what it costs us (taxpayers) to fund the Region and to pay for studies that councillors may not get to see in good time, if at all, should be an total embarrassment to ALL councillors including the Chair of Works, as well as your current CAO and Commissioners, but mostly to Regional Chair John Henry who is ultimately responsible as the head of council and CEO of the municipal corporation. There were hopes things might improve this term.

These are the Region's stated values: **Corporate Values: • Ethical Leadership • Accountability • Service Excellence • Continuous Learning and Improvement • Inclusion**

It's ultimately the Regional Chair's and the CAO's responsibility to ensure that Council has information in good time so they could make informed decisions. It's also their responsibility to ensure that the public has access to documents in good time.

Council Collier has attempted to request documents on several occasions that I have witnessed. When I hear the staff responses to questions, it's not at all clear what information might actually be delivered or when. Someone should be tracking staff commitments to deliver on their promises.

A quick read of this Deloitte report indicates there **might be** several other business case/financial model and other documents produced that were not provided to all of council or the public.

Some of this Deloitte review info might have been useful prior to the recommendation around yesterday's COW-22 and pursuing negotiations with EPCOR.

On that note you should review of the Region's 2018 annual report - <https://www.durham.ca/en/resources/2018-Durham-Regional-Annual-Report.pdf> and ask what are the merits, if any, to EPCOR participating in financing the Organics project?

This Deloitte review notes the separate report that staff indicated last May, in Report COW 08 , would be provided to council in September re the potential impacts of the Organics projects on your incinerator, which you are considering expanding throughput to 160K tpy and where council authorized staff to produce a DRAFT Terms of Reference for a possible expansion to 250K tpy. So where's that promised report? These matters are related.

Please do your due diligence. There is no rush. There is no crisis and there are no silver bullets. It's hard work being an informed and effective politician.

May I also suggest that you review of Durham's 2018 WASTE Management report –it's mostly a fluffy light PR piece but there is some tonnage data.

<https://www.durham.ca/en/living-here/resources/Documents/Waste-Management-Annual-Reports/2018-Waste-Management-Annual-Report.pdf>

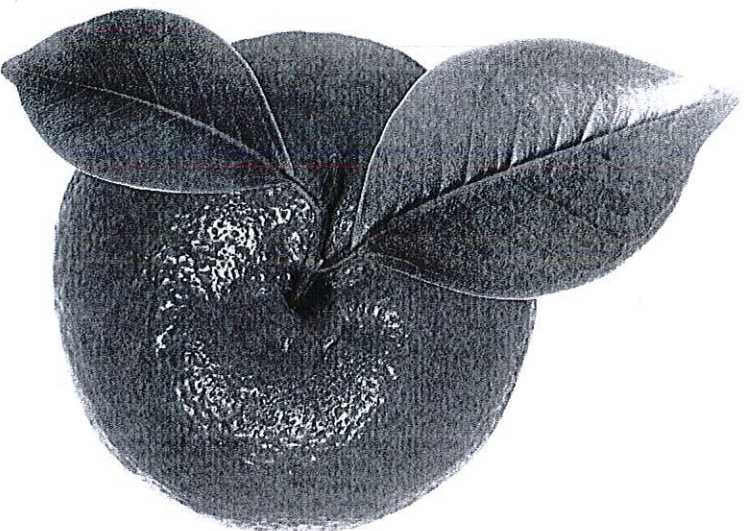
to get a look at some basic numbers by material category. This report used to hit Works agendas in the spring – I saw it for the first time at the August 21st Open House meeting for the incinerator where a few hard copies were available as a handout.

Given the costs and the long term impact to the Region and residents, it's long past time Council got a grip on Durham's waste system and the various external pressures and impacts on same, and in particular on the proposed organics management strategy and your burner.

Thank you for your attention.

Linda Gasser
Whitby

Deloitte.



Regional Municipality of Durham
Organics Management Project – Financial Model Peer Review Report
DRAFT

June 24, 2019

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Engagement Overview

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Region of Durham - Organics Management Project Peer Review Report

Organics Management Project Peer Review Overview

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Engagement Background

- The Regional Municipality of Durham (the "Region") is currently in the process of determining its next steps relating to the potential procurement to establish a contract for mixed waste transfer and pre-sort organics processing service for the Region (the "Project").
- The Region completed its preliminary business case (the "Preliminary Business Case" or "PBC") in June 2017, which recommended:
 - An aerobic or anaerobic technology based system for organics processing; and
 - A mixed waste pre-sort facility required to extract organics from garbage bags to be compliant with possible food waste organics ban (landfill and energy-from-waste).
- The Region subsequently underwent a Request for Information ("RFI") process in December 2017 to obtain input from potential market participants on viable options for implementation of the Region's long-term organics management plan; also undertaking an update in 2018 of the PBC based on the RFI feedback.
- Furthermore, in October 2018, the Region issued an Expression of Interest ("EOI") to seek and identify potential partners willing to enter into a strategic partnership with the Region to procure, finance and share net costs arising from the Region's long term organics waste management solution.
 - The Region is currently in the process of finalizing selection of a preferred partner for potential business partnership selected through the EOI process.
- As part of the Region's next steps, as per the report to Council, the Region has selected a Design-Build-Operate-Maintain ("DBOM") procurement method as the preferred service delivery approach and the shared responsibilities between the counterparties will be determined upon a joint discussion.

Organics Management Project Peer Review Overview

DRAFT

Deloitte's Role

- Deloitte LLP ("Deloitte", "we", "us") has been engaged by the Region to provide financial and business advisory services for the Project, including options analysis of the potential service delivery models, business case and related financial analysis, and advice on commercial business matters and risk assessment (the "Engagement").
- As part of the Engagement scope, Deloitte has been requested to undertake the following key tasks:
 1. Financial Model Review: Review the Region's updated 2019 organics management Financial Model (updated from the 2018 preliminary business case) (the "Model") to be reported in a June 2019 staff report, including review of Model structure, assumptions, calculations, and financial impacts to the Region, and providing key comments and observations on risk assessment and sensitivity analysis around key parameters, as required.
 2. Review Region's Draft June 2019 Report and Presentation Materials: Review the draft report, presentation materials, and any back up material prepared by Region staff highlighting the analysis and recommendation to Council including: updated business case analysis, service delivery and procurement process, business partnerships based on EOI, energy and by-product options, costs and risk assessment, and potential for senior government or other grant funding.
 3. Strategic Business and Commercial Advice: Provide input, expertise, and strategic financial and business advice ~~on next steps for the Region to meet its objectives of minimizing cost and financial risk for a long-term organics management strategy and procurement process.~~
 4. Support Region in Meetings: Provide support to Region staff, as required, through attendance at the Committee of the Whole ("COW") meeting and Council meeting.
 5. Peer Review Report: A report to summarize the findings from Tasks #1 to #3 providing recommendations for improvements and best practices.

