

Flato North Comment Response Matrix		
Comment #	Comment	Response
<b>Ministry of Transportation- 2017.01.12</b>		
1.1	MTO has no concerns with the development of the subject lands provided that all necessitated highway improvements are in place prior to any connection to Highway 10 (through the Flato East subdivision).	Acknowledged.
<b>Grand River Conservation Authority- 2017.01.06</b>		
Note:	Prior to any grading or construction on the site and prior to registration of the plan, the owners or their agents submit the following plans and reports to the satisfaction of the Grand River Conservation Authority.	Acknowledged.
1.1	A detailed Stormwater Management Report in accordance with the 2003 Ministry of Environment Report entitled, "Stormwater Management Practices Planning and Design Manual" and in keeping with the Preliminary Servicing & Stormwater Management Report (dated August 2016, prepared by C.F. Crozier and Associates.	Servicing and Stormwater Management Implementation Report (C.F. Crozier & Associates, March 2017) has been provided.
1.2	Detailed Lot Grading and Drainage Plans showing existing and proposed grades.	Plans have been provided in March 2017 submission.
1.3	An Erosion and Siltation Control Plan in accordance with the Grand River Conservation Authority's Guidelines for sediment and erosion control, indicating the means whereby erosion will be minimized and silt maintained on-site throughout all phases of grading and construction.	Plans have been provided in March 2017 submission.
1.4	The submission and approval of a Development, Interference with Wetlands and Alterations to Shorelines and Watercourses permit from the GRCA prior to any grading within the regulated area.	Acknowledged. Permit application will be applied for at a future submission.
<b>Advisory Comments</b>		
2.1	The Flato North property fabric is denser than the proposed fabric of the Flato East Subdivision. Additional justification should be provided to ensure that the assumed 50-55% impervious level are consistent with the modelling for post-development catchments 1 and 2.	In the absence of individual house plans, we have assumed that the proposed residential buildings cover 90% of their respective building envelopes. This is considered conservative as the proposed units within Flato West Development cover 60% to 80% of their building envelopes. Based on the assumed building sizes within Flato North, the impervious levels for SWM Facility 1 and 2 will be 48% and 49%, respectively. These imperviousness levels are below the impervious levels assumed when sizing the SWM facility blocks.
2.2	Floodplain mapping of the unnamed tributary requires submission of a revised hydraulic model (electronic copy).	Model has been provided in the 1st submission detailed design package.
<b>Flato East Comments</b>		
3.1	All prior comments with respect to Flato East are still required to be addressed through final design required draft plan conditions.	Acknowledged.
<b>Hydro One- 2016.11.08</b>		
1.1	We have reviewed your Plan of Subdivision Application, 42T-2016-05, dated October 14, 2016 and have no comments or concerns at this time. Our preliminary review considers issues affecting Hydro One's High Voltage Facilities and Corridor Lands only. For proposals affecting 'Low Voltage Distribution Facilities' the owner/applicant should consult their local area distribution supplier.	Acknowledged.
<b>Historic Saugeen Metis Lands, Resources, and Consultation Department- 2016.10.16</b>		
1.1	The HSM Lands, Resources, and Consultation Department has reviewed the relevant documents and have no objection or opposition to the proposed development, land re-designation, rezoning, land severance, Official Plan and/or Zoning By-Law Amendments.	Acknowledged.

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Bluewater District School Board- 2016.10.17		
1.1	The school board does not have any comments at this time.	N/A
Six Nations Lands and Resources- 2016.11.15		
1.1	Approve the AMICK archaeological assessment.	N/A
Triton Engineering Services Limited- 2016.11.08		
Draft Plan		
1.1	Daylighting triangles to be provided at Block 368, 369, 370 (FE) and Block 246 (FN) to accommodate future ROWs. MTO daylighting requirements at Highway 10 to be confirmed.	Daylighting Triangles have been included in Draft Plan.
