



BURNSIDE

**Fergus Golf Course Development
Environmental Assessment, PIC #1
Summary**

Fergus Development Inc.



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Summary**

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**R.J. Burnside & Associates Limited
292 Speedvale Avenue West Unit 20
Guelph ON N1H 1C4 CANADA**

**August 2023
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Distribution List

No. of Hard Copies	PDF	Email	Organization Name
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Record of Revisions

Revision	Date	Description
0	July 25, 2023	Draft Report
1	August 4, 2023	Final Report

R.J. Burnside & Associates Limited**Report Prepared By:**


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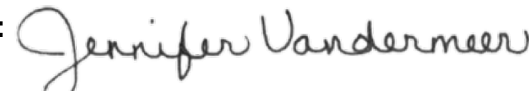

Jennifer Vandermeer
Project Manager

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Disclaimer

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1.0 Introduction and Background

Fergus Development Inc. (Geranium) has initiated a Municipal Class Environmental Assessment (MCEA) Study to evaluate alternatives for water and wastewater servicing required for the redevelopment of part of the Fergus Golf Club lands.

2.0 Method of Notification

The Notice of Study Commencement and Public Information Centre (PIC) #1 was advertised in the Wellington Advertiser on May 18, 2023, and May 25, 2023.

A distribution list for property owners within 500 m of the Study Area was provided by the Township. Property owners identified on this list were mailed the Notice of PIC #1.

The Notice was either emailed or mailed to agencies and municipalities. Indigenous communities with a potential interest in the study are being engaged as part of the MCEA process. A copy of the advertisement is provided in Attachment A.

3.0 Public Meeting Format

PIC #1 was hosted at Belwood Hall. The PIC began with an open house period whereby attendees could review the display boards and ask questions of the study team. The open house period was followed by a presentation and a question-and-answer period. The presentation provided a description of the project, introduction and background, background studies, study context, and next steps. A copy of the display boards and presentation slide deck are provided in Attachment B.

Fifteen attendees signed-in for the PIC. One comment sheet was submitted during the PIC. Following the PIC, two sets of comments were received by the project email address. A copy of the comments is provided in Attachment C. An attendee forwarded a letter they had previously sent to staff at the County of Wellington regarding the Planning Act application for the proposed development. All comments received that are relevant to the MCEA are summarized in Section 5.0 along with study team responses. Comments related to the Planning Act application were shared with Geranium and are being addressed through the Planning Act process.

Several opportunities to provide feedback were provided during the PIC #1 comment period. These included:

- Online comment sheets were made available on the project website (<https://www.rjburnside.com/fergusGEA/>) on June 13, 2023.
- Project email address.

Fergus Golf Course Development Environmental Assessment, PIC #1 Summary
August 2023

The PIC #1 comment period was initially set to run from June 2, 2023, to June 30, 2023. Due to technical challenges, the study team extended the PIC #1 review period to July 7, 2023.

Additionally, residents who indicated they would like to be added to the Project Contact List at PIC #1 were emailed with a copy of the comment form and a link to the project website on June 13, 2023, noting the extended PIC #1 review period.

4.0 Summary of Question-and-Answer Period

A chronological summary of the question-and-answer period discussion is provided in Attachment D.

5.0 Summary of MCEA Comments Received and Study Team Responses

General

Comments Received	Study Team Responses
<p>The "500 m" zone of effect falls very far short of who is going to be affected by this development. You need to expand your view of the affected area significantly. Residents outside the 500 m will still be affected by water usage, traffic, noise, etc. from this development, especially since there will be two entrances to it on Third Line.</p>	<p>The direct email notification area used for the circulation of the Notice of Commencement / PIC #1 was established as 500 m to be consistent with the notification circulation area used for the community meeting held on June 1, 2022. This direct notification area includes all properties adjacent to the study area and the areas that may be impacted by changes in traffic associated with the development. The direct notification for the second PIC will be expanded to properties that are located within 1 km of the subject site. Residents in a broader area will receive notices via newspaper ads.</p>
<p>We are all concerned in the current global environmental crisis about our continued access to water. How can you conclude residents will not run out of water without knowledge of their water usage, or what will happen to the aquifers in this area in the future.</p>	<p>Conservative water consumption based on Township standards has been used to estimate the water usage. A private well preconstruction survey will be conducted at residences within 1 km of the production well, who would like to participate in the survey. The survey will help confirm existing well details, usage and issues. Based on a pumping test and assessment at the development site, the proposed water supply is sustainable with no unacceptable impacts to the natural environment and surrounding water users. The production well will require a Ministry of the Environment Conservation and Parks (MECP) Permit to Take Water in order to supply water to the proposed development. The permit will include a monitoring program and a condition that requires the permit owner to take the necessary action to restore the water supply of any wells where their operation is affected.</p>
<p>I am concerned that once these homes are sold, Geranium will be absolved of responsibility to deal with problems that may arise. I see no accountability here; a housing association at this development certainly will not want to take responsibility for water problems that may ensue down the road.</p>	<p>Fergus Development Inc. c/o Geranium will enter into a responsibility agreement with the municipality to address this issue if insolvency were to occur. Additionally, there will be reserve funds set aside in the case of insolvency where the municipality will need to take over the operation of the treatment plants. This is standard process. When the last home is sold, the Condominium Corporation assumes responsibility. Additionally, the Drinking Water Works Permit and the Environmental Compliance Approval issued by the MECP for the water system will outline terms that the development and condominium corporation will be required to comply with.</p>

Surface Water Drainage / Groundwater

Comments Received	Study Team Responses
<p>Is the Black Drain a Municipal Drain or a private drain? Will there be any alterations and / or improvements to the Black Drain?</p> <p>If the Black Drain is a Municipal Drain all of the improvement costs and any future maintenance costs benefitting the proposed subdivision should be assessed to the 118 subdivision lots only under the Municipal Drainage Act, and not assessed to upstream or downstream landowners.</p>	<p>The Black Drain is an existing Municipal Drain built and operated under the Drainage Act. The uppermost portion of the Black Drain will be abandoned, but the function of the drainage will remain via the stormwater infrastructure within the proposed development. To our knowledge, there are no downstream improvements proposed for the Black Drain and there are no additional changes being proposed as part of this application. Any costs associated with the abandonment of the portions of the Black Drain have been borne by the developer.</p>

Wastewater

Comments Received	Study Team Responses
<p>Will the Condo Corporation own and operate the wastewater collection / treatment system? Will that also include ownership of the land the treatment system is located on?</p>	<p>When the last home is sold, the Condominium Corporation assumes responsibility of the treatment system and the Condominium Corporation will have an agreement in place with a licensed operator to operate and maintain the treatment system. The land that the treatment system is located on will have an easement in favour of the Condominium Corporation.</p>
<p>Is there sufficient distance between the nitrate plume from the treatment system and the proposed water supply wells as well as from the Irvine Creek and its tributaries to the north.</p>	<p>The treated effluent will be applied to the golf course lands as irrigation water and as such will not generate a nitrate plume in the same way that a traditional subsurface leaching bed would. The treatment plant is proposed to incorporate nitrogen treatment to mitigate the potential for offsite groundwater and surface water impacts that could result from effluent reuse for irrigation on the site, in accordance with MECP requirements. There are no unacceptable impacts to the creek or tributaries.</p>

Natural Heritage

Comments Received	Study Team Responses
<p>I am concerned about loss of wildlife habitat and species and wetland.</p>	<p>The footprint areas of the water and wastewater treatment systems are within the existing active golf course lands. Generally, these manicured lands provide limited direct habitat opportunities for</p>

Comments Received	Study Team Responses
	<p>wildlife. The raw water piping route from the well to the water treatment plant area and the discharge pipe conveying treated effluent from the wastewater treatment plant to the irrigation pond may require the temporary removal of cultural meadow, or “rough” areas of the golf course lands, which provide habitat for Eastern Meadowlark and Bobolink, two species protected under the Endangered Species Act. These works would be reviewed with MECP to ensure full compliance with the Act. There are some wetland marsh vegetation communities associated with the perimeters of the irrigation ponds, which may be temporarily disturbed for the construction of the pipe into the irrigation pond. There are no provincially significant wetland communities present within the footprint areas of the water and wastewater treatment systems including piping routes, and drawdown from any well is not expected to impact Irvine Creek and wetlands to the north of the golf course lands. Measures to avoid and / or minimize impacts to wildlife and vegetation, including any re-planting requirements, will be outlined in the Environmental Study Report.</p>

Socio-Economic

Comments Received	Study Team Responses
<p>I am concerned about loss of Class 1 Agricultural lands.</p>	<p>The SE Site is currently being used as a nine-hole golf course, operating as an extension of the 18 holes located on the NW Site. The Subject Site would be considered “Rural Lands” in accordance with the definition in the Provincial Policy Statement. County OPA 119 also designates this land for development.</p>
<p>I am concerned about increased traffic noise pollution.</p>	<p>There is minimal traffic noise associated with the wastewater treatment plant. The operator would attend the site in a passenger vehicle for regular operational activities. On an occasional basis, a licensed sewage hauling truck would attend the site to remove accumulated sludge from the tanks. This is estimated to be approximately one to two times per year but would depend on the specific technology and treatment process design.</p> <p>There is minimal traffic noise associated with the water treatment plant. The operator would attend the site in a passenger vehicle for regular operational activities. On an occasional basis, an operator</p>

Comments Received	Study Team Responses
	would perform yearly UV maintenance and monthly deliveries of chemicals. Traffic concerns associated with the residential development were addressed as part of the Planning Act approvals.
I am concerned about light pollution.	<p>Under normal operating conditions, operators would generally be attending the site during daytime hours so the wastewater treatment plant would not require overnight lighting aside from basic site safety / security lights.</p> <p>Under normal operating conditions, operators would generally be attending the site during daytime hours so the water treatment plant would not require overnight lighting aside from basic site safety / security lights.</p>

Water Supply and Distribution

Comments Received	Study Team Responses
Will the lands that the Water supply and distribution systems sit on be owned by the Condo Corporation?	The systems will sit on lands that will have an easement in favour of the Condominium Corporation.
Will the distribution system be sized to accommodate fire protection flows? Will there be fire hydrants as part of the system?	The system will include two fire flow pumps (duty / standby) and will ensure the pumps flow to the distribution system. Fire hydrants will be available within the development and will be appropriately spaced to provide full coverage of the development.
Has it been determined whether the storage for fire protection be housed in an above ground or grade level reservoir?	Both of these options are suitable for water storage and the preferred design will be determined during preliminary design.
I am concerned about decreased water quality and quantity	<p>The MECP regulates water taking with a Permit to Take Water. The permit will have conditions that will protect the existing water users and ensure there are no unacceptable well interference impacts. The quality of water should not be impacted as wastewater will be treated at the treatment plant before being discharged back to the environment.</p> <p>Water quality within the development will be in accordance with Ontario Drinking Water Standards and MECP Design Guidelines.</p>