Current draft of the Peer Review Report provides Deloitte's review under scope items #1 only

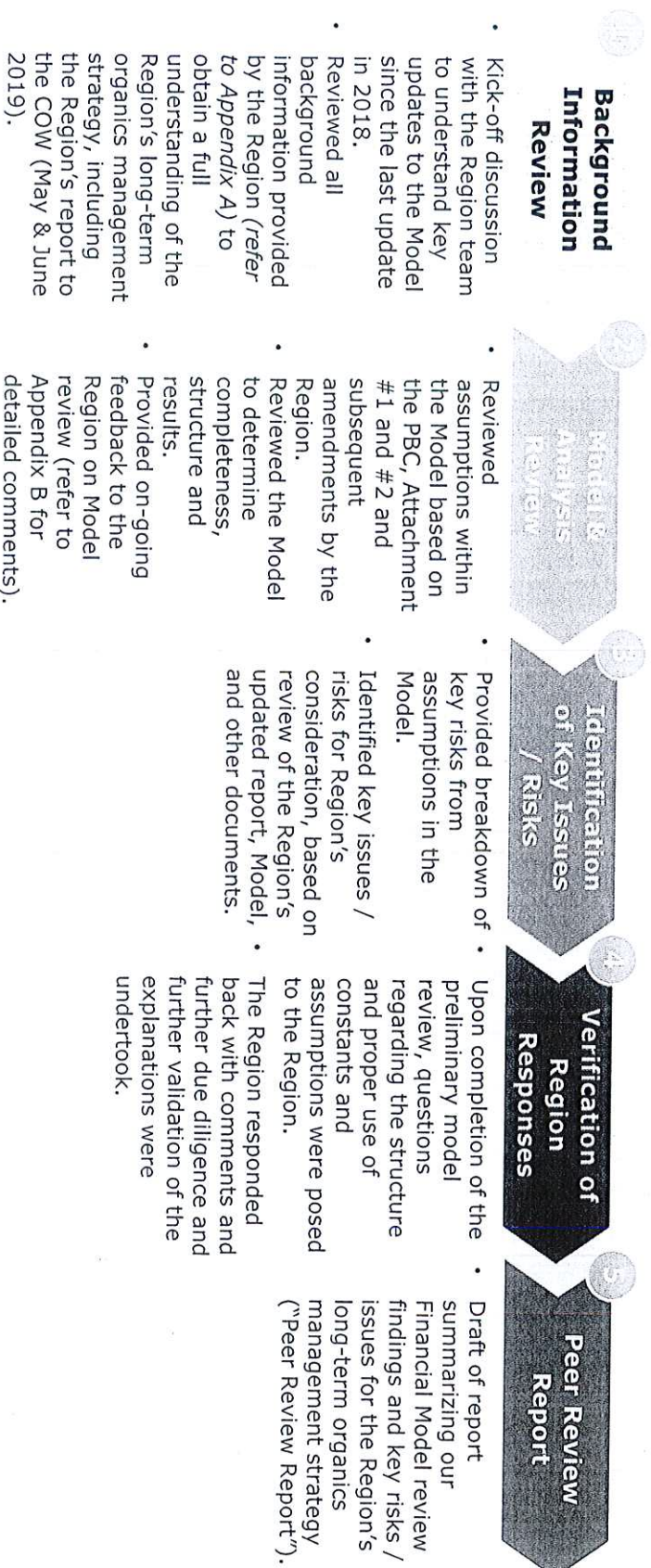
Financial Model Review

Approach & Methodology

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Model Review and Identification of Risks / Issues

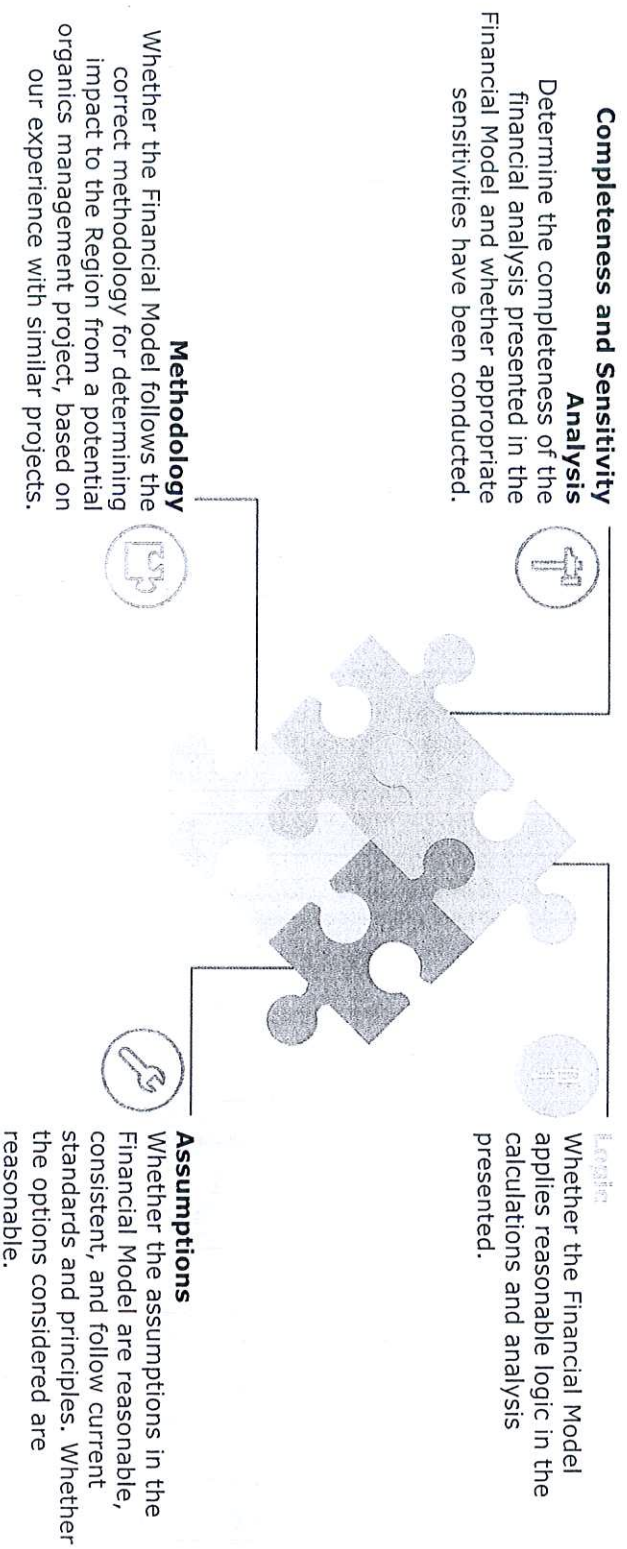
Information provided by the Region was reviewed through a detailed process to understand the Region's long-term organics management strategy and conduct a review of the Model and the Preliminary Business Case.