1.2	The feasibility of the extension of Street J to be considered including: (a) Are there any constraints to the extension of Street J? (b) Is the property south of Street J available/feasible for future development? (c) Is the location proposed for the extension appropriate/optimum? (d) Is it feasible to combine Flato East and Eco-Parkway for a single Highway 10 access?	Not applicable to Flato North
1.3	Township should be aware that there are numerous park and open space blocks throughout the development. It is unclear what is proposed for these blocks. Considerations are as follows: (a) Will the Township assume ownership of all these? (b) Are there constraints associated with these (i.e. EP lands, buffers/setbacks)? (c) What is the intended function (i.e. passive/active, are services required)? (d) Maintenance requirements. (e) Fencing requirements. (f) Access to be reviewed as some do not have frontage on a street (i.e. Block 353 FE). (g) Liability considerations.	(a) Yes, that is the intention (b) Yes, EP lands designed to include the constraints associated with the water course, the adjacent park lands zoned Open Space are outside of this constraint. (c) Function of parks/open space blocks would be determined by the Township. (d) Maintenance requirements would be determined by the Township. (e) Fencing requirements would be determined by the Township. (f) It is anticipated Block 353 will be accessed through Open Space Block 366. (g) Liability considerations would be determined by the Township.
1.4	Record of site conditions (ROC) requirements/status to be confirmed.	Phase 1, Environmental Audit has been completed and came back clean. No record of site conditions (ROC) is needed, similar to Flato West and Flato East.
Functional Servicing Report (FSR)		
Note:	The FSR for FN appears to supersede the previously submitted FE FSR and for the most part deals with the same issues. Therefore, our comments will primarily deal with the FN FSR.	Agreed.
2.1	Submission did not include reference to development phasing. However, we are aware that a preliminary phasing plan has been prepared for the entire Flato development area. This plan should be formalized along with a summary indicating the special requirements (i.e. cul-de-sacs, servicing extensions, holding of lots, Sewage/Water Reserve Capacity) of each phase.	The Phasing Plan is preliminary for the entire site. Specific phasing plans are to be prepared at each phase of development with all of the required information for each phase. A detailed phasing plan has been provided for the first phase of development.
2.2	Section 5 (FN) indicates that there are 303 units of uncommitted reserve capacity for sewage treatment based on 2016 Annual Report. Based on our records there is on 293 units.	Acknowledged. The 303 units includes the additional 10 units for Flato West. This was revised after the report was completed.
2.3	Comments regarding sanitary collection system (Figure 3-FN): (a) Upstream reaches of sewers to be minimum 1%. (b) Maximum reach length is 100m. (c) Minimum slope for 200mm is 0.4%. Pipes should be sized based on hydraulic requirements and not oversizing to allow slopes to be reduced. (d) The above items are to be addressed as a part of detailed design.	(a) Acknowledged. (b) Acknowledged. (c) Acknowledged. (d) Refer to detailed design submission.

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2.4	Municipal Standards specify sanitary sewer minimum cover is 2.4 m, not a 2.5 m depth as per Section 5 (FN). Clarify for detailed design.	Acknowledged.
2.5	Confirm that size of Block 354-FE is sufficient to accommodate the proposed sewage pumping station and supporting infrastructure. Preliminary general management drawing to be provided. Also, this Block is labelled as a Park on the FE Draft Plan.	The SPS Block has been revised to Block 355. Preliminary sizing has been completed and we are confident in the sufficiency of the block size. The SPS will be designed at the timing of future phase when required. Revisions will be made to the naming of this block in future phases.
2.6	SPS/forcemain design will need to consider the following: -Interim operation (i.e. retention time). -Odor control at discharge point and SPS. -Special requirements of forcemain at discharge manhole. -Alternative forcemain routes and discharge point. -Expanded SPS service area. -Standby power. -See Municipal Servicing Standards (MSS) for design requirements.	Acknowledged. Design to be completed when SPS is required. Request to defer these comments until such time.
2.7	Section 6 (FN) indicates that "the current hydraulic capacity in the Township's municipal water system is 1260 residential units. It is assumed that this is intended to reference "Uncommitted Reserve Capacity Equivalent Residential Units". Based on 2016 Annual Report there is 1260 units. Similarly, the subsequent paragraph discussing the firm capacity calculation should be adjusted to reflect the appropriate terminology.	Acknowledged. Water capacity for each phase will be established at the onset of the Detailed Design phase with the municipality.
2.8	Watermain connection to be provided from existing Highway 10 watermain to Flato East. This will require a 6 m wide block through either Lot 232/233. This block could also provide for a walkway from Street G to the Block 360 Park.	Acknowledged. Flato has reviewed this request and has no issues with it. This will be designed at a later phase.