Comments Received	Study Team Responses
	Testing conducted at the site has shown that there is sufficient water to sustainably supply the proposed development in addition to the existing houses.
Will landowners receive legal protection of existing drilled wells in a legal document?	The water taking from the proposed well will require a Permit to Take Water, which will stipulate that if permanent interference with the private wells is caused by the permit holder, then the permit holder shall restore the water takings of those permanently affected. Additionally, private well precondition surveys will be completed for homes within a 1 km radius of the proposed well to document the water levels prior to the commencement of construction, for those who indicate willingness to participate.
I would like to understand the wastewater system including primary, secondary and tertiary treatment.	The wastewater treatment facility will include all of these levels of treatment. Primary treatment would be provided in the initial settling tanks to separate solids from the liquid. Secondary treatment would be provided through the aerobic biological treatment process. Tertiary treatment would be provided using final filters and disinfection equipment.
I want to see the formulas used to calculate the water usage per household. I believe this proposed development will be multigenerational housing, however you state the number of people per household using water was estimated to be 3.09. How did you arrive at these assumptions?	<p>The application of 3.09 persons per household is based on the Development Charges Background Study released by the Township of Centre Wellington. As such, this is the prescribed persons per household to be used in the analysis.</p> <p>Centre Wellington completed a Growth Management Plan (GMP) – Background Report in 2016 identified the population growth and the number of households projected from 2016 to 2041 within Centre Wellington. The data was referenced from the Watson and Associates Economists, County of Wellington Official Plan Amendment No. 99. The average person per household is expected to be approximately 2.9 based on this data. The proposed re-development identifies a people per household higher than what is projected based on economical data for GMP.</p> <p>Typically, the proposed water consumption rate is reviewed in accordance with the MECP design guidelines. The MECP design guidelines identify a typical litres per capita per day (LPCD) range between 270 to 450 for projecting water demands for design purposes. As such, the proposed water consumption rate of 350 LPCD falls within the MECP design guidelines and is considered a conservative value when compared with the historical water demands in the area (ranging between</p>

Comments Received	Study Team Responses
	190 LPCD to 210 LPCD for Fergus within the Water Supply Master Plan for Township of Centre Wellington).

6.0 Next Steps

To conclude Phase 2 of the MCEA Study, the Preferred Solution will be confirmed using the results of the Alternative Solutions Evaluation and feedback from PIC #1. In Phase 3, the Alternative Design Concepts will be identified and evaluated.

A copy of this report has been posted on the project webpage and an email sent on August 4, 2023, to all PIC #1 participants who asked to be added to the Project Contact List to advise them of this updated webpage content.

The project webpage will be maintained and updated with additional information as the study progresses.

PIC #2 will be held on Monday September 11, 2023, at Belwood Hall (6:00 – 8:00 p.m.).

In Phase 4, the Draft Environmental Study Report (ESR) will be prepared. The Draft ESR will be circulated to agencies and Indigenous communities who have requested a copy for review.

The final ESR is anticipated to be filed in December 2023. After filing, the document will be circulated to all parties on the Project Contact List for the 30-day public review period.



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Attachment A

Notice of Commencement / PIC #1

Notice of Study Commencement and Public Information Centre #1

Municipal Class Environmental Assessment

Fergus Golf Club Redevelopment

The Study

Fergus Development Inc. is undertaking a Municipal Class Environmental Assessment (MCEA) Study to evaluate alternatives for water and wastewater servicing required for the redevelopment of part of the Fergus Golf Club lands. The site location and approximate extent of the Study Area are shown on the map.

The Process

The project is being conducted in accordance with the planning and design processes for 'Schedule C' projects, as outlined in the Municipal Class Environmental Assessment (2023) which is approved under the Environmental Assessment Act. The MCEA process includes: consultation with agencies, stakeholders, Indigenous communities and public; an evaluation of alternative solutions to address the problem; alternative design concepts for the preferred solution; an assessment of potential environmental impacts; and identification of reasonable measures to mitigate any potential adverse impacts. At the conclusion of the Study, an Environmental Study Report (ESR) will be prepared for public review.



Opportunity to Participate

Public consultation is important to this Study. Fergus Development Inc. would like to ensure that anyone interested in this Study has the opportunity to provide input into the planning and design of the project. Fergus Development Inc. is inviting the public to attend the first of two Public Information Centres (PIC) for this Study.

PIC #1 will present the problem /opportunity statement, results of environmental and technical studies completed to date, the alternative solutions considered and the preliminary preferred solution. PIC #1 will be held as an "Open House" with materials pertaining to the study on display and members of the study team on hand to answer questions and discuss issues related to the project. A short presentation will be provided (see timing below).

Public Information Centre #1

Date: Thursday June 1, 2023
Time: 6:00 - 8:00 p.m.
Presentation: 6:30 p.m.
Location: Belwood Hall
36 Queen Street, Belwood, ON N0B 1J0

For More Information

To provide comment, request additional information about this Study or to be added to the Project Contact List to receive future notices, please email or contact either of the following Project Team members:

Theyonas Manoharan, P.Eng. Project Manager Fergus Development Inc. 3190 Steeles Avenue East, Suite 300 Markham, ON L3R 1G9 Tel: 905-477-1177 x 257	Jennifer Vandermeer, P.Eng. Consultant Project Manager R. J. Burnside & Associates Limited 292 Speedvale Avenue West, Unit 20 Guelph, ON N1H 1C4 Tel: 226-486-1559
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Email: FergusGolfEA@rjburnside.com

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

This Notice first issued on May 18, 2023.



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Attachment B

PIC #1 Display Boards and Presentation

Attachment B

Fergus Golf Club Redevelopment Environmental Assessment Study



Public Information Centre #1

June 1, 2023, 6 p.m. - 8 p.m.

Belwood Hall, Township of Centre Wellington



Welcome

to Public Information Centre #1 for the Fergus Golf Club Redevelopment Environmental Assessment Study

Please Sign In

Meet with Study Team Members

Review the display materials and discuss your questions and ideas with the Study Team

Listen to the **short presentation at 6:30pm** and participate in the Question & Answer Period

Please fill out a comment sheet and return it to the comment box today or FergusGolfEA@rjburnside.com by

June 30, 2023

Purpose of Public Information Centre #1

PIC #1 is the first of three mandatory public contact points under the 2023 Municipal Class Environmental Assessment process for Schedule C Projects.

The purpose of PIC #1 is to:

- Introduce the Study to the public
- Provide an opportunity to participate and give input in the planning and decision-making process
- Discuss the proposed servicing option



PIC # 1 will present:

- Project Opportunity Statement
- Results of studies completed to date
- Alternative solutions considered
- Next steps



Consultant Team



Environmental Assessment
Lead, Civil Engineering



Transportation



Land Use Planning,
Landscaping Architecture,
Urban Design



Acoustic Engineering



Water Treatment
Design



Hydrogeology,
Geotechnical,
Archaeology
Environmental



Natural Heritage



Legal



Legal

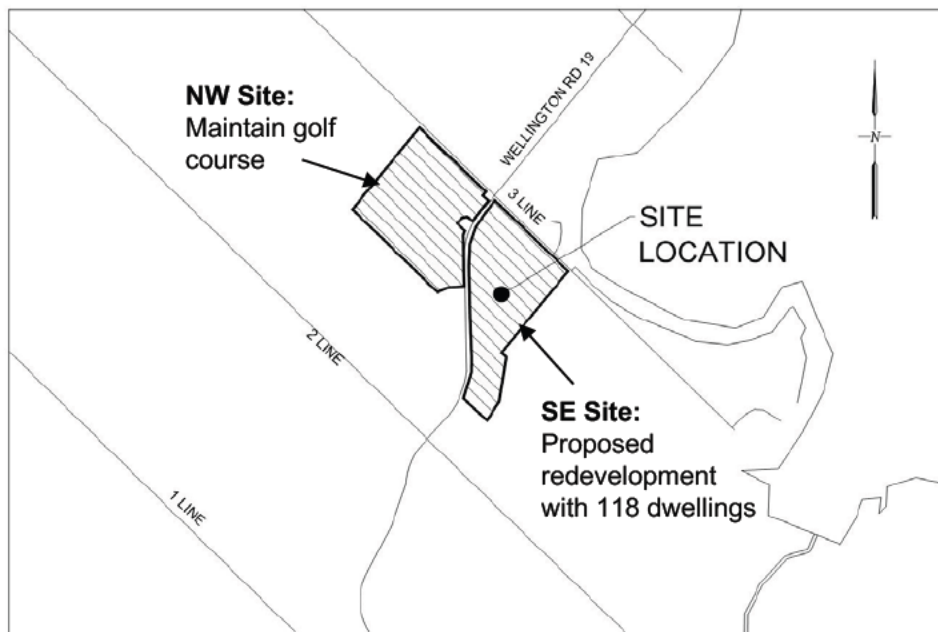
Project Description

The Fergus Golf Club lands are located along the western side of 3rd Line, on both the northern side (“NW Site”) and southern side (“SE Site”) of Wellington Road 19.

The proposed Fergus Golf Club redevelopment will consist of:

- The existing northwestern golf course (the “NW Site”)
- Redeveloping the southeast golf course (the “SE Site”) into a private condominium development with 118 single family dwellings.

