



March 16, 2023
Our File: 411009

Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0

Attention: Chantelle Pellizzari
Planning Coordinator

Re: Ainley Farm Property
6545 & 6560 Gerrie Road, Elora
Response Letter

Dear Ms. Pellizzari,

In response to the comments received from Triton Engineering Services Limited following Submission No. 2 dated March 20, 2020 regarding the subdivision for the Ainley Farm Property, we offer the following responses for your review and consideration:

General Design & Review Process:

Comment 2.1: Construction Specifications (i.e. notes & details page, or separate document) is to be submitted for review prior to tendering the project.

Response: *Acknowledged. A Notes and Details plan is included with this submission. Additional construction specifications may be added to the Notes and Details Plan or into the Tender Documents prior to tendering.*

Comment 2.2: Individual services (water, sanitary and storm) are to be shown on the plans.

Response: *Individual services will be included in the detailed design drawings which will be completed following draft plan approval.*

Comment 2.3: Safety Platforms are to be provided as per O.P.S.D 404.020 in all manholes as applicable.

Response: *Safety platform have been added where applicable.*

Comment 2.4: Signage and Parking Plan is to be prepared and submitted for review.

Response: *A draft Signage and Parking Plan is provided with this submission.*

Comment 2.5: Proposed Subdivision Sign mock up is to be provided. The requirements of this sign will be detailed in the Subdivision Agreement.

Response: *The subdivision sign mock up will be provided as part of the detailed design following draft plan approval.*

Comment 2.6: Canada Post mailbox locations are to be indicated on the plans. Additionally, provide reference to Canada Post mailbox installation standards.

Response: *The preliminary location of mailboxes are provided with this submission. Mailbox locations are shown on the general plan.*

Comment 2.7: Hydro plans, Street Lighting Layout, Details including Photometric analysis, the individual utility supplier drawings and a Composite Utility Plan (CUP) is to be submitted for review and approval. When the CUP is approved by the Township it can then be re-circulated to the individual utility suppliers for their approval and confirmation that the plan matches their plans/requirements and no conflicts are noted. This confirmation is to be received in writing (email or otherwise). Municipal Consent may then be issued for installation of the utilities within the Municipal ROW and Subdivision.

Response: *Acknowledged. These plans will be provided with the detailed design stage following draft plan approval.*

Comment 2.8: Landscaping plans to be submitted, including those pertaining to the SWM block, parks, trails, areas to be naturalized and street boulevards.

Response: *Acknowledged. These plans will be provided with the detailed design stage following draft plan approval.*

Comment 2.9: All Manhole (MH) frames and lids are to be self-leveling (East Jordan Iron Works – product no. 00302202 or Bibby-Ste-Croix) or approved equivalent.

Response: *A note on self-levelling manholes has been added to the General Notes Plan, please see note 10 of the storm sewer notes, and notes 7 of the sanitary sewer notes.*

Comment 2.10: Labelling is to be updated for clarity as some are hard to interpret (i.e. Manhole X and CBMH82)

Response: *Labelling has been updated to improve clarity in the revised drawings.*

Comment 2.11: Retaining wall separating the proposed sidewalk from the Wetland in the open space block is to be relocated a minimum of 0.3m from the back of sidewalk, and equipped with pedestrian hand rail as required. Typical section and details are to be provided.

Response: *A section of the retaining wall has been included in the revised drawings.*

Comment 2.12: Confirm final use/intent of irregular shaped parcel at the connection to existing Walser Street. A conceptual lot fabric should be provided for this parcel including existing Lots 22-24.

Response: *The lotting of this area has been added to the drawings.*

Comment 2.13: Pipe insulation detail title is misleading as minimum cover varies based on the type of service.