2.9	Watermain sizing to be considered further as a part of detailed design. Consideration to be given to increasing Russell extension to 200 mm. Also, extension to Highway 10 to 200mm. This will be confirmed prior to detailed design.	Flato is open to the Highway 10 watermain extension which will be designed at a later phase, as long as it can be accomplished without impacting the number of lots. We understand that Triton will provide watermain sizing for the various internal roads via the Township water distribution model.
2.1	Section 9.0-FN: Options to lower groundwater levels to accommodate basements will need to be reviewed in detail with the Township prior to committing to this approach. This issue should be addressed early in the design stage given its fundamental nature and potential impact on the configuration of the development.	Foundation Drain Collector will not be implemented per discussions with Flato.
2.11	We note that a preliminary geotechnical investigation (February 2015) was included in the FE-FSR, is this the most recent version? We note there is a February 2016 hydrogeological study for FE, was the geotechnical report updated to reflect this document?	The Final Soil Report (Soil Engineers Ltd., August 2016) has been completed for Flato North. Report has been sent to Triton Engineering Services Ltd. and Township of Southgate.
2.12	Geotechnical report for FN indicates that a hydrogeological study is pending, what is the status of this?	Hydrogeology Study is complete and has been provided in March 2017 detailed design submission.

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2.13	<p>Geotechnical report comments:</p> <p>(a) Building Department should review/comment on the recommendations related to foundations and footings.</p> <p>(b) Footing excavation inspection requirement to be included in subdivision agreement.</p> <p>(c) It should be noted that MSS pavement design requires minimum 450 mm Granular and HL #4 is required for base asphalt, not HL #8 as indicated.</p> <p>(d) Section 6.3.3-FN discusses the environmental quality of imported fill. Township requirements for importing of fill (i.e. reporting/testing protocols) will be flushed out further as part of detailed design and/or SAP process. This should be noted. We note the FE report doesn't speak to this issue. This requirement needs to be addressed in this document.</p> <p>(e) Section 6.4-FN discusses basement elevations with respect to high groundwater; it is the Township's policy to have basements set minimum 0.3 m above the seasonal high groundwater levels (SHGWL). This is reiterated in the FN FSR. However, the FE report doesn't speak to this issue. This requirement needs to be addressed in this document.</p>	<p>a) acknowledged - to be addressed at detailed design. B) acknowledged. C) acknowledged - to be addressed at detailed design. D) and E) Please refer to the appended SEL Letters dated April 21, 2017.</p>
Storm Water Management (SWM)		
3.1	<p>Is reassessment of the Foley Drain required? How will the assessment be allocated and administrated (i.e. to individual lots owners, or, to municipality)?</p>	<p>As per correspondence with Gerd Understand, R.J. Burnside &amp; Associates (2017.01.23), due to the fact that the proposed subdivision is close to the municipal drain, it was decided that an investigation should be made to determine the condition of the existing drain and possibly to have a cleanout done before the residential homes are built. After the spring run-off, a field investigation will be completed to determine what course of action is necessary. It is understood from the January 19, 2017 meeting that Township staff will have a meeting with Gerd to discuss the best administration methodology.</p>
3.2	<p>The catchment plan for the FN indicated minimal external drainage from the north, has this been confirmed with field reconnaissance? This will need to be confirmed as a part of detailed design to ensure off-site drainage has been accommodated.</p>	<p>External drainage areas will be confirmed this Spring with field reconnaissance to support the 2nd submission of Phases 2A, 2B and 3.</p>
3.3	<p>GRCA has expressed concerns with the use of the Mount Forest IDF data for SWM design in Dundalk. Based on their May 19, 2016 e-mail, Mount Forest IDF is acceptable provided the recent data attached to the e-mail is used in conjunction with a Chicago distribution. Confirm that the SWM design utilized this data. If not, the revised data should be run through the hydrologic model to determine extent of changes to the SWM design and to confirm that the proposed SWM blocks are sufficiently sized. It is our understanding that this issue has been addressed in a recent design and that the SWM blocks as shown on the Draft Plan can accommodate the revised footprint.</p>	<p>MTO IDF curves have been used for the Detailed Design.</p>
3.4	<p>Preliminary design has indicated forebays proposed for each SWM facility, it is the Township's preference that these forebays be replaced with oil grit separators where feasible.</p>	<p>Per discussions with Ray Kirtz, it was agreed that a forebay is the most practical solution to provide water quality control given the size of the tributary areas.</p>
3.5	<p>A cursory review of the flood lines for Foley Drain and the Unnamed Tributary appear to be against the proposed lines in several locations. Detailed grading will need to ensure that flood lines do not encroach on the lots and there should be adequate freeboard (i.e. 0.3m) from grade at the building.</p>	<p>Acknowledged. The site grading for the Phases 2A, 2B and 3 detailed design submission incorporated adequate floodproofing. The detailed design for all future phases will also be floodproofed to provide adequate freeboard from flood elevation to the grade at the building.</p>

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3.6	The following general comments regarding SWM facility configuration to be addressed as part of final design: -Access road to be 4 m wide. -Inlet pipe into SWM facility is to allow for free discharge under 5 year event.	Refer to Detailed Design Drawings.