A Schedule C Municipal Class Environmental Assessment (MCEA) Study is being undertaken for the proposed water and wastewater servicing for the proposed redevelopment. **The MCEA does not affect Planning Act approvals.**



Study Area Map

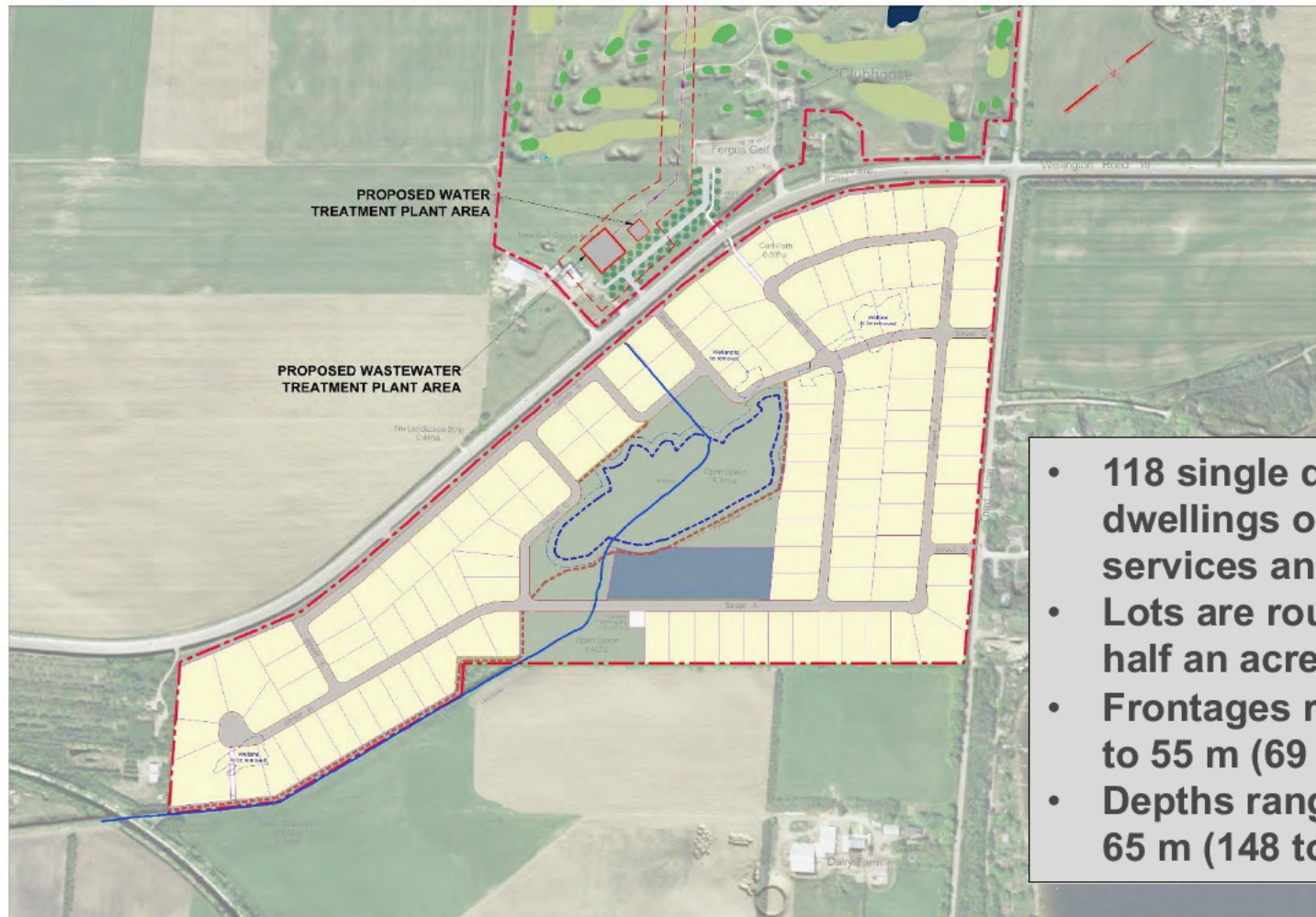
A Brief Chronology

Planning Approvals

MCEA Process

1977	Fairview Golf Course constructed on SE parcel	May 2023	Notice of Study Commencement and Public Information Centre #1
1996	Residential development approved on Fairview Golf Course Lands	June 2023	EA Public Information Centre #1
2000	Newly constructed Lake Belwood Golf Course opens on NW parcel		
Feb 2022	Applications filed for SE and NW parcels		
April 2022	Applications Deemed Complete		
June 2022	Community Information Meeting at Belwood Hall		
April 2023	Statutory Planning Act Public Meeting		
June 2023	Targeted Planning Application Consideration by Council		

Proposed Redevelopment



- 118 single detached dwellings on private services and roads
- Lots are roughly half an acre in size
- Frontages range 21 to 55 m (69 to 180 ft)
- Depths range 45 to 65 m (148 to 213 ft)

Project Opportunity Statement

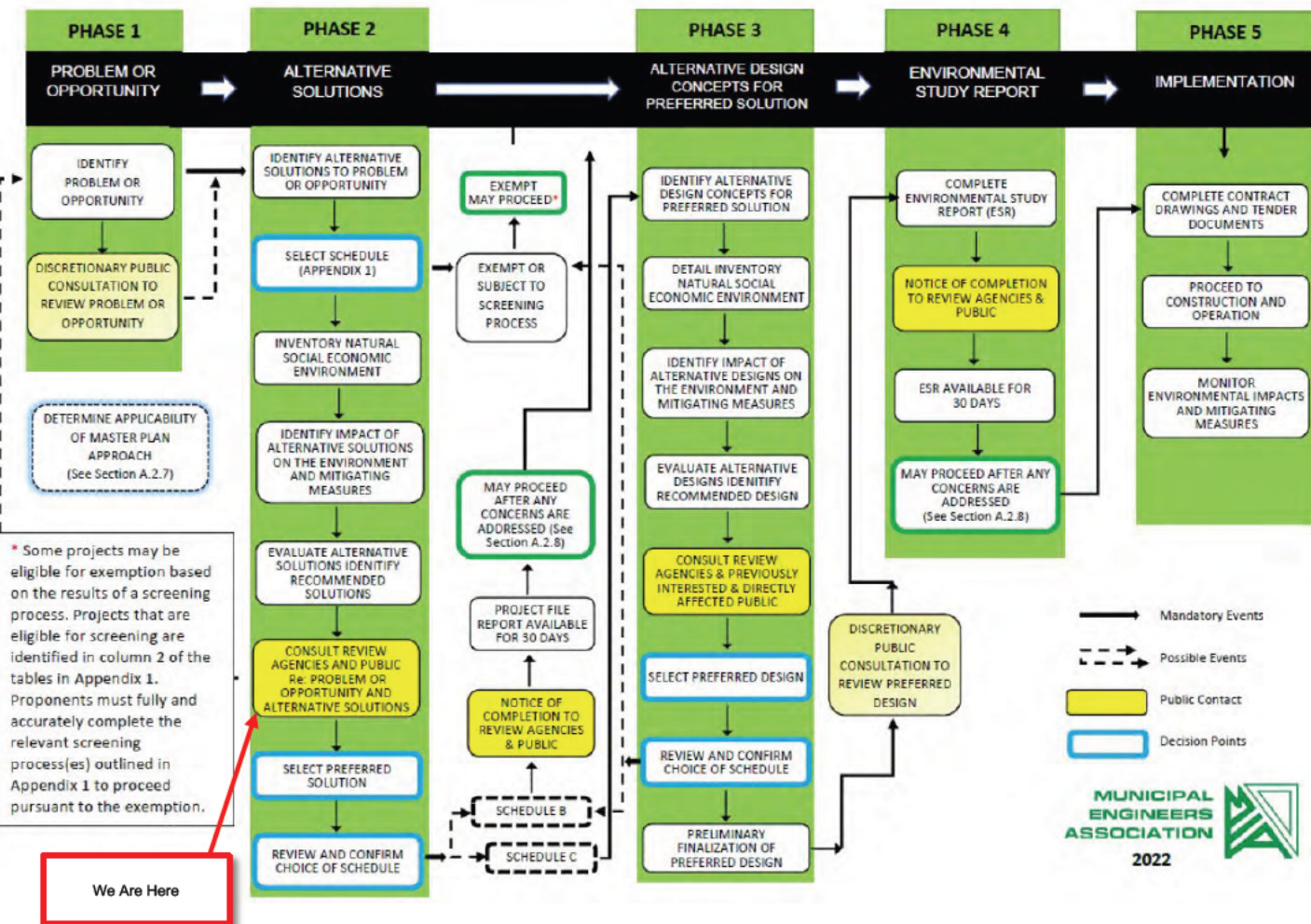
The project opportunity statement defines the principal starting point in the undertaking of the MCEA Study and assists in defining the scope of the project. The Project Opportunity for this MCEA Study is defined as follows:

Fergus Development Inc. is undertaking the redevelopment of a part of the Fergus Golf Club lands, which will provide single detached rural recreational-based housing, based on the findings of a servicing study, on the SE Site. This redevelopment will contribute to satisfying the need and market demand for recreational focused housing in the Township of Centre Wellington and the County of Wellington. In order to service the new housing units, Fergus Development Inc. needs to identify and consider options to provide cost-effective and environmentally sound means of providing a potable water supply and wastewater servicing. Alternatives will be examined as part of the MCEA Study including the impacts of alternatives on the natural, socio-cultural, technical and financial environment.

The project opportunity statement is a requirement of the MCEA process.

The EA Process

The Study is being carried out in accordance with the planning and design process for Schedule C projects as outlined in the 2023 Municipal Class Environmental Assessment, which is approved under the **Ontario Environmental Assessment Act**. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and made available for public review and comment.





Technical Studies

The following studies were completed in conjunction with the Planning Act applications, which also inform the EA Study:

- Planning Justification Report by GSP Group
- Community Design Guidelines by GSP Group
- Functional Servicing Report by R.J. Burnside & Associates Limited (Burnside)
- Stormwater Management Report by Burnside
- Water Servicing Study by TYLIN
- Environmental Impact Assessment by Beacon Environmental
- Environmental Noise Report by Jade Acoustics
- Transportation Report by BA Group
- Stage 1 and 2 Archaeological Assessment by WSP (Golder)
- Preliminary Geotechnical Investigation by WSP (Golder)
- Hydrogeological Investigation by WSP (Golder)
- Water Supply Investigation by WSP (Golder)

Natural Heritage Resources

Designated Areas

- Living Springs Provincially Significant Wetland (PSW) Complex associated with Irving Creek Valley corridor north of Study Area.
- Watercourse and fish habitat associated with the Black Drain and tributary crossings.
- Significant Valleyland and Woodland, fish habitat, potential Significant Wildlife Habitat (SWH) and endangered species habitat at Grand River.

Terrestrial Habitat

- Habitat for threatened Bobolink and Eastern Meadowlark within golf course lands in Study Area.
- Potential SWH (Colonial Nesting Birds) in Grand River Valley.

Aquatic Habitat

- Fish habitat at Black Drain and tributary crossings.
- Fish habitat and potential habitat for Silver Shiner (federally endangered) at Grand River.

**All significant habitat and natural heritage areas being preserved / protected from development.
Enhancements are provided in other areas.**

Archaeological Resources

- Stage 1 Archaeological Assessment and Stage 2 Archaeological Assessment completed for NW and SE Sites.
- Stage 1 Archaeological Assessment identified that both the NW and SE Sites had archaeological potential.
- Stage 2 Archaeological Assessment cleared both the entire SE Site and the NW Site as described of archaeological resources.
- First Nations communities participated in field work and pre-consultation.