Response: *The pipe insulation detail title has been revised.*

Comment 2.14: Construction cost estimate is to be prepared as per below:

- Cost estimate submissions are to make reference to and correlate with the latest drawing set.
- The costs associated with the flushing, CCTV Video & Report of the Sanitary Sewer, Storm Sewer and GWMS Sewer prior to Preliminary Acceptance, surface asphalt and Final Acceptance. is to be included. It appears only one iteration of CCTV was included.
- The construction costs estimates are to include costs associated with the street lighting, street trees and hydro installation.
- Cost estimates are to include an additional 10% for Engineering, 10% for Contingency and 13% HST.

Response: *A preliminary cost estimate is attached. The cost estimate will be updated as more detailed information becomes available.*

Comment 2.15: Legend is not provided on DWG. 26 as indicated on the plans, update reference on DWGs accordingly.

Response: *Legends have been added to all drawings, legend on DWG 27 is removed.*

Comment 2.16: Hydrogeological report is to be provided which discusses existing groundwater elevation with respect to proposed basements, water balance, impact on existing private wells and infiltration trenches design/suitability.

Response: *A hydrogeological and geotechnical report will be provided under separate cover.*

Comment 2.17: All external works are to be TWSP projects, subject to Service Finance Agreements as applicable.

Response: *A meeting was held with the Township and Developer on June 16, 2022.*

Comment 2.18: The following external works will be required to service this Development. These works will be subject to a Service Finance Agreement, with some portions being Development Charge (DC) eligible. Cost estimates for these works have been attached. Cost sharing breakdowns will be provided and discussed under separate cover:

- Gerrie Road watermain construction and urbanization from Colborne Street to Development southern limit.
- Gerrie Road watermain construction and urbanization across Development frontage.
- Colborne Street urbanization and sanitary sewer replacement from John Street to Wilson Street (western leg).

Response: *Acknowledged. A meeting was held with the Township and Developer on June 16, 2022.*

Comment 2.19: Township has updated their design/construction standards. Refer to the new Development Manual available for download on the Township website to ensure compliance.

Response: *Acknowledged.*

Comment 2.20: Structure inverts are to correlate with project north. Revise accordingly.

Response: *Project North is assigned to the construction north shown on all drawings.*

Comment 2.21: Drawing 18 does not have inverts matching those shown on profile.

Response: *Drawing 18 has been revised to match inverts between plan and profile.*

Comment 2.22: CBMH on Drawing 18 to be given a structure name.

Response: *The manhole labelling has been checked and updated in the revised drawings.*

General and Individual Lot Grading:

Comment 2.23: Top of Foundation Elevation is to be provided for each lot.

Response: *Top of foundations have been provided in the updated chart on Drawing No. 27. As part of the detailed design, the under side of footings will be revised and adjust as needed to meet the Township standard for the separation from the water table.*

Comment 2.24: Confirm Specific House Grade for lots 26, 75 and 92 as grading plan indicate a different number than Chart in DWG 27.

Response: *The house grades have been reviewed and adjusted in the revised drawings.*

Comment 2.25: Front yard slopes to be indicated for lots 50 to 57.

Response: *The front yard slopes have been indicated in lots 50 to 57 in the revised drawings.*

Comment 2.26: Proposed driveway locations and slopes are to be provided.

Response: *Proposed driveway locations have been added to the drawings. Additional grading will be provided as part of detailed design following Draft Plan Approval.*

Comment 2.27: Confirm significance of triangle indicated in Legend indicating lots with FF 0.6m above specified grade.

Response: *Triangle indicates houses that are raised to provide 0.60m separation from the high groundwater elevation.*

Comment 2.28: The rear yard swale of Lots 14 & 15 is to be defined to stop discharging to external lands.

Response: *Rear yard swale has been revised to prevent flows from discharging to external lands.*

Comment 2.29: Swale is to be better defined across Lots 78/79/81.

Response: *Swale is redefined with a small berm and 0.15m depth maintained throughout the swale.*

Storm Water Management Facility (SWMF) and Report:

Comment 2.30: Information signage required for SWM facility (i.e. deep water, thin ice, no swimming, skating etc.). TWSP standard will be provided.