3.7	Based on discussions with Crozier & Associates, it is our understanding that Water Quantity Control strategy/criteria for this development has to be altered from that which is described in the SWM report in order to satisfy GRCA requirements and provide adequate control for the Unnamed Tributary and the Foley Drain. This strategy will be adequately outlined in the final SWM report.	The water quantity control criteria used to size the SWM facility blocks is to control the post-development peak flows to pre-development levels at the Unnamed Tributary and Foley Drain at the Flato East south property line.  In response to the GRCA comment letter dated May 6th, 2016, discussions with GRCA staff took place to address the SWM report wording with respect to water quantity control. As per personal communication (J. Palmer, P. Eng. – GRCA; D. Tone, P. Eng. – CFCA; dated May 18, 2016), it was agreed that since ‘post-to-pre’ peak flows are met for the Foley Drain at the hydrologic point of interest (south property line), attenuation of the flows generated from the infrequent events is not required. The Flato East Preliminary SWM & Floodplain Assessment report dated June 2016 (Section 5.4) was re-worded accordingly to support the issuance of the Flato East draft plan approval.
Traffic Impact Study (TIS)		
4.1	In our review of the Draft Plan, we noted possible operational issues with the proximity of Street G and Highway 10, as well as the close proximity of driveways close to Highway 10 (lots 310 and 311). We note that MTO did not raise any concerns with this in their review comments, but it should be verified so that issues do not arise during the design of the intersection.	Acknowledged. The proximity of the proposed driveways will be taken into account during detailed design to address any access-related concerns.
4.2	In reviewing a previous version of the TIS, we had identified a possible problem with the way traffic counts were done at the intersection of Highway 10 and Main Street. This was identified by MTO and has been addressed in the Addendum.	Acknowledged.
4.3	We have not identified any particular concerns with the methodology or conclusions of the current TIS. Traffic operations at the proposed Highway 10 access and existing Highway 10 access have been reviewed and accepted by MTO.	Acknowledged.
4.4	Connections to Main Street will be via Russell Street and Elm/Victoria/Osprey. The forecast traffic volumes will not create any level of service deficiencies. Traffic volumes will increase, and our comments on the condition of these existing roads is as follows: (a) Russell Street- has concrete curb and gutter and a 1.5 m sidewalk on the east side between Main Street and Sheffield. The sidewalk should be extended south of Sheffield to the new development. (b) Elm Street- should be reconstructed with concrete curb and gutter and sidewalk (we understand this is being done with the construction of Flato West).	(a) Acknowledged. (b) Acknowledged.
Miscellaneous		
5.1	Noise assessment will be required with respect to Highway 10.	Acknowledged. This will be completed at a later phase when triggered by the development.
Grey County- County Transportation Services Department- 2016.11.07		

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1.1	Depending upon the phasing of the overall Flato developments, the County Transportation Services Department is concerned with the potential impacts to Grey Road 9 prior to the construction of the Highway 10 access through the Flato East lands. Further information should be provided regarding the anticipated overall phasing of the Flato developments from a traffic impact perspective, including the anticipated timeframes for when the Highway 10 access through Flato East will be constructed so that the County Transportation Services can comment on the potential impacts of this development and the overall Flato developments on Grey Road 9.	These concerns have been addressed through supplemental traffic analysis provided to the County on December 6th, 2016. Per email correspondence from the County (Tanya Patterson) on December 9th, 2016, the County accepts the Crozier report and has no further comments at this time.