Hydrogeological Conditions

Water Taking Requirement

- average day 128 m³/d (1.48 L/s)
- maximum day 435 m³/d (5.03 L/s)

Existing bedrock aquifer suitable for water supply

- thick glacial till (29.9 m) overlies the bedrock
- Test Well PW21-1 constructed to 84.1 m in the bedrock aquifer

Water Quantity

- tested yield of 8.8 L/s and can meet the demand of 5.03 L/s
- no unacceptable interference with private wells
- no anticipated impacts to surface water features

Water Quality

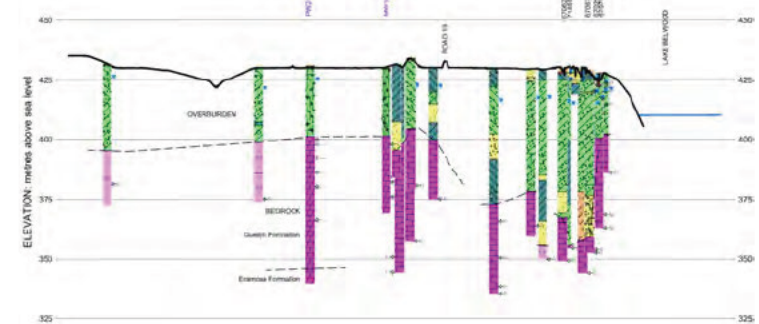
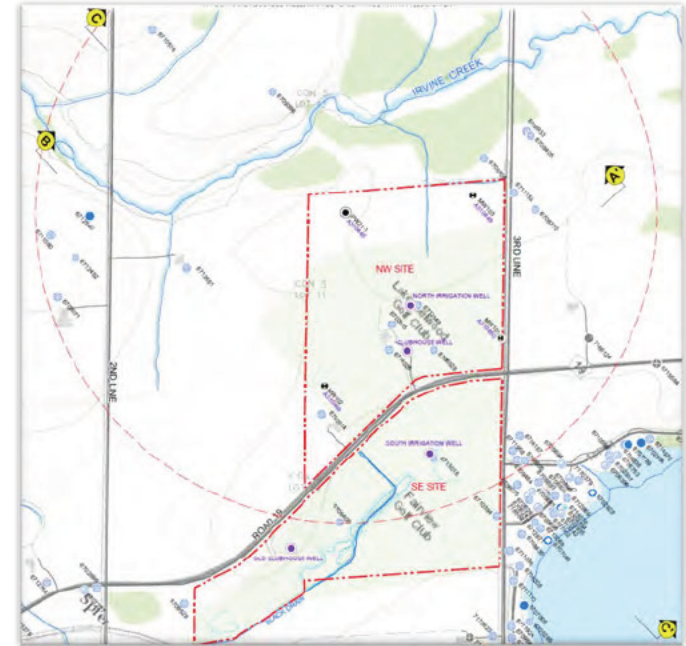
- meets the Ontario Drinking Water Quality Standards except for total dissolved solids and hardness, which will be addressed by proven treatment methods

GUDI Assessment

- risk of surface contamination is low (MPA analysis) and well is not considered GUDI

Source Protection

- in a low vulnerability zone
- no significant threats to Township wells
- located outside of the Township water quantity protection zone



Section C-C'



Existing Conditions – Hydrogeology, Water Supply & Wastewater Management

- Existing subsurface hydrogeological conditions have been documented by WSP (Golder).
- The site is characterized by low permeability surficial soils.
- The existing golf course is serviced by groundwater wells and an onsite sewage (septic) system.
- Existing golf course wells draw water from the deep bedrock aquifer.
- The deep bedrock aquifer is separated from shallow wells by the low permeability soil overburden that extend 20m to 30m below grade.
- There is no identified interaction between shallow water wells and the deep bedrock wells on the site.

Alternative Solutions - Water

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to an Existing Municipal Water Supply System

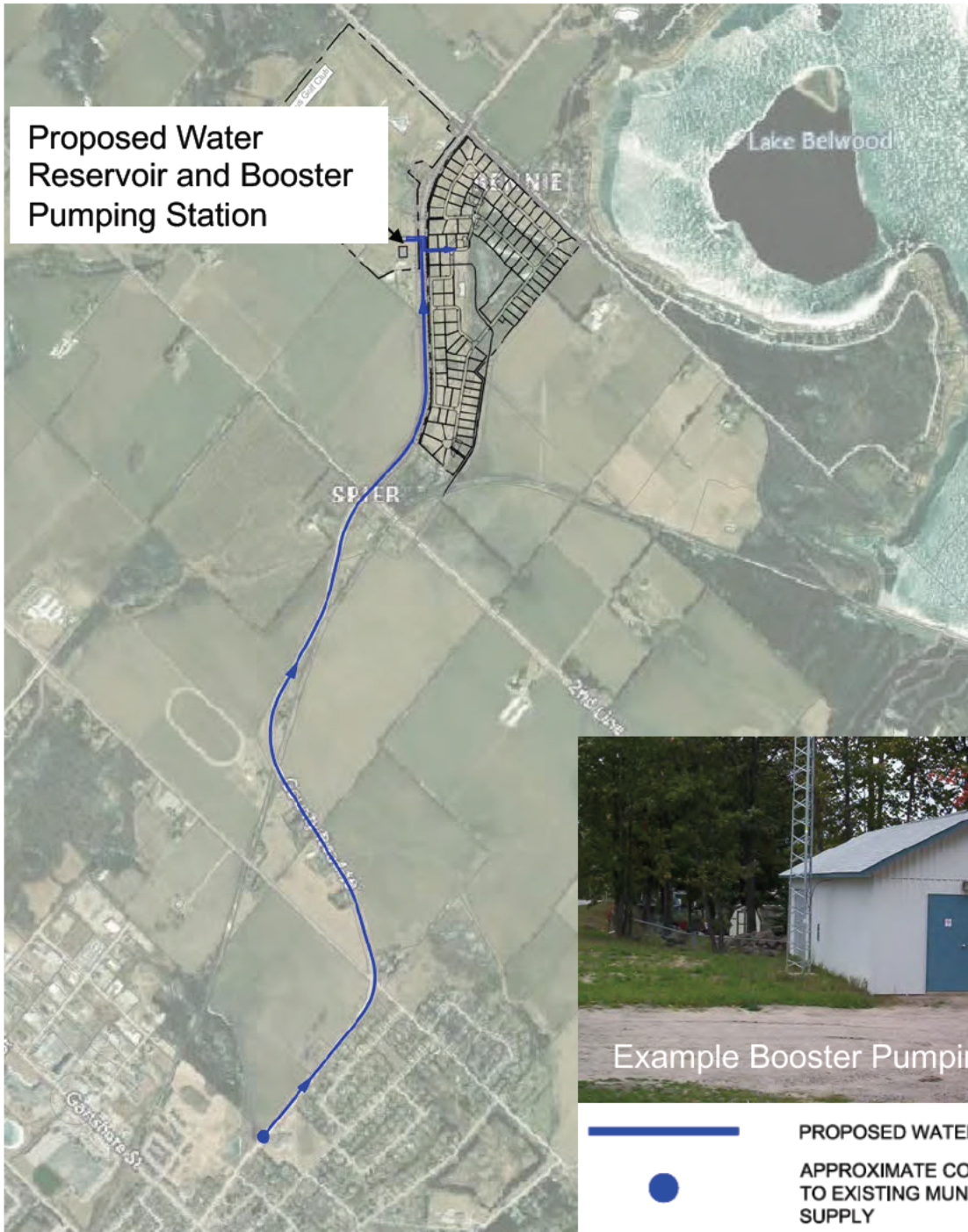
- Requires new watermain from existing system in Fergus along Wellington Road 19 to development site.
- Requires reservoir, booster pumping station, re-chlorination and backup power on NW Site.

3. New Onsite Communal Water Supply and Treatment System

- Commissioning of new onsite wells.
- Requires raw water supply main.
- Requires new onsite water treatment plant (WTP), reservoir and backup power.
- Requires water distribution system via feedermain from WTP.

Alternative Solution 2 – Water

Connect to an Existing Municipal Water Supply System



- PROPOSED WATERMAIN
- APPROXIMATE CONNECTION POINT TO EXISTING MUNICIPAL WATER SUPPLY

Alternative Solution 3 – Water

New Onsite Communal Water Supply and Treatment System



Alternative Solutions - Wastewater

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to Existing Municipal Wastewater System

- Conveyance of untreated wastewater via sewage pumping station and new forcemain from development within Wellington County Road 19 right-of-way (ROW) and within local road ROWs to the existing wastewater treatment plant (WWTP) in Fergus.

3. New Communal WWTP and Subsurface Discharge

- Wastewater treated on-site and discharged to dispersal beds within the NW Site; No off-site works.

4. New Communal WWTP and Discharge Treated Sewage Effluent to a surface receiving waterbody

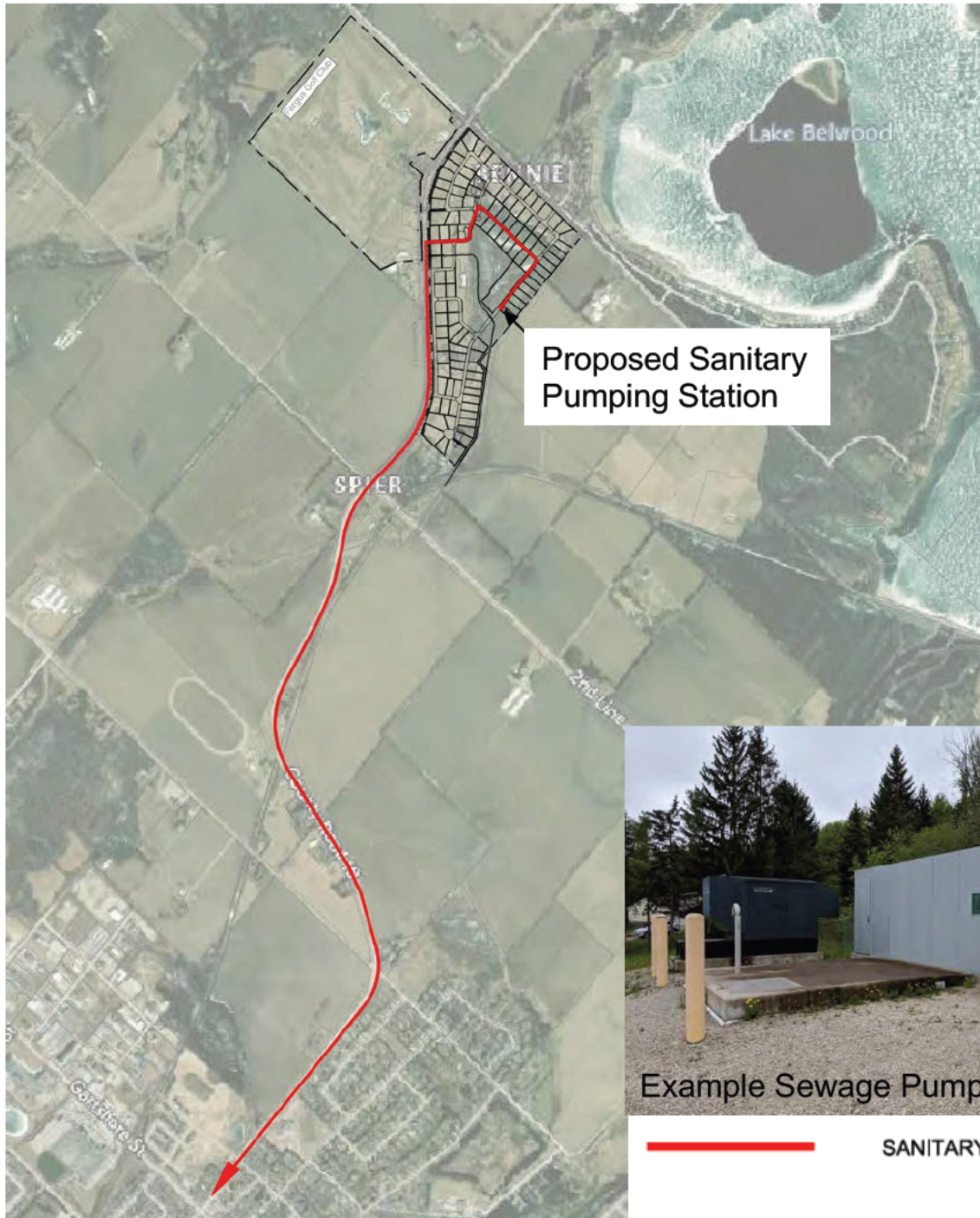
- Wastewater treated on-site and then conveyed by piping within existing municipal ROWs (Wellington County Rd 19, 2nd Line) to discharge outfall.
- Discharge outfall location is Grand River.