Financial Model Review Approach

DRAFT

Following the process outlined in Slide 7, we have completed a review of the Financial Model. The review comprised of testing the Financial Model for four primary factors:



Please note that we have not performed any adjustments / revisions to the Model

Financial Model Review

Overview of Financial Model

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General Methodology

Development of Financial Model

- We understand that the initial financial analysis was conducted based on the Preliminary Business Case completed in June 2017. Since then, the Region underwent an RFI process and utilized the feedback received from the RFI respondents to:
- Review the assumptions used within the PBC and Model; adjust some of the original assumptions in consultation with its technical advisor, GHD Limited (“GHD”), as applicable; and adjust the analysis to provide a more prudent view of the potential economics of the project (e.g. eliminating revenue sources from the base case which presents a high risk);
- In 2019, Region adjusted some of the key PBC assumptions based on general changes in industry conditions, Region’s waste actuals and forecasts, as well as updated prices from Region’s existing contracts used within the Model.

Financial Model Structure and Key Components

- Deloitte reviewed the Model for updated assumptions, completeness, accuracy of calculation, structure, and results.
- The Model includes three waste management options for the Region (the “Options”):
 1. Status Quo (As-is);
 2. Anaerobic Digestion Scenario; and
 3. Merchant Capacity Scenario.
- The Options are developed within the Model to determine the financial impacts to the Region on a cost-based approach, primarily considering the relevant capital and operating costs, with the exception of the Status Quo option (which was based on the Region’s current cost and revenue forecasts).
 - The Options are not based on a particular project delivery model (e.g. a Design-Build-Operate-Maintain model, as recommended through the PBC), which may exclude costs (e.g. private financing costs) associated with the project delivery model, as recommended through the Preliminary Business Case.
- ***Note that there are a number of additional scenarios (e.g. In-Vessel) which were utilized in the previous 2018 update of the Model but are not utilized within the 2019 update, as per discussions with the Region.***

Financial Model Review

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Overview of Financial Model cont'd

Financial Model Structure and Key Components

- The following scenarios are considered within the Financial Model to provide a fulsome analysis of the impact to the Region under each Option:

1 Base Scenario

- Base case scenario for AD DBOM options with base growth and cost forecasts.
- No assumed sale of excess capacity of unutilized organics processing.
- No base RNG sales revenue.
- Includes pre-sort and transferof mixed waste to Durham-York Energy Centre ("DYEC") up to 110,000 tpa limit (excess to landfill).

2 High Scenario

- Base Scenario +25% on capital and Operations and Maintenance ("O&M") costs for pre-sort and organics processing.

3 Low Scenario

- Base Scenario -25% on capital and O&M costs for pre-sort and organics processing.

4 Merchant Scenario

- AD Merchant capacity scenario to determine the effective rate required to compare to incremental AD costs (on NPV basis).

5 Contamination Scenario

- Assuming higher contamination of incoming SSO (10% compared to 3%) and OFMW (30% compared to 20%).

6 High/Low Growth Scenario

- Region's total household growth adjusted downward to a +/-1.75% annual growth, all else remaining the same.

7 End Products Scenarios

- Compares scenarios from various end products / by-products, e.g. biogas, RNG, service contract pricing, digestate/compost, and ferrous/non-ferrous.

8 Haulage Scenarios

- Implied tonnage impacts from siting and co-location in relation to collection, processing, and disposal sites – (i) 40 km; (ii) 180 km.
- Not used within the PBC analysis but within additional siting analysis.
- **Not considered as part of the PBC analysis, per direction from the Region.**

Financial Model Review

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Review of Assumptions and Analysis

Summary of Key Financial Model Assumptions

General Assumptions	
Total Household Growth Forecasts <ul style="list-style-type: none"> 2031 values based on Official Plan values with interpolation to arrive at 2021 to 2031 values. Post 2031 values are based on HH growth projections The annual compound growth rate is 2.06% up to 2041. 	Waste & Tonnage Intensity <ul style="list-style-type: none"> SSO: 28,446 tpa (2018) to 47,176 tpa (2041) OFMW: 32,313 tpa (2018) 53,153 tpa (2041)
Inflation <ul style="list-style-type: none"> Operating: 1.88% (StatsCan) Construction: 2.78% (StatsCan) 	Construction Term <p>2 Years (Substantial completion: Dec 2021)</p>
Facility Capacity <p>110,000 tpa</p>	Operating Term <p>20 Years (2022 Operation start date)</p>
Discount Rate <p>5.0%</p>	
Base Scenario Assumptions	
AD Processing Facility	Pre-Sort/Transfer
Capital Costs <p>110,000 tonnes of mixed waste processing capacity at \$1,000 / tonne</p>	Capital Costs <p>160,000 tonnes of mixed waste processing capacity at \$250 / tonne</p>
Facility Operating Costs <p>\$90 / tonne</p>	Facility Operating Costs <p>\$80 / tonne</p>
Lifecycle Costs <p>2% of Initial Capital Costs</p>	Lifecycle Costs <p>2% of Initial Capital Costs</p>
Revenues <p>No revenues in Base Scenario</p>	Revenues <p>No revenues in Base Scenario</p>
Pre-Processing Pass Through Rate <ul style="list-style-type: none"> Existing SSO: 97% Pre-Sort OFMW: 80% Excess Capacity Organics: 97% 	Pre-Processing Pass Through Rate <ul style="list-style-type: none"> Existing SSO: 97% Pre-Sort OFMW: 80% Excess Capacity Organics: 97%
Service Contract Costs <p>\$200/tonne (SSO/OFMW) \$109/tonne mixed waste pre-sort/transfer</p>	Service Contract Costs <p>\$200/tonne (SSO/OFMW) \$109/tonne mixed waste pre-sort/transfer</p>

Financial Model Review

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Review of Assumptions and Analysis