1.2	County Transportation Services noted that there appears to be discrepancies in the unit totals as referenced in the TIS for this development as well as the entire Flato developments. These unit totals should be clarified in the updated totals on the phasing plan from a traffic perspective.	
1.3	Based on the above, the County Transportation Services is wondering if Crozier & Associates can prepare updated traffic volumes and anticipated traffic impacts based on the overall phasing plan for the entire Flato developments (West, East and North)? Ultimately, County Transportation Services wants to know what the estimated traffic volumes will be on Grey Road 9 based on the anticipated phasing of the development. This would include the estimated timeframe for when the Highway 10 access will be/should be constructed from a traffic volume/emergency access perspective (i.e. roughly what phase the Highway 10 access will be constructed, what phase the connection to Russell Street will be established), estimated traffic volumes on Grey Road 9 following each phase, including traffic volumes on Grey Road 9 pre-Highway 10 access, pre-Russell Street access, post Russell Street access and post Highway 10 access.	
Note:	The TIS concluded that an access should be provided to Highway 10. We are in receipt of a letter from MTO to Grey County dated September 2, 2016 that indicates MTO has reviewed the TIS and Draft Plan (July 5, 2016) and accepts the reports and conclusions. The access to Highway 10 is therefore acceptable to MTO, subject to the Developer entering into an agreement to design and construct the entrance and associated highway improvements. The entrance is to be stop controlled, and have a northbound left turn lane on Highway 10. MTO have also commented on the requirement for right of way widenings, 0.3 m reserve, and visibility triangles.	Acknowledged.
Township of Public Meeting- Minutes of Public Meeting 2017.03.01		
Concerns from Council		
1.1	Concerns were raised regarding the volume of vehicles that the development will generate and if the plan is to still expedite the Highway 10 entrance.	Supplementary traffic analysis has been undertaken and accepted by the County to determine the trigger when the Highway 10 entrance is required.
1.2	Questions were asked regarding whether or not there will be a street light at the proposed Highway 10 intersection.	A streetlight is not warranted under current analysis. When the Highway 10 access is triggered, supplementary traffic analysis can be undertaken to confirm or revise this conclusion.
1.3	It was also commented that they would like to invite a municipal lawyer and engineer to meet with the council and go over the plans. Additionally, there is an inflow problem with regards to wastewater.	Acknowledged.
Concerns from the Public		



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2.1	Many Southgate residents living adjacent to the development are concerned with the flow of drainage water from the development to their properties, and are inquiring about what provisions are being made for those with water problems on existing properties.	Flooding issues and drainage concerns on adjacent properties are existing. Flato will ensure that no future drainage from the Flato Property is directed north to the existing residents to worsen the existing conditions. Flato has undertaken a site visit with an existing resident and the CAO to review the existing drainage conditions. An interceptor swale is being proposed along the north property line, which will collect and convey drainage from the rear of the proposed lots that back onto the north property line as well as any drainage from existing external properties to the Unnamed Tributary and the proposed storm sewer system.
2.2	Residents also voiced concerns regarding the odors coming from Eco Park.	Councillor Woodbury explained during the meeting that companies in Eco Park have been working with the Ministry of Environment on different ways to test Odour. This is an issue the municipality is addressing and not related to the Flato subdivision.
Grey County -2017.03.22		
1.1	The Township and County want to ensure that the stormwater/drainage design for the Flato development will not exacerbate any existing drainage/stormwater issues surrounding the subject lands. (a) Please indicate whether the stormwater management design will impact the surrounding lands. (b) Please confirm that the stormwater management design will not result in any of the problems that are currently being experienced by the existing landowners surrounding the subject lands. (c) How is the Flato stormwater management design different than the surrounding development and how will the design avoid any of the problems that the existing development may be experiencing.	The proposed stormwater management design will not negatively impact the surrounding lands. Features such as the proposed interceptor swale along the north property line will collect any drainage flowing onto the site from the residential area to the north and discharged the flows downstream, away from the existing residential lots. The site will be filled to ensure that the basements of each proposed residential dwelling are above the seasonally high groundwater table, per the Township standards. Each lot will be graded to provide positive drainage away from the building. The proposed road crossings of the Unnamed Tributary and Foley Drain have been designed to ensure that the flood elevations associated with the aforementioned watercourses on the adjacent properties are at or below pre-development levels.