5. New Communal Wastewater Treatment Plant and Discharge to Existing Irrigation Ponds followed by Beneficial Reuse for Golf Course Irrigation

- Wastewater treated on-site and discharged to irrigation ponds within the NW Site; No off-site works.

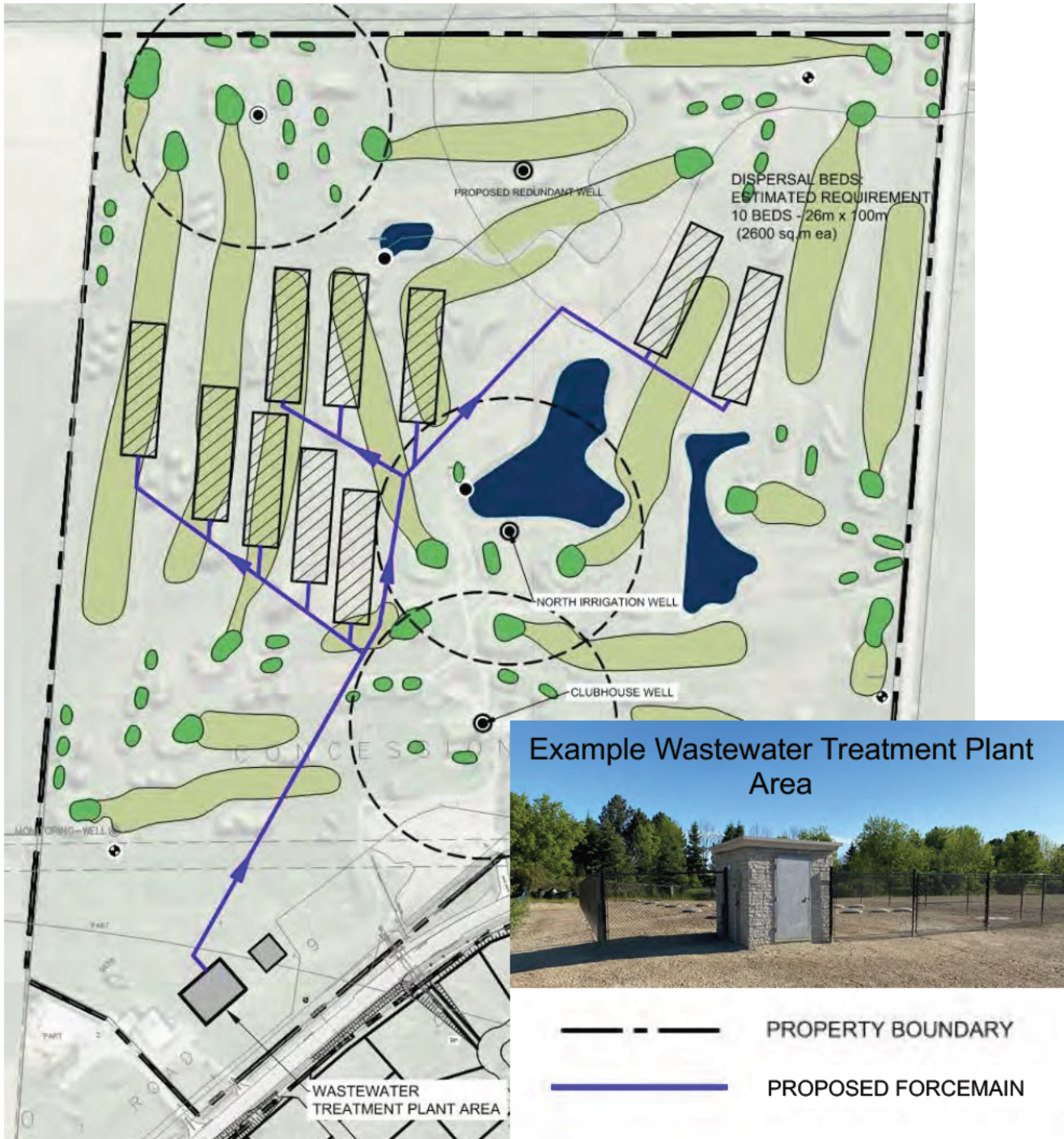
Alternative Solution 2 – Wastewater

Connect to Existing Municipal Wastewater System



Alternative Solution 3 – Wastewater

New Communal WWTP and Subsurface Discharge



Alternative Solution 4 – Wastewater

New Communal WWTP and Discharge Treated Sewage Effluent to a surface receiving waterbody



Alternative Solution 5 – Wastewater

New Onsite Communal Wastewater Treatment Plant with Discharge to Irrigation Ponds





Evaluation Criteria - Water

- **Natural Environment**
 - Impacts to Designated Site / Species
 - Impacts to Surface Water Quality
 - Impacts to Groundwater Quality and Quantity
 - Impacts to Hazard Lands
 - Impacts to Vegetation and Terrestrial Habitat
 - Impacts to Aquatic Habitat
 - Source Water Protection
- **Socio-Cultural Environment**
 - Compatibility with Official Plan and Provincial Growth Plans
 - Heritage Resources (archaeological features, built heritage, and cultural landscapes)
 - Noise impacts
 - Nuisance impacts
 - Impact to existing private wells
- **Technical Environment**
 - Ability to service proposed development
 - Approvals / permitting requirements
 - Site considerations and construction requirements
 - Operation and maintenance requirements and complexity
 - Conformity with applicable guidelines and standards
- **Financial**
 - Capital costs
 - Operation and Maintenance costs

Evaluation Criteria - Wastewater

- **Natural Environment**
 - Impacts to Designated Site / Species
 - Impacts to Surface Water Quality
 - Impacts to Groundwater Quality and Quantity
 - Impacts to Hazard Lands
 - Impacts to Vegetation and Terrestrial Habitat
 - Impacts to Aquatic Habitat
 - Source Water Protection
- **Socio-Cultural Environment**
 - Compatibility with Official Plan and Provincial Growth Plans
 - Heritage Resources (archaeological features, built heritage, and cultural landscapes)
 - Noise impacts
 - Nuisance impacts
- **Technical Environment**
 - Ability to service proposed development
 - Approvals / permitting requirements
 - Construction complexity
 - Operation and maintenance requirements and complexity
 - Conformity with applicable guidelines and standards
- **Financial**
 - Capital costs
 - Operation and Maintenance costs

Evaluation of Alternative Solutions – Water

Criteria	1: Do Nothing	2: Connect to Existing Municipal Water Supply System	3: New Onsite Communal Water Supply System
Natural Environment	No impact over existing conditions.	Higher impact due to length of watermain / impact footprint.	Lower impact associated with Water Treatment Plant (WTP) footprint.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>	<i>Less Preferred</i>
Socio-Cultural Environment	Not consistent with Official Plan (OP). Does not contribute to housing per Bill 23. Continuation of golf course operations on SE Site may have potential impacts to shallow groundwater.	Consistent with OP. Contributes to housing per Bill 23. Potential for impact to archaeological resources. Construction noise and traffic impacts greater due to length of watermain.	Compatible with OP. Contributes to housing per Bill 23. No known archaeological impacts. Noise from onsite WWTP operation can be mitigated. No traffic impacts anticipated. Visual impacts can be screened.
<i>Ranking</i>	<i>Less Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>
Technical Criteria	No services to lands designated for development. No construction or operations and maintenance (O&M) requirements. Does not necessarily mean that no further development in the community would occur.	Requires an increase in water taking from existing municipal water supply – capacity to be confirmed. Requires approvals. Moderate complexity in O&M.	Can adequately service development. Requires approvals. Moderate complexity in O&M.
<i>Ranking</i>	<i>Least Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>
Financial Criteria	No capital or O&M costs.	Capital Costs ~ \$10M (Developer responsibility). Moderate O&M costs (Developer responsibility). Capital costs for upgrades to existing water supply system unknown (Developer responsibility).	Capital Costs ~ \$10M (Developer responsibility). Moderate O&M costs (Developer responsibility).
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>	<i>Less Preferred</i>
Overall Ranking	<i>Less Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>
Meets Project Opportunity (PO) Statement	No. Does not meet Project Opportunity Statement. Not a viable alternative.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.
Recommendation	Not Carried Forward	Not Carried Forward	Carried Forward