Response: *Information signage for the SWM facility will be noted during detailed design.*

Comment 2.31: Proposed fencing (i.e. SWMF, park, agricultural) is to be added to plans. This is to be confirmed with Township planning department.

Response: *Proposed fencing will be added to the detailed design drawings.*

Comment 2.32: Condition, capacity and general suitability of the existing ditch on Gerrie Rd. is to be confirmed since it is proposed as a receiver of drainage from the development.

Response: *The stormwater management design currently controls flow rates to the existing ditch on Gerrie Road to less than existing condition peak flow rates. Unless there are flooding concerns, we will continue with this approach for the draft plan stage and confirm the capacity of the ditch in detailed design.*

Comment 2.33: All headwalls are to be equipped with pedestrian hand rails (O.P.S.D 980.101)

Response: *A note on pedestrian handrails have been included on headwall labels in the revised drawings.*

Comment 2.34: Additional details on the outlet from DICB 32 are to be provided (i.e. end of pipe erosion treatment/structure).

Response: *Rip rap and a headwall has been included at the outlet from DICB 123 (previously DICB 32) in the revised drawings.*

Comment 2.35: Outlets from SWMF No.1 are to be equipped with headwalls.

Response: *The outlets from SWMF No. 1 have been equipped with headwalls in the revised drawings.*

Comment 2.36: Proposed SWM design is to be revised such that post-development run-off do not exceed pre-development run-off rates.

Response: *A super-pipe system has been included in the revised stormwater management design to limit post-development runoff on Walser Street to pre-development rates.*

Comment 2.37: Confirm infiltration trench pipe material.

Response: *The infiltration trench pipe material is indicated on Drawing No 21.*

Comment 2.38: Inlet and Outlet pipe slopes from the SMWFs are to be indicated, with capacity confirmed based on SSD requirements.

Response: *Inlet and outlet pipe slopes have been indicated on the revised engineering drawings and the capacity has been confirmed based on SSD requirements.*

Comment 2.39: Pond bottoms are to be graded to confirm positive drainage to outlets and avoid localized ponding.

Response: *The pond has been revised to provide 0.50% slopes from the inlets to the pond outlet. Our stormwater modelling files have been updated based on the new pond volume.*

Comment 2.40: Pond side slopes currently indicated at 3:1 are to be revised to 5:1 as per the MOE/GRCA SWM Design Guidelines.

Response: *The pond side slopes have been revised to 5:1.*

Comment 2.41: Confirm what flows from property to the north are expected in the future. If there is no flow expected storm sewers shown are not required.

Response: *None of the stormwater from the north property will come to the Ainley Subdivision, as such no storm sewer stubs to the north have been included in the revised drawings.*

Comment 2.42: DWGs 19 & 20 indicate ponding elevations for the 2- and 100-year events.

Response: *Ponding elevations for the 2- and 100-year design storm events have been included in the revised drawings.*

Storm Sewer Design:

Comment 2.43: Suitability (i.e. hydraulic capacity, positive slope, no flooding impact on adjacent properties) of the receiver of run-off from SWMF No.1 is to be confirmed. Additional detail and assessment of the wetland is to be provided which discusses potential environmental impacts of the increased run-off volume.

Response: *The stormwater management design currently controls flow rates to the adjacent wetland to less than existing condition peak flow rates. Unless there are flooding concerns, we will continue with this approach for the draft plan stage and confirm the capacity of the receiver of runoff from SWMF No. 1 in detailed design.*

Comment 2.44: Granular proposed between perforated storm sewers are to be specified.

Response: *The 50mm diameter clear stone proposed between the perforated storm sewers has been included in the revised drawings.*

Comment 2.45: Outlet from DICB 265 is to be equipped with headwall & rip-rap.