Summary of Key Financial Model Assumptions

Base Scenario Assumptions	
AD Processing Facility	Pre-Sort/Transfer
<p>Contamination Rate</p> <p>3% for SSO, 20% for OFMW w/ 40% sensitivity</p>	<p>Direct RNG Sales Rates</p> <p>\$30/GJ for California and British Columbia and \$15/GJ for Quebec</p>
<p>Waste Composition</p> <p>[Source: 2019 Region of Durham Waste Composition Study Results]</p> <ul style="list-style-type: none"> Single-family for OFMW: 41.5% plus recoverable fibre Multi-residential OFMW: 42.6% plus recoverable fibre 80% recovery of organics at pre-sort OFMW includes pets and sanitary waste 	<p>Cost/tonne/km for Haulage (non-WMF)</p> <p>\$0.70</p>
<p>Region Debenture Assumptions</p> <p>Issuance Year: 2020, Amortization period: 10 yrs, Interest rate: 5%</p>	<p>Land Acquisition Cost</p> <p>\$545,000/hectare</p>
<p>Digestate Disposal Cost</p> <p>\$88 per tonne of output</p>	

Financial Model Review

Findings and Observations

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General Findings and Observations

Financial Model Structure and Methodology:

- Overall, no major issues identified on the Model structure and methodology for undertaking the updated PBC analysis. The overall logic and methodology applied within the Model is consistent with the Preliminary Business Case and 2018 logic.
- The Model provides a reasonable representation of the underlying economics of the Options for the Region's long-term organics management plan and assumptions provided at this preliminary stage.
- Several assumptions were updated relative to 2018 while the general framework in the model remained intact.
- The energy by-products review was contained in the report as a separate exercise, hence the scope of the model review has been narrowed to the base business case model (as provided to Deloitte). There were several sensitivity scenarios run in the model which were mainly for internal discussion and information only, as informed by the Region.
- There are 86 tabs in the Model, 42 of which are hidden and correspond to 2018 updates. There are several #REF errors on the hidden tabs. The hidden tabs were not reviewed in 2019 model review. Refer to Appendix B for further details.
- With respect to the 'solved' / implied service contract rate or costs per tonne within the model, checks in the model should be applied to highlight when an assumption within the model is changed or updated, the various implied service contract rates need to be re-solved for.
- It is recommended to show the calculations of Base Unit Cost/Rate for all categories to make it easier to change the inputs, calculations or to correct them. It is also noted that this 'solved' cost per tonne does not consider any financing costs under both the DBOM and merchant capacity scenario. The financing costs would differ between the two scenarios as well.
- Note and remove any prior assumptions and carry overs from 2018 that are not to be used in the model and in the current analysis (i.e. impact to DYECC as a result of its expansion and capital costs).
- Clean up any 'placeholder cell' in the model with no inputs or any alternative scenarios that are not used in the report output and organize the model accordingly.
- Suggest that the total siting and procurement costs of \$0.8M should not be held as a firm number for future procurement.

Financial Model Review

Findings and Observations

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General Findings and Observations

Facility Capacity

- The Region's current modeling and analysis is based upon a facility capacity (pre-sorting and processing) of 110,000 tpa.
 - As per the SSO and OFMW waste projections, the Region only achieves approximately 110,000 tpa after 2042, whereby the mixed waste projections reach 110,000 tpa in the first few years of operations.
 - The pre-sort / transfer facility capacity would seem to be size appropriately to 110,000 tpa from the start, however the organics processing facility would have extensive unutilized capacity for almost all of the forecast period.
- An alternative option may be to consider phasing scenarios that allow for increasing capacity as the Region's organics supply builds (phasing / modular builds).
- Initial facility should look to develop basic infrastructure for accommodating potential expansions in the future as supply increases.

Revenue / Off-Take

- Revenues from off-take of gas, heat, electricity, and sale of other end products (e.g. digestate, compost, etc.) could be critical to the feasibility of the project, however the Model does not include certain components including Biogas Upgrading Facility (RNG for Regional facilities, CNG/RNG fueling, and Direct RNG sales), Facility and Fueling Upgrades (for CNG/RNG Fueling Option), Vehicle Cost Premiums (for CNG/RNG Fueling Option) and Direct RNG Sales Rates (for RNG Direct Sales Option).
- As per response from the Region, we understand these components are being considered under a separate biogas options assessment model and the Region has excluded revenues from its base case analysis, while presenting additional scenarios on incremental impact to the project through potential revenues from capacity sales, end-product sales.
- This presents a reasonable approach given the high degree of uncertainty on revenues from off-take from the facility, excess capacity sales, and market for end-product sales.

Financial Model Review Findings and Observations

General Findings and Observations

Capital/Construction Costs:

- Current estimates on capital/construction costs for the AD Option are provided as a single cost rather than a breakdown by components of the construction costs.
 - Increased detail on construction costs would provide the Region a more accurate and reliable estimate on project costs and ability to size the facility to adapt to changing tonnage profile in the Region.

Appendix A

Scope of Review

Scope of Review – Documents Reviewed

List of Documents Reviewed

- 1 The Financial Model for the project as prepared by EY and later revised by the Region [June 2019]
- 2 The Regional Municipality of Durham Report [May 15, 2019]
- 3 The Regional Municipality of Durham Report [June 19, 2019]
- 4 Attachment #1: Potential Beneficial Uses of the By-Products of an AD facility
- 5 Attachment #2: Summary of Key Preliminary Business Case Update Assumptions
- 6 Expression of Interest EOI – 1152-2018 for a Partnership to procure, finance and share net costs arising from the Regional Municipality of Durham’s Long Term Organics Waste Management Solution
- 7 Preferred Vendor Response, Business Proposal and Preliminary Answers to Questions – For Discussion [May 2019]

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Scope of Review – Model Worksheets Reviewed

Below is the list of the worksheets in the Model that were reviewed for the purposes of our Report.