Evaluation of Alternative Solutions – Wastewater

Criteria	1: Do Nothing	2: Connect to Existing Municipal Wastewater System	3: New Onsite Water System with Subsurface Discharge	4: New Onsite Water System with Discharge to Waterbody	5: New Onsite Water System with Discharge to Irrigation Pond
Natural Environment	No impact over existing conditions.	Higher impact due to length of forceman / impact footprint.	Moderate impact associated with dispersed footprints.	Higher impact due to discharge within Grand River foodpan.	Lower impact associated with on-site discharge piping to the pond.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>	<i>Somewhat Preferred</i>	<i>Least Preferred</i>	<i>More Preferred</i>
Socio-Cultural Environment	Not consistent with Official Plan (OP). Does not contribute to housing per B 23.	Consistent with OP. Contributes to housing per B 23. Potential impact to archaeological resources. Construction noise and traffic impacts greater due to work in urban area.	Consistent with OP. Contributes to housing per B 23. Potential impact to archaeological resources in dispersed areas. Noise from on-site WWTP operation can be mitigated. No traffic impacts anticipated. Visual impacts can be screened.	Consistent with OP. Contributes to housing per B 23. Potential impact to archaeological resources along discharge route and outfall. Noise associated discharge route construction. Noise from on-site WWTP operation can be mitigated. Traffic impacts associated with discharge route. Visual impacts can be screened.	Consistent with OP. Contributes to housing per B 23. No known archaeological impacts. Noise from on-site WWTP operation can be mitigated. No traffic impacts anticipated. Visual impacts can be screened.
<i>Ranking</i>	<i>Somewhat Preferred</i>	<i>Least Preferred</i>	<i>Somewhat Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>
Technical Criteria	No services to lands designated for development. No construction or O&M requirements. Does not necessarily mean that no further development in the community would occur.	Insufficient treatment capacity at existing WWTP to accommodate development. Would require upgrades to existing WWTP. Requires forceman. Less O&M.	Can adequately serve development. Requires approvals.	Can adequately serve development. Requires more complex approvals due to outfall. More complex equipment compared to Alternatives 3 and 5. More operator attention.	Can adequately serve development. Requires approvals.
<i>Ranking</i>	<i>Least Preferred</i>	<i>Less Preferred</i>	<i>More Preferred</i>	<i>Somewhat Preferred</i>	<i>Most Preferred</i>
Financial Criteria	No capital or O&M costs.	Capital Cost for forceman ~ \$5M (Developmental responsibility). Capital costs for existing WWTP upgrades unknown. Lowest O&M costs (Developmental responsibility).	Capital Costs ~ \$5M (Developmental responsibility). Moderate O&M costs (Developmental responsibility).	Capital Costs ~ \$7.5M (Developmental responsibility). Highest O&M costs (Developmental responsibility).	Capital Costs ~ \$2.5M (Developmental responsibility). Additional O&M costs associated with management of irrigation of effluent (Developmental responsibility).
<i>Ranking</i>	<i>Most Preferred</i>	<i>Somewhat Preferred</i>	<i>Less Preferred</i>	<i>Least Preferred</i>	<i>Somewhat Preferred</i>
Overall Ranking	<i>More Preferred</i>	<i>Less Preferred</i>	<i>Somewhat Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>
Meets PO Statement	No. Does not meet Project Opportunity Statement. Not available alternative.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.
Recommendation	Not Carried Forward	Not Carried Forward	Not Carried Forward	Not Carried Forward	Carried Forward

Next Steps

MCEA
Phase 2
Completion

- Comment Period to June 30, 2023
- Review Feedback from PIC #1 (July 2023)
- Confirm Preferred Solution (July 2023)

MCEA
Phase 3

- Identify and Evaluate Alternative Design Concepts (July – September 2023)
- PIC #2 (late September 2023)

MCEA
Phase 4

- Draft Environmental Study Report (October 2023)
- Agency Review of Draft ESR (November 2023)
- File EA (December 2023)
- Public Review Period (December 2023 – January 2024)



Invitation for Participation

Thanks for participating in this PIC.

Public input is an important component of the decision-making process.

You are invited to provide comments by completing the comment sheet and submitting to the comment box today or FergusGolfEA@rjburnside.com by June 30, 2023.

**Theyonas Manoharan, P.Eng.
Project Manager**

Fergus Development Inc. / Geranium
3190 Steeles Avenue East, Suite 300
Markham, ON L3R 1G9
Tel: 905-477-1177 ext. 257

**Jennifer Vandermeer, P. Eng.
Consultant Project Manager**

R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 226-486-1559

Email: FergusGolfEA@rjburnside.com

Fergus Golf Club Redevelopment Environmental Assessment Study

Public Information Centre #1

June 1, 2023

Belwood Hall, Township of Centre Wellington

Introductions

Geranium

Theyonas Manoharan, P.Eng.
Project Manager

GSP Group

Hugh Handy, MCIP, RPP
Vice President

Evan Wittmann, MCIP, RPP
Planner

TYLin

Mateusz Lewandowski, P.Eng.
Project Manager

Ainley Group

Brian Edwards, B.Sc., BAS
Water Servicing Advisor

Burnside

Jennifer Vandermeer, P.Eng.
Project Manager and EA Lead

Steven Roorda, P.Eng.
Senior Project Manager

Anne Egan, P.Eng.
Wastewater Servicing Lead

WSP

Greg Padusenko, M.Sc., P.Eng., P.Geo.
Hydrogeologist

Consultant Team



Environmental Assessment Lead,
Civil Engineering



Transportation



Land Use Planning,
Landscaping Architecture,
Urban Design



Acoustic Engineering



Water Treatment
Design



Hydrogeology,
Geotechnical,
Archaeology
Environmental



Natural Heritage



Legal



Legal

A Brief Chronology

Planning Approvals

MCEA Process

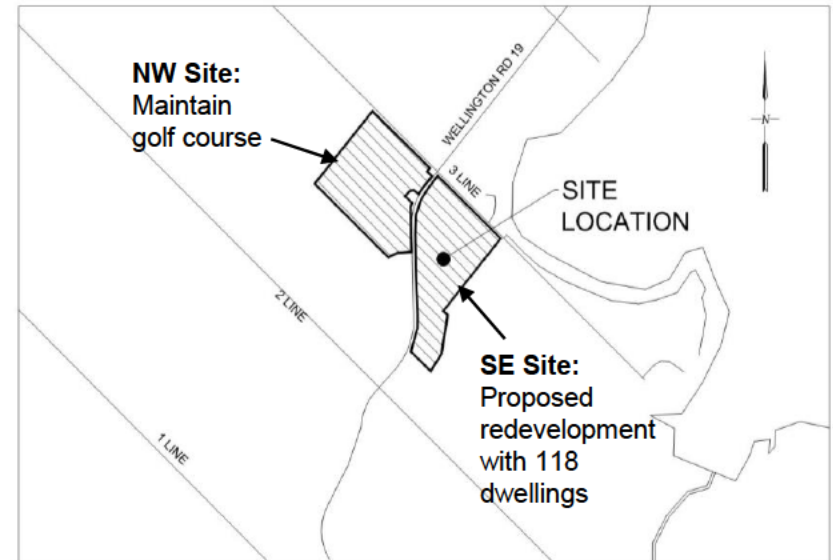
1977	Fairview Golf Course constructed on SE parcel	May 2023	Notice of Study Commencement and Public Information Centre #1
1996	Residential development approved on Fairview Golf Course Lands	June 2023	EA Public Information Centre #1
2000	Newly constructed Lake Belwood Golf Course opens on NW parcel		
Feb 2022	Applications filed for SE and NW parcels		
April 2022	Applications Deemed Complete		
June 2022	Community Information Meeting at Belwood Hall		
April 2023	Statutory Planning Act Public Meeting		
June 2023	Targeted Planning Application consideration by Council		

Project Description

The Fergus Golf Club lands are located along the western side of 3rd Line, on both the northern side (“NW Site”) and southern side (“SE Site”) of Wellington Road 19.

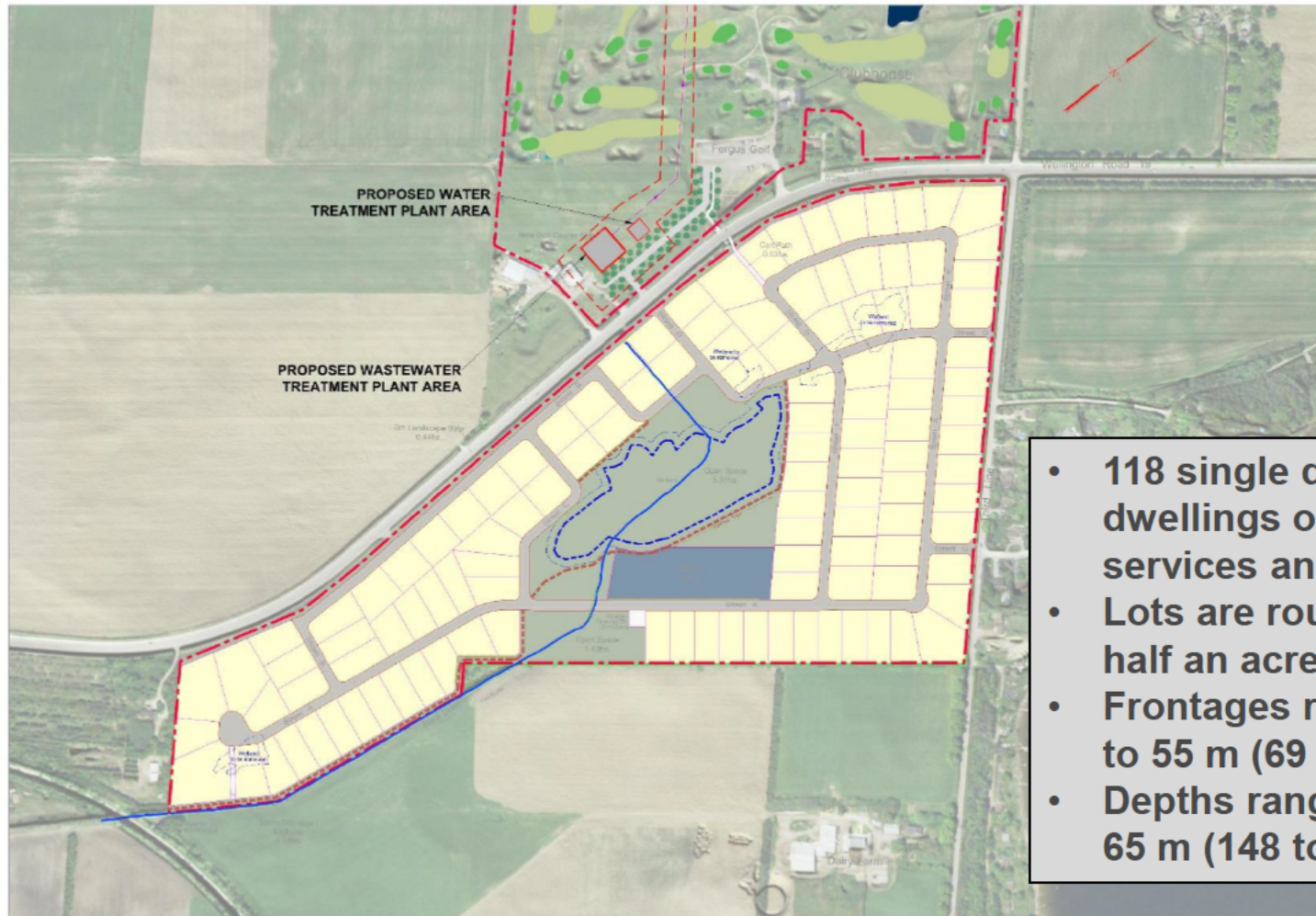
The proposed Fergus Golf Club redevelopment will consist of:

- The existing northwestern golf course (the “NW Site”)
- Redeveloping the southeast golf course (the “SE Site”) into a private condominium development with 118 single family dwellings.