Response: *Rip rap and a headwall has been included at the outlet from DICB 124 (previously DICB 265) in the revised drawings.*

Comment 2.46: Infiltration trenches are to be wrapped with filter fabric around granulars. Runoff from roads should not be directed to trenches.

Response: *Filter fabric has been included in the revised infiltration trenches around granulars. Runoff from the roads is not directed to the infiltration trenches.*

Comment 2.47: DCBMH 58 and 67 Top of Grates appear to be significantly higher than the road way as shown on Section B-B on DWG 20.

Response: *Section B-B on Drawing 22 (previously noted as Drawing 20) has been revised to show the re-labelled DCBMH23 and DCBMH24 with top of grates consistent with the right of way grades.*

Comment 2.48: All catch basins are to be installed as per O.P.S.D 400.082.

Response: *A note has been included on the revised General Notes Plan.*

Comment 2.49: Confirm how existing drainage routes on Gerrie Rd. will be maintained where development roads connect as no culverts or grading is indicated.

Response: *Culverts have been included where development roads connect to Gerrie Road in the revised drawings.*

Comment 2.50: Surface inlets are required every two units (townhouse or singles) along rear lot line swales. Singles require full catch basins for all structures. Townhouses require a catch basin at the lead from the road but inlet basins can be used thereafter.

Response: *Additional surface inlets have been included along rear lot line swales in the revised drawings.*

Sanitary Sewer Design:

Comment 2.51: Manholes with greater than 0.6m difference between the invert of manhole and invert of inlet are to have a drop structure (OPSD 1003.010 or 1003.020) as applicable. Revise the following sanitary connections:

- MH-MA
- MH-U

Response: *The inverts on MH-MA and MH-U have been revised to eliminate the need for a drop structure in the updated drawings.*

Comment 2.52: MH U outlet invert is higher than one of the inlet inverts. MH U inverts are to also have cardinal directions labelled correctly.

Response: *Inverts have been revised and pipe invert direction reference construction north on all drawings.*

Comment 2.53: Flow arrow between MH S and MH R is showing the wrong direction on General Plan 3.

Response: *Flow arrow revised.*

Comment 2.54: Minimum cover required for the Sanitary Sewers is not achieved along the Keating Drive outlet. Revise inverts or provide insulation as required.

Response: *The sanitary sewers along the Keating Drive outlet have a minimum of 1.5m cover in the revised drawings.*

Comment 2.55: Confirm what hatching over sanitary sewer outlet is indicating.

Response: *Hatching is indication limit of sanitary sewer excavation. Labeled on all drawings and included in the legend.*

Comment 2.56: Sanitary flows from development are expected to trigger offsite sanitary sewer works. This is to be discussed and the cost sharing of this work is to be addressed within the Service Finance Agreement and Subdivision Agreement.

Response: *A meeting with the Township and Developer was held on June 16, 2022. Township staff are reviewing capacity.*

Comment 2.57: Sanitary MH Cover to be as per OPSD 401.010 Type "A".

Response: *A note indicating sanitary MH covers are to be as per OPSD 401.010 Type A has been added to the General Notes Plan, please see note 10 under the sanitary sewer notes on Drawing No. 27.*

Comment 2.58: MH steps are to be Hollow Aluminum as per OPSD 405.010.

Response: *The note on manhole steps has been included in the revised General Notes Plan.*

Comment 2.59: Sanitary Sewer Design sheet to be submitted and to be included in Preliminary Servicing & Stormwater Management Report for Sanitary Sewer System.

Response: *The sanitary sewer design sheet has been included in the revised Preliminary Servicing & Stormwater Management Report.*

Comment 2.60: All Sanitary MHs provided in low points of the road are to be equipped with water tight lids.

Response: *A note on watertight sanitary manhole lids at low points of the road has been included in the revised drawings.*

Comment 2.61: Expected sanitary contribution and its impact on the existing reserve capacity is to be discussed in Preliminary Servicing & Stormwater Management Report.