#	Reviewed Worksheets	#	Reviewed Worksheets
1	Assumptions Summary	18	Cash Flows Base 2019 Update SC
2	Results Summaries	19	Cash Flows Base 2019 SC \$200
3	Master 2018 to 2019 Compare	20	Cash Flows 2019 Alt Sizing 1
4	Debtenture Assumptions	21	Cash Flows Base 2019 Low \$
5	Incremental Summ - Base 2019	22	Cash Flows Base 2019 Low \$ SC
6	Incremental Summ - 2019 \$200	23	Cash Flows Base 2019 High \$
7	Incremental Summ - 2019 Alt Siz	24	Cash Flows Base 2019 High \$ SC
8	Incremental Summ - Base 2019 L\$	25	Tonnage Low Growth 2019
9	Incremental Summ - Base 2019 H\$	26	Mass Balance - 2019 Low Growth
10	Incremental Summ - Low 2019	27	Cash Flows 2019 Low Growth
11	Incremental Summ - Low 2019 L\$	28	Cash Flows 2019 Low Growth SC
12	Incremental Summ - Low 2019 H\$	29	Cash Flows 2019 Low Gr Alt Size
13	Incremental Summ - HICont 2019	30	Cash Flows 2019 Low Growth Low\$
14	Incremental Summ -Low&Cont 2019	31	Cash Flows 2019 Low Growth Hi\$
15	Tonnage and Growth 2019	32	Tonnage High Cont 2019
16	Mass Balance - Waste Cmp Update	33	Mass Balance - 2019 High Cont
17	Cash Flows Base 2019 Update	34	Cash Flows 2019 High Cont

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Scope of Review – Model Worksheets Reviewed cont'd

Below is the list of the worksheets in the Model that were reviewed for the purposes of our Report.

#	Reviewed Worksheets	#	Reviewed Worksheets
35	Tonnage Low&Cont 2019	40	Composition and Diversion Summ
36	Mass Balance - 2019 Low&Cont	41	End Products Scenarios
37	Cash Flows 2019 Low&Cont	42	Statistics Canada Data
38	Haulage Scenarios - Ext 180km	43	Updated Contract Prices 2019
39	Haulage Scenarios - Ext 40km	44	Land Sample

Appendix A

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Scope of Review – Model Worksheets not Reviewed

Below is the list of the worksheets in the Model that were **not reviewed** for the purposes of our Report, per discussions with the Region.

#	Not Reviewed Worksheets	#	Not Reviewed Worksheets
1	Inputs for EY model	16	Summary Base
2	Old Table Format	17	Mass Balance - Waste Cmp GHD
3	Deloitte Summary Chart	18	Sheet2
4	Report Summary Tables	19	Cash Flows Base 2019 No Transf
5	Incremental Summ - Base	20	Cash Flows High
6	Incremental Summ - Low Growth	21	Cash Flows Low
7	Incremental Summ - High Contam	22	Merchant Scenario 2
8	Incremental Summ - Merchant	23	Merchant Scenario 3
9	Incremental Summ - Max Revenues	24	Summary High
10	Mass Balance Original	25	Summary Low
11	Cash Flows Original	26	Cash Flows Base - DYEC Sales
12	Summary Original	27	Summary Base - DYEC Sales
13	Tonnage and Growth 2018	28	Mass Balance - Contam High
14	Mass Balance Base	29	Cash Flows - Contam High
15	Cash Flows Base	30	Summary - Contam High

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Scope of Review – Model Worksheets not Reviewed cont'd

Below is the list of the worksheets in the Model that were **not reviewed** for the purposes of our Report, per discussions with the Region.

#	Not Reviewed Worksheets	#	Not Reviewed Worksheets
31	Tonnage and Growth - Low Growth	37	Summary - Old Growth
32	Mass Balance - Low Growth	38	Mass Balance - Capacity Sales
33	Cash Flows - Low Growth	39	Cash Flows - Capacity Sales
34	Summary - Low Growth	40	Cash Flows - Capacity Sales Max
35	Mass Balance - Old Growth	41	Updated Contract Prices 2018
36	Cash Flows - Old Growth	42	Summary - Capacity Sales

Appendix B

Detailed Model Review

Comments / Observations

Detailed Model Review Findings and Observations

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
1	Assumptions Summaries	<ul style="list-style-type: none"> Verified the proper use of the "Updated Modeling Assumptions 2019" relative to the numbers used in the Model. Specific assumptions were not used or modelled in 2019. 	<ul style="list-style-type: none"> N/A
2	Results Summaries	<ul style="list-style-type: none"> \$/tonne Service Contract Rate: Attachment 2 states \$200/tonne for processing SSO & OFMW, however \$234/tonne is used in the model for base growth, and \$247/tonne for low growth case. 	<ul style="list-style-type: none"> These scenarios were run in those respective tabs but not used in the final summary output tables for the report. Note that the \$/tonne you reference equates to \$/tonne required to arrive at the same NPV as available under DBOM (although nominal values may vary).
3	Results Summaries	<ul style="list-style-type: none"> Please clarify the assumption of Service Contract Rate for AD processing and the +/-25% increment for the concurrent cases and relative sensitivities. If those numbers are solved for, kindly clarify. 	<ul style="list-style-type: none"> The service contract rate is the implied service contract rate for organics processing (for SSO and OFMW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront)
4	Results Summaries	<ul style="list-style-type: none"> Scenario 2: Pre-Sort/Transfer = 160,000 t, AD = 110,000 t, DYEC = 160,000 t (Durham 125,714 t): These numbers are linked to a different file on a different location that we do not have access to. Please clarify the source and hardcode. 	<ul style="list-style-type: none"> Scenario 2 is essentially the same model as outlined in Scenario 1 with the exception of DYEC being at 160,000 tonnes of capacity following administrative amendment (versus the 140,000 tonnes under base scenario, where 110,000 tonnes is Durham-specific). Was run to assess the relative impacts of the DYEC administrative amendment which would permit more processing capacity where impact mainly to transfer and landfill costs (does not impact capital and O&M). Ultimately, this does not feed into the report and was used mainly for internal discussion purposes and information only. <i>The impacts to DYEC (as discussed) will be a further analysis to be undertaken during the summer by us with Deloitte to peer review.</i>

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
5	Results Summaries	<ul style="list-style-type: none">Net Present Value (2018 Dollars): NPV calculation table is all hard codes or linked to a file we do not have access to.	<ul style="list-style-type: none">This table was just included for comparison purposes as it was based on the 2018 update values. Was to show that the updated PBC values are within the range of those from the 2018 analysis once including revenues (comparison also made in the "Master 2018 to 2019 Compare" worksheet).
6	Results Summaries	<ul style="list-style-type: none">Cell G88 is zero. Could you kindly clarify this assumption while F88 is \$(21.7).	<ul style="list-style-type: none">The "other disposal" costs alludes to the cost of disposing of digestate by-product from AD processing (assumed at \$88/tonne). The scenario presented in column G was a scenario in which there is a marketable opportunity for digestate and we do not have to pay to get rid of it. Alternatively, the base scenario is somewhat of a worst case in that we do assume we will have to pay to dispose of it. Ultimately this scenario of excluding the digestate disposal costs as a sensitivity for the report was not used (for purposes of the chart).
7	Debenture Assumptions	<ul style="list-style-type: none">Is '1% Tax Increase Equals: \$6.45 million' this being utilized within the analysis in any respect?	<ul style="list-style-type: none">We did not consider this sensitivity in the 2019 update - it is a carryover from the prior 2018 update.
8	Debenture Assumptions	<ul style="list-style-type: none">Note that there are links from this tab to old tables and hidden tabs.	<ul style="list-style-type: none">This should be OK as the debenture assumptions will feed into several output tables but only captured in the Results Summaries worksheet (does not feed into our main cash flow tables). Is really only used for information purposes in the summary operating table (in report) as well as text in report when we discuss potential cost ranges.