Study Area Map

Proposed Redevelopment



- 118 single detached dwellings on private services and roads
- Lots are roughly half an acre in size
- Frontages range 21 to 55 m (69 to 180 ft)
- Depths range 45 to 65 m (148 to 213 ft)

Purpose of Public Information Centre #1

PIC #1 is the first of three mandatory public contact points under the 2023 Municipal Class Environmental Assessment (MCEA) process for Schedule C Projects.

The purpose of PIC #1 is to:

- Introduce the Study to the public
- Provide an opportunity to participate and give input in the planning and decision-making process
- Discuss the proposed servicing option



PIC # 1 will present:

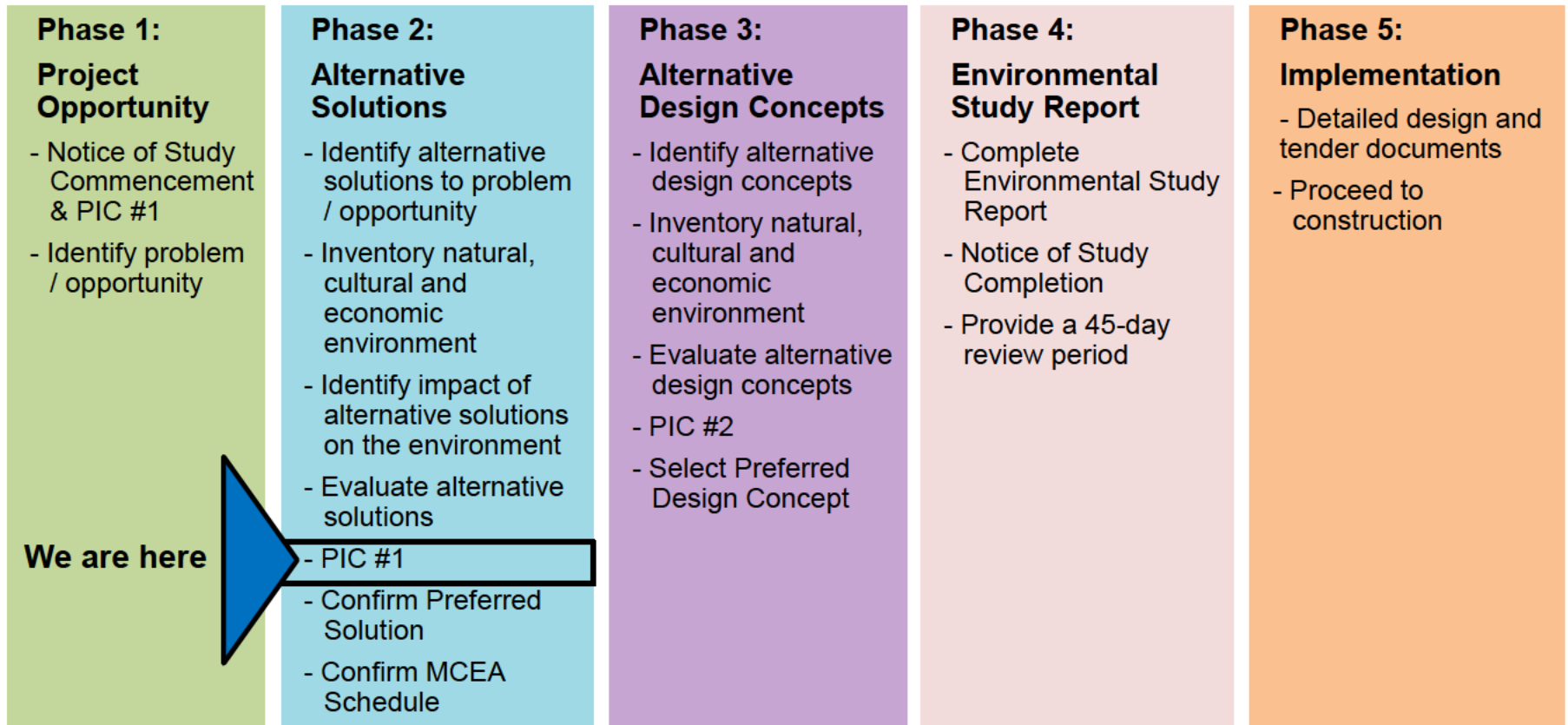
- Project Opportunity Statement
- Results of studies completed to date
- Alternative solutions considered
- Next steps



Study Context

- To undertake water and wastewater servicing for the proposed redevelopment, the Province requires completion of a Schedule C Municipal Class Environmental Assessment (MCEA) Study.
- The 2023 MCEA is an approved Class EA under the EA Act.
- Involves completion of Phase 1 to Phase 4 of the MCEA process.
- **The MCEA does not affect Planning Act approvals.**

The MCEA Process



Project Opportunity Statement

The project opportunity statement defines the principal starting point in the undertaking of the MCEA Study and assists in defining the scope of the project. The Project Opportunity for this MCEA Study is defined as follows:

Fergus Development Inc. is undertaking the redevelopment of a part of the Fergus Golf Club lands, which will provide single detached rural recreational-based housing, based on the findings of a servicing study, on the SE Site. This redevelopment will contribute to satisfying the need and market demand for recreational focused housing in the Township of Centre Wellington and the County of Wellington. In order to service the new housing units, Fergus Development Inc. needs to identify and consider options to provide cost-effective and environmentally sound means of providing a potable water supply and wastewater servicing. Alternatives will be examined as part of the MCEA Study including the impacts of alternatives on the natural, socio-cultural, technical and financial environment.

The project opportunity statement is a requirement of the MCEA process.

Technical Studies

The following studies were completed in conjunction with the Planning Act applications, which also inform the EA Study:

- Planning Justification Report by GSP Group
- Community Design Guidelines by GSP Group
- Functional Servicing Report by R.J. Burnside & Associates Limited (Burnside)
- Stormwater Management Report by Burnside
- Water Servicing Study by TYLIN
- Environmental Impact Assessment by Beacon Environmental
- Environmental Noise Report by Jade Acoustics
- Transportation Report by BA Group
- Stage 1 and 2 Archaeological Assessment by WSP (Golder)
- Preliminary Geotechnical Investigation by WSP (Golder)
- Hydrogeological Investigation by WSP (Golder)
- Water Supply Investigation by WSP (Golder)

Natural Heritage Resources

Designated Areas

- Living Springs Provincially Significant Wetland (PSW) Complex associated with Irving Creek Valley corridor north of Study Area.
- Watercourse and fish habitat associated with the Black Drain and tributary crossings.
- Significant Valleyland and Woodland, fish habitat, potential Significant Wildlife Habitat (SWH) and endangered species habitat at Grand River.

Terrestrial Habitat

- Habitat for threatened Bobolink and Eastern Meadowlark within golf course lands in Study Area.
- Potential SWH (Colonial Nesting Birds) in Grand River Valley.

Aquatic Habitat

- Fish habitat at Black Drain and tributary crossings.
- Fish habitat and potential habitat for Silver Shiner (federally endangered) at Grand River.

All significant habitat and natural heritage areas being preserved / protected from development. Enhancements are provided in other areas.

Archaeological Resources

- Stage 1 Archaeological Assessment and Stage 2 Archaeological Assessment completed for NW and SE Sites.
- Stage 1 Archaeological Assessment identified that both the NW and SE Sites had archaeological potential.
- Stage 2 Archaeological Assessment cleared both the entire SE Site and the NW Site as described of archaeological resources.
- First Nation communities participated in field work and pre-consultation.



Existing Conditions – Hydrogeology, Water Supply & Wastewater Management

- Existing subsurface hydrogeological conditions have been documented by WSP (Golder).
- The site is characterized by low permeability surficial soils.
- The existing golf course is serviced by groundwater wells and an onsite sewage (septic) system.
- Existing golf course wells draw water from the deep bedrock aquifer.
- The deep bedrock aquifer is separated from shallow wells by the low permeability soil overburden that extend 20m to 30m below grade.
- There is no identified interaction between shallow water wells and the deep bedrock wells on the site.

Hydrogeological Conditions

Water Taking Requirement

- average day 128 m³/d (1.48 L/s)
- maximum day 435 m³/d (5.03 L/s)

Existing bedrock aquifer suitable for water supply

- thick glacial till (29.9 m) overlies the bedrock
- Test Well PW21-1 constructed to 84.1 m in the bedrock aquifer

Water Quantity

- tested yield of 8.8 L/s and can meet the demand of 5.03 L/s
- no unacceptable interference with private wells
- no anticipated impacts to surface water features

Water Quality

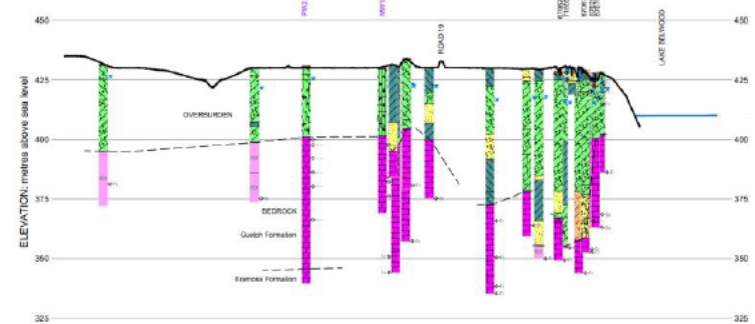
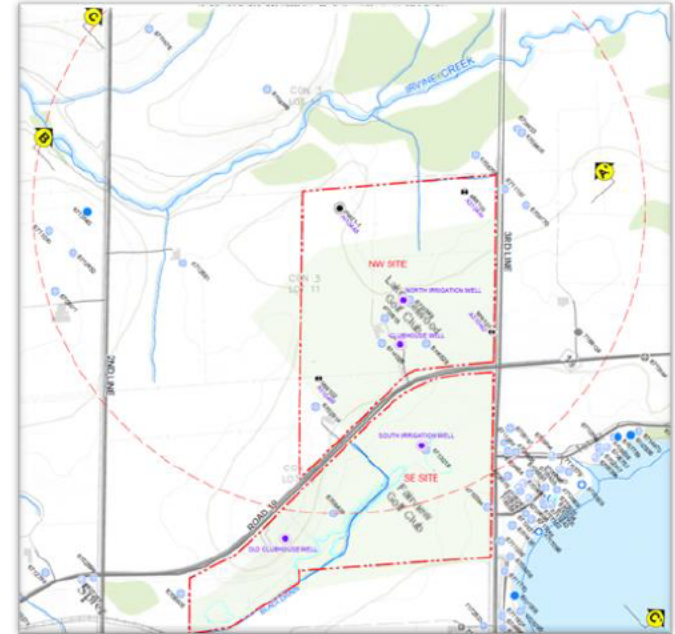
- meets the Ontario Drinking Water Quality Standards except for total dissolved solids and hardness, which will be addressed by proven treatment methods

GUDI Assessment

- risk of surface contamination is low (MPA analysis) and well is not considered GUDI

Source Protection

- in a low vulnerability zone
- no significant threats to Township wells
- located outside of the Township water quantity protection zone



Section C-C'

Alternative Solutions - Water

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to an Existing Municipal Water Supply System

3. New Onsite Communal Water Supply and Treatment System

Alternative Solution 2 Water

Connect to an Existing Municipal Water Supply System

- Requires new watermain from existing system in Fergus along Wellington Road 19 to development site.
- Requires reservoir, booster pumping station, re-chlorination and backup power on NW Site.