Response: *A meeting with the Township and Developer was held on June 16, 2022. Township staff are reviewing capacity.*

Water System Design:

Comment 2.62: Expected water demand and its impact on the existing reserve capacity is to be discussed in Preliminary Servicing & Stormwater Management Report for Water System.

Response: *A meeting with the Township and Developer was held on June 16, 2022. Township staff are reviewing capacity.*

Comment 2.63: Water valve label missing for water system at Street No.2 just south of Walser Street.

Response: *Water valve labels have been included in the revised drawings.*

Comment 2.64: Wherever watermain passes within 1 meter of storm structures insulation is to be provided.

Response: *Notes have been included in the revised drawings where the watermain passes within 1m of storm structures.*

Comment 2.65: Hydrants are to be Anchor Tee Type with Valve.

Response: *Acknowledged, the drawings have been revised to include this detail.*

Comment 2.66: Hydrant at the corner of Street No.1 and Walser St. is to be relocated out of the daylighting triangle.

Response: *The hydrant has been relocated out of the daylighting triangle in the revised drawings.*

Comment 2.67: Tracer Wire Test stations are to be installed at a maximum of 300 m spacing. They are to be located directly behind a fire hydrant and shall be Copperhead model LD14-TP 350mm in length with a cast iron blue locking lid with “water” cast into the cap or approved equivalent. The tracer wire is not to be fastened to the hydrant flange.

Response: *Acknowledged. The tracer wire test stations have been added and identified on the revised drawings.*

Comment 2.68: Watermain dead ends are to be looped with by a watermain on Gerrie Rd from Walser Street to Street No.4. Note: This is part of the external works that are to be a Municipal Project.

Response: *Acknowledged. Township to construct external works for looping purposes.*

Comment 2.69: Watermain is to be 150mm on all proposed streets, except for Walser Street which is to remain as 200mm.

Response: *The drawings have been revised to include 150mm diameter watermains on all proposed streets except for Walser Street which has remained as a 200mm diameter.*

Comment 2.70: Meter/chamber for district water metering to be provided on the Walser Street watermain connection, at Keating Drive. Additional details regarding the meter will be provided, however valve chamber is to be indicated on the drawings at the connection location.

Response: *A meter chamber location is shown on the drawings. Meter chamber detail is to be provided by the Township.*

Sediment and Erosion Control Design:

Comment 2.71: Construction access from existing Walser St. will not be permitted. Revise plans accordingly. Proposed Haul Route is to be reviewed and discussed with TWSP.

Response: *Acknowledged. Haul route plans have been revised.*

Road & Sidewalk Design:

Comment 2.72: Tactile Warning plates required at all intersections and to be indicated in drawings.

Response: *Tactile warning plates will be indicated in the detailed design drawings following Draft Plan Approval.*

Comment 2.73: Indicate radii for intersections as they should support township standards of 10m radius.

Response: *The radii for intersections have been added to the revised drawings. The edge of pavement radius is 9.5 and back of curb radius would then be 10m.*

Comment 2.74: Stone Dust Maintenance Access pathway is to have 0.3 m area of sod/landscaping on either side that is at a maximum slope of 6% before transitioning to area of steep slope (3:1) as required.

Response: *A detail of the stone dust maintenance access pathway has been included on Drawing 28 in the revised drawing set.*

Comment 2.75: Traffic Calming “Bump-outs” are to be provided on the south side of Walser St. at the intersection of Street No.1 and Street No.2.

Response: *Traffic calming bump-outs have been added to the current drawings.*

Comment 2.76: All roads within this Development are to be updated to TWSP Standard R1(1).

Response: *Typical cross section derived from TWSP Standard R1(1).*

We trust this is the information you require at this time. If you have any questions or require additional information, please do not hesitate to call or write.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in blue ink, appearing to read 'Glenn Anderson'.

Glenn Anderson, C.E.T.

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cc: Tom Keating, James Keating Construction
Nancy Shoemaker, J.D. Barnes