Appendix B

Detailed Model Review Findings and Observations

cont'd

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Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
9	Incremental Summary - Base 2019	<ul style="list-style-type: none"> Set rate for SSO and OFMW Processing is at \$234/tonne under Merchant Capacity. Please clarify how you solved for this rate. 	<ul style="list-style-type: none"> The Service Contract Rate is the implied service contract rate for organics processing (for SSO and OFMW) required to arrive at the same 2019 to 2041 NPV as under DBOM with capital invested upfront.
10	Incremental Summ - 2019 Alt Siz	<ul style="list-style-type: none"> Set rate for SSO and OFMW Processing is at \$223.62/tonne. Please clarify how you solved for this rate. No inconsistency in the formulas or tab set up. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OFMW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).
11	Incremental Summ - Base 2019 L\$	<ul style="list-style-type: none"> Set rate for SSO and OFMW Processing is at \$182.37. Please clarify how you solved for this rate. No inconsistency in the formulas or tab set up. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OFMW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).
12	Incremental Summ - Base 2019 H\$	<ul style="list-style-type: none"> Set rate for SSO and OFMW Processing is at \$286.31. Please clarify how you solved for this rate. No inconsistency in the formulas or tab set up. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OFMW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).
13	Incremental Summ - Low 2019	<ul style="list-style-type: none"> Set rate for SSO and OFMW Processing is at \$246.68. Please clarify how you solved for this rate. No inconsistency in the formulas or tab set up. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OFMW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
14	Incremental Summ - Low 2019 L\$	<ul style="list-style-type: none"> Set rate for SSO and OMFW Processing is at \$190.97. Please clarify how you solved for this rate. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OMFW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).
15	Incremental Summ - Low 2019 H\$	<ul style="list-style-type: none"> Set rate for SSO and OMFW Processing is at \$302.38. Please clarify how you solved for this rate. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OMFW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).
16	Incremental Summ - HiCont 2019	<ul style="list-style-type: none"> Set rate for SSO and OMFW Processing is at \$237.34. Please clarify how you solved for this rate. 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OMFW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).
17	Incremental Summ - Low&Cont 2019	<ul style="list-style-type: none"> Set rate for SSO and OMFW Processing is at \$248.12. Please clarify how you solved for this rate. General comment on all the 'solved' / implied service contract rate or costs per tonne within the model is that there needs to be a check within the model to highlight that when an assumption within the model is changed which impacts these numbers, the various numbers need to be solved for again. Further, suggest that the methodology is captured within Attachment 2 (or some other place) to ensure alignment and understanding of reasonableness of the assumption. Have these assumptions been reconciled to RFI respondent responses (if requested)? 	<ul style="list-style-type: none"> Similar to point above, the service contract rate is the implied service contract rate for organics processing (for SSO and OMFW) required to arrive at the same 2019 to 2041 NPV as under DBOM (where capital is invested upfront).

Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
18	General Comment	<ul style="list-style-type: none"> General comment on all the 'solved' / implied service contract rate or costs per tonne within the model is that there needs to be a check within the model to highlight that when an assumption within the model is changed which impacts these numbers, the various numbers need to be solved for again. Further, suggest that the methodology is captured within Attachment 2 (or some other place) to ensure alignment and understanding of reasonableness of the assumption. Have these assumptions been reconciled to RFI respondent responses (if requested)? 	<ul style="list-style-type: none"> N/A
19	Mass Balance - Waste Cmp Update	<ul style="list-style-type: none"> There are linkages to hidden tabs. 	<ul style="list-style-type: none"> One of the links is referencing the 2018 mass balance assumptions for OFMW for both single family and multi-residential. This was to determine just how much recoverable organics have changed following the completion of the waste composition study (2019), not including recoverable fibres (previously assumed 0%, now assuming 10% of recoverable fibres amount going to AD, which is not included in the OFMW % amounts).
20	Cash Flows Base 2019 Update	<ul style="list-style-type: none"> The capital costs in Cells J19 to M19 are assumed at \$100,000,000. However, these are not used within the model below where the capital costs are calculated differently. Please confirm approach. Suggest to add a note to the same and potential clean up assumptions which are not used in the analysis 	<ul style="list-style-type: none"> The \$100 million was an initial estimate relating to DYEC expansion. Ultimately DYEC expansion and related capital costs are not considered in the analysis so this can be disregarded (you are correct in that it does not factor into the cash flows) The impacts to DYEC (as discussed) will be a further analysis to be undertaken during the summer by us with Deloitte to peer review.

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
21	Cash Flows Base 2019 Update	<ul style="list-style-type: none"> Show the calculations of Base Unit Cost/Rate for all categories to make it easier to change the inputs, calculations or to correct them. Currently only includes hardcoded numbers. 	<ul style="list-style-type: none"> Comment noted. All the unit costs for O&M and design cost per tonne for pre-sort/transfer and AD are the same as the prior update in 2018.
22	Cash Flows Base 2019 Update	<ul style="list-style-type: none"> Lifecycle costs @ 1% for the AD processing is not used in the model. Is this intentional? Suggest to clean such items up in the model to avoid confusion in assumptions 	<ul style="list-style-type: none"> We did not consider this sensitivity in the 2019 update – it is a carryover from the prior 2018 update.
23	Cash Flows Base 2019 Update	<ul style="list-style-type: none"> o Siting and Procurement (total \$) is at \$800,000,000. Please indicate the source and calculation of this cost. Region should then look to ensure that the \$800M presented in the report is not held as a firm number for future procurement] 	<ul style="list-style-type: none"> Siting and procurement is a carryover value of \$0.8 million assumed related to the Phase 3 GHD consulting assignment. In fact the costs will likely be significantly higher but have not been explicitly defined here (the \$0.8 million was deemed reasonable as a placeholder for this update).
24	Cash Flows Base 2019 Update	<ul style="list-style-type: none"> Miscellaneous Revenues assumptions are reasonable as long as you have the sources stated or documented. 	<ul style="list-style-type: none"> Comment noted. The estimates account for the upstream recovery of materials from pre-sort while taking away downstream at DYEC. However, assumed that materials from the WMF waste stream will still yield recoverable and marketable materials from DYEC recovery.