Example Booster Pumping Station

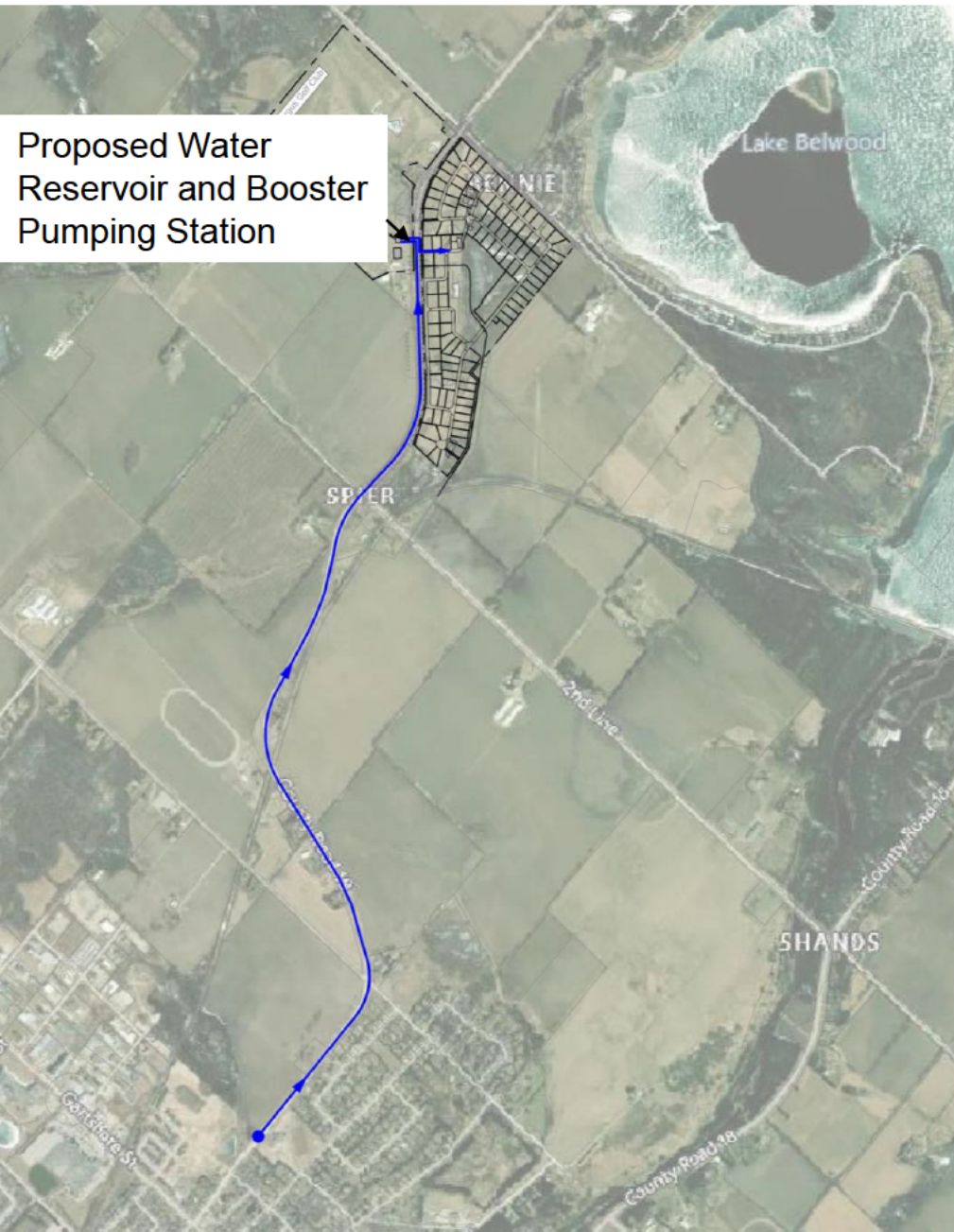


PROPOSED WATERMAIN



APPROXIMATE CONNECTION POINT
TO EXISTING MUNICIPAL WATER
SUPPLY

Proposed Water
Reservoir and Booster
Pumping Station



Alternative Solution 3 Water

New Onsite Communal Water Supply and Treatment System

- Commissioning of new onsite wells.
- Requires raw water supply main.
- Requires new onsite water treatment plant (WTP), reservoir and backup power.
- Requires water distribution system via feedermain from WTP.



Alternative Solutions - Wastewater

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to Existing Municipal Wastewater System

3. New Communal WWTP and Subsurface Discharge

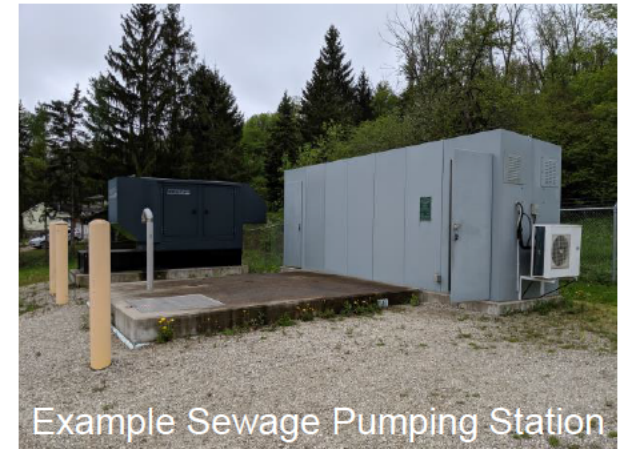
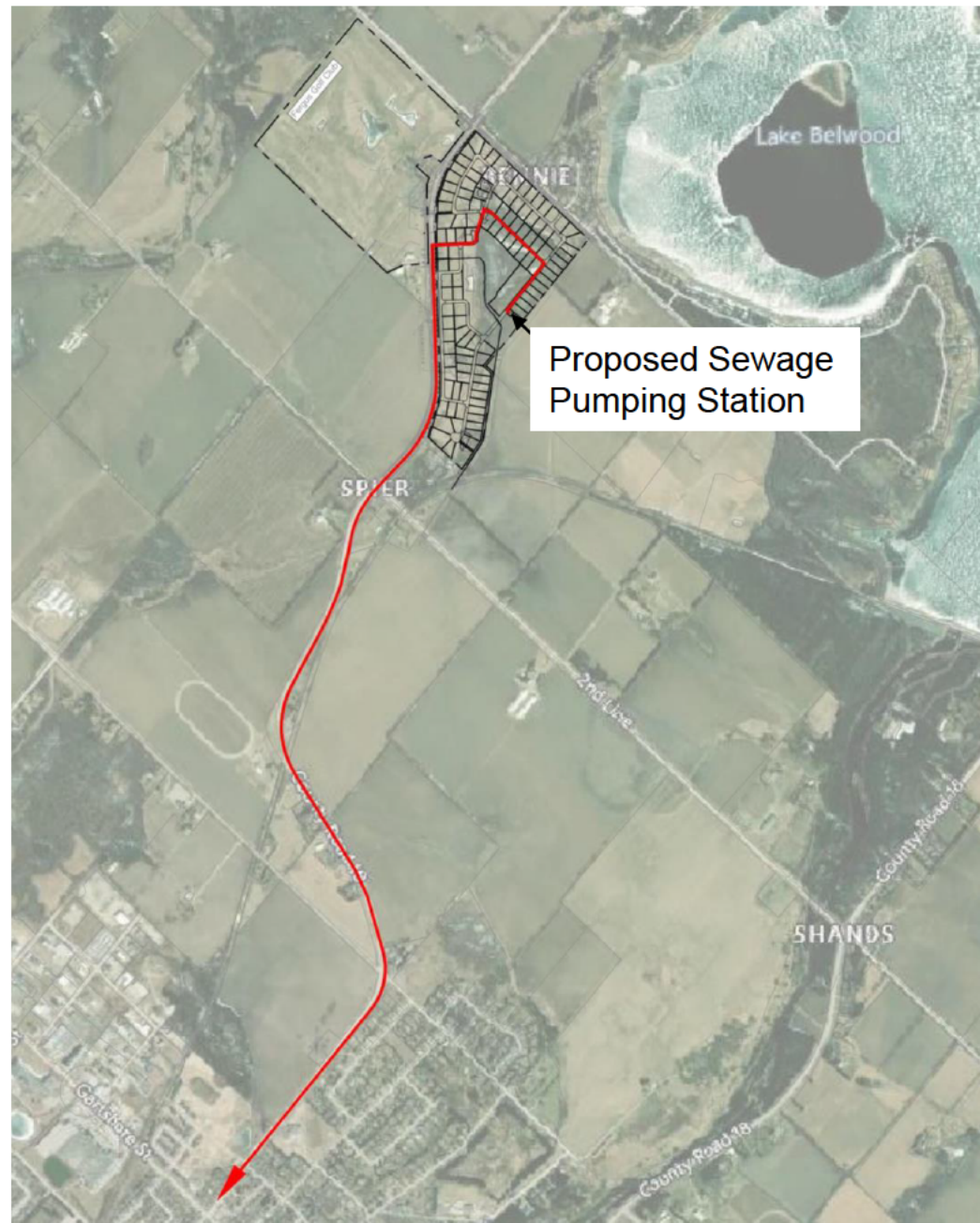
4. New Communal WWTP and Discharge Treated Sewage Effluent to a surface receiving waterbody

5. New Communal Wastewater Treatment Plant and Discharge to Existing Irrigation Ponds followed by Beneficial Reuse for Golf Course Irrigation

Alternative Solution 2 Wastewater

Connect to Existing Municipal Wastewater System

- Conveyance of untreated wastewater via sewage pumping station and new forcemain from development within Wellington County Road 19 right-of-way (ROW) and within local road ROWs to the existing wastewater treatment plant (WWTP) in Fergus.



Example Sewage Pumping Station

————— SANITARY FORCEMAIN

Alternative Solution 3 Wastewater

New Communal WWTP and Subsurface Discharge

- Wastewater treated on-site and discharged to dispersal beds within the NW Site.
- No off-site works.

Example Wastewater Treatment Plant Area



- PROPERTY BOUNDARY
- PROPOSED FORCEMAIN