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
25	Cash Flows Base 2019 Low \$ SC	<ul style="list-style-type: none"> Under Merchant Capacity Scenario - Detailed Analysis, Pre-sort Facility Base Unit Cost/Rate Operating Costs is \$82.2465765688122. Please clarify the assumptions. Should note that this 'solved' cost per tonne does not consider any financing costs under both the DBOM and merchant capacity scenario. The financing costs would differ between the two scenarios as well. 	<ul style="list-style-type: none"> This is the implied cost per tonne for pre-sort/transfer to arrive at the same 2019 to 2041 NPV as would have been arrived at under the DBOM scenario (upfronting capital). As the pre-sort requirements under the DBOM and service contract options are the same, essentially, it implies the cost per tonne which includes capital, operating, life cycle and land (from other worksheet) for an all-in cost per tonne for pre-sort transfer (as opposed to the base \$80/tonne for just O&M when assuming capital upfronted). Both the low capital and O&M costs per tonne of pre-sort/transfer are factored.
26	Cash Flows Base 2019 Low \$ SC	<ul style="list-style-type: none"> In the same section no Capital costs are applied (red cell) Could you clarify further as to why capital costs for the pre-sort facility would be excluded as the DBOM would include capital costs outlay 	<ul style="list-style-type: none"> Correct – capital excluded as we are looking to derive an all-in rate per tonne which result in the same 2019 to 2041 NPV value as would have been derived under DBOM (upfront capital) scenario.
27	Cash Flows Base 2019 High \$ SC	<ul style="list-style-type: none"> Under Merchant Capacity Scenario - Detailed Analysis, Pre-sort Facility Base Unit Cost/Rate Operating Costs is \$136.020427709942. Please clarify the assumption and how you solved for it. As per comments in Cash Flows Base 2019 Low \$ SC 	<ul style="list-style-type: none"> This is the implied cost per tonne for pre-sort/transfer to arrive at the same 2019 to 2041 NPV as would have been arrived at under the DBOM scenario (upfronting capital). As the pre-sort requirements under the DBOM and service contract options are the same, essentially, it implies the cost per tonne which includes capital, operating, life cycle and land (from other worksheet) for an all-in cost per tonne for pre-sort transfer (as opposed to the base \$80/tonne for just O&M when assuming capital upfronted). Both the high capital and O&M costs per tonne of pre-sort/transfer are factored.

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
28	Cash Flows Base 2019 High \$ SC	<ul style="list-style-type: none"> In the same section no Capital costs are applied (red cell) As per comments in Cash Flows Base 2019 Low \$ SC 	<ul style="list-style-type: none"> Correct – capital excluded as we are looking to derive an all-in rate per tonne which result in the same 2019 to 2041 NPV value as would have been derived under DBOM (upfront capital) scenario.
29	Cash Flows 2019 Low Growth	<ul style="list-style-type: none"> Are the assumptions in the red highlighted cells being updated prior to finalization of the analysis for Council? Should clean up. 	<ul style="list-style-type: none"> No – the text boxes were placeholders but the rates contained are what were used for the analysis (thus comments should have been removed from these tabs).
30	Cash Flows 2019 Low Growth SC	<ul style="list-style-type: none"> Are the assumptions in the red highlighted cells being updated prior to finalization of the analysis for Council? Should clean up. 	<ul style="list-style-type: none"> No – the text boxes were placeholders but the rates contained are what were used for the analysis (thus comments should have been removed from these tabs).
31	Cash Flows 2019 Low Gr Alt Size	<ul style="list-style-type: none"> Please clarify Cells D76 & D77 at 135k and 85k assumptions. It is neither a +/-25% with respect to the base numbers (Pre-Sort/Transfer Station (AD) or AD Capital Infrastructure under Major Capital Cost Phasing Assumptions). Would suggest future clean ups to organize the model as such. 	<ul style="list-style-type: none"> This was an alternative scenario which was never actually used in the report output tables but rather for internal discussion purposes. Was to consider the relative impacts of smaller sizing of both pre-sort/transfer and AD processing under a low growth scenario although for sensitivities we only allude to a reduced AD processing facility to 100,000 tonnes to consider capital cost and life cycle cost implications.
32	Cash Flows 2019 Low Growth Low\$	<ul style="list-style-type: none"> Miscellaneous Revenues (Status Quo) for Electronic Waste (\$/year), MRF Materials (\$/year), Scrap Metals (\$/year), EPR Revenues (\$/year), DYEC Excess Capacity Sales (\$/tonne) are all zero. 	<ul style="list-style-type: none"> There are no ancillary costs under Status Quo nor Service Contract (as there is no land or other consulting assumed required) and the AD scenario continues to assume ancillary costs and land.

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
33	Cash Flows 2019 Low Growth Low\$	<ul style="list-style-type: none"> Merchant Capacity Scenario - Detailed Analysis, Pre-sort facility operating costs are at \$84.9402821560122 (Base Unit Cost/Rate). Please clarify the assumption or how it was solved for. 	<ul style="list-style-type: none"> This is the implied cost per tonne for pre-sort/transfer to arrive at the same 2019 to 2041 NPV as would have been arrived at under the DBOM scenario (upfronting capital). As the pre-sort requirements under the DBOM and service contract options are the same, essentially, it implies the cost per tonne which includes capital, operating, life cycle and land (from other worksheet) for an all-in cost per tonne for pre-sort transfer (as opposed to the base \$80/tonne for just O&M when assuming capital upfronted). Both the low capital and O&M costs per tonne of pre-sort/transfer are factored and the lower growth scenario results in a smaller denominator from which to spread the costs out over
34	Cash Flows 2019 Low Growth HI\$	<ul style="list-style-type: none"> Ancillary Costs Base Unit Cost/Rate inputs for Status Quo Scenario - Detailed Analysis are all zero. Is this the assumption under this scenario? 	<ul style="list-style-type: none"> There are no ancillary costs under Status Quo nor Service Contract (as there is no land or other consulting assumed required) and the AD scenario continues to assume ancillary costs and land.
35	Cash Flows 2019 Low Growth HI\$	<ul style="list-style-type: none"> Miscellaneous Revenues (Status Quo) for Electronic Waste (\$/year), MRF Materials (\$/year), Scrap Metals (\$/year), EPR Revenues (\$/year), DYEC Excess Capacity Sales (\$/tonne) are all zero 	<ul style="list-style-type: none"> There are no ancillary costs under Status Quo and there are metals revenues assumed. No other revenues included similar to other scenarios.

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Detailed Model Review Findings and Observations

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Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
36	Cash Flows 2019 Low Growth Hi\$	<ul style="list-style-type: none"> Merchant Capacity Scenario - Detailed Analysis, Pre-Sort Facility Base Unit Cost/Rate, D637. Please clarify how this number is solved for. 	<ul style="list-style-type: none"> This is the implied cost per tonne for pre-sort/transfer to arrive at the same 2019 to 2041 NPV as would have been arrived at under the DBOM scenario (upfronting capital). As the pre-sort requirements under the DBOM and service contract options are the same, essentially, it implies the cost per tonne which includes capital, operating, life cycle and land (from other worksheet) for an all-in cost per tonne for pre-sort transfer (as opposed to the base \$80/tonne for just O&M when assuming capital upfronted). Both the high capital and O&M costs per tonne of pre-sort/transfer are factored and the lower growth scenario results in a smaller denominator from which to spread the costs out over.
37	Tonnage High Cont 2019	<ul style="list-style-type: none"> There are constants on this tab with no source (i.e. look at row 125, 155). Please clarify the source. 	<ul style="list-style-type: none"> The SF and MR apportionments across municipalities are based on ratios (roughly 70/30) although for Seaton, we base it on a specific forecast values (so values are hardcoded) as we have subdivision plans per our most updated DC by-law for Seaton. In the end, the Seaton plus net Pickering totals should equal the total Pickering values.
38	Mass Balance - 2019 High Cont	<ul style="list-style-type: none"> No comment 	<ul style="list-style-type: none"> Comment noted.

Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
39	Tonnage Low Growth 2019	<ul style="list-style-type: none"> Formulas in Rows 110 to 129 (Growth Schedule (total HH)) are different from the formulas of the same section on Tonnage and Growth 2019 tab (base case). <ul style="list-style-type: none"> The tab description for Tonnage and Growth 2019 states: "HH values to 2022 based on Planning report (2018-INFO-149), value interpolated to 2031 OP values, post 2031 values converge to Hemson study model (used by Metrolinx). Tonnage intensity per HH based on 2018 actual intensity values. Ratio of HH apportioned to SF and MR based on ratios received from Planning/Finance". The description for Tonnage Low Growth 2019 states: "Similar to base except target average annual household growth rate is about 1.75% (versus about 2.2-2.3% under base case)". However, Rows 110 to 129 show no interpolation and a YoY growth is applied. Please clarify the source of 1.75% and 2.2 – 2.3% growth rates. Also indicate if you have considered the fact that for Low household growth scenarios, average household growth should be 27% less than the assumed values under the base case. Should clarify the verbiage within the Attachment 2 the updated assumption on average HH growth rate being 30% lower than under the base case. 	<ul style="list-style-type: none"> To summarize the base case growth projection for households: <ul style="list-style-type: none"> Actuals to 2018; Planning report projections to 2022; and OP values at 2031 where values between 2022 and 2031 are interpolated. Post 2031 is based on Hemson HH growth projections. As a result, the annual compound growth rate is 2.4% to 2042 (from 2018) and closer to 2.5% to 2041 (thus the model assumptions should read as closer to 2.4 to 2.5%. We ignore the critical end-points (i.e. Planning forecast, OP values) and derive the estimated HH growth at a lower compound rate than the base case (historical average for last 10 years closer to 1.3%). We set a target compound growth rate for the forecast period of about 1.75% taking into account actual Seaton values which are tied to subdivision plans. The actual compound growth is about 1.75% out to 2042 and 1.77% to 2041. Given this there is no interpolation, but rather, an implied escalation to arrive at average annual growth within the 1.75% range (arbitrary selection, set higher than historical growth but less than aggressive base projections). The decline in the annual average compound growth rate (decline to 1.75% from about 2.5% is a 30% decline). Note we modified from the 27 per cent to a more rounded 30 per cent in the report assumptions.

Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
40	Cash Flows 2019 High Cont	<ul style="list-style-type: none"> Please clarify D637 assumption and the source. 	<ul style="list-style-type: none"> This is the implied cost per tonne for pre-sort/transfer to arrive at the same 2019 to 2041 NPV as would have been arrived at under the DBOM scenario (upfronting capital). As the pre-sort requirements under the DBOM and service contract options are the same, essentially, it implies the cost per tonne which includes capital, operating, life cycle and land (from other worksheet) for an all-in cost per tonne for pre-sort transfer (as opposed to the \$80/tonne for just O&M when assuming capital upfronted).
41	Cash Flows 2019 Low&Cont	<ul style="list-style-type: none"> D637, please clarify the source of the assumption. 	<ul style="list-style-type: none"> This is the implied cost per tonne for pre-sort/transfer to arrive at the same 2019 to 2041 NPV as would have been arrived at under the DBOM scenario (upfronting capital). As the pre-sort requirements under the DBOM and service contract options are the same, essentially, it implies the cost per tonne which includes capital, operating, life cycle and land (from other worksheet) for an all-in cost per tonne for pre-sort transfer (as opposed to the \$80/tonne for just O&M when assuming capital upfronted).
42	Composition and Diversion Summ	<ul style="list-style-type: none"> No inconsistency in the formulas. Seems this is a generally analysis tab and not flowing anywhere. This tab includes the contamination rate of organics. 	<ul style="list-style-type: none"> Correct – is a summary tab showing various comparisons of tonnage growth and various waste streams including comparisons versus the 2017 and 2018 updates.

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Detailed Model Review Findings and Observations cont'd

Provided in the table below are our detailed Model peer review findings, including the Region's responses.

#	Worksheet	Deloitte comments	Region's Responses
43	End Products Scenarios	<ul style="list-style-type: none">Under Section A (Biogas Production Scenarios - AD Technology Option) the following are 0/null: RNG Revenue Scenarios, Base Capital and Operating Scenarios, High Capital and Operating Scenarios, Alternative Capital and Operating Scenarios, Additional Sensitivities.	<ul style="list-style-type: none">As the energy by-products review was contained in the report as a separate exercise, the scope of the model review has been narrowed to the base business case model (as provided to Deloitte). The only item included here are the estimated biogas and RNG yields from different scenarios for information purposes only.
44	End Products Scenarios	<ul style="list-style-type: none">Section C (Compost Production Scenarios - In-Vessel Technology Option) has red cells with no input. Confirm.	<ul style="list-style-type: none">In-vessel for organics processing is not considered in the 2019 so we can disregard any references or analysis relating to in-vessel (AD was selected technology).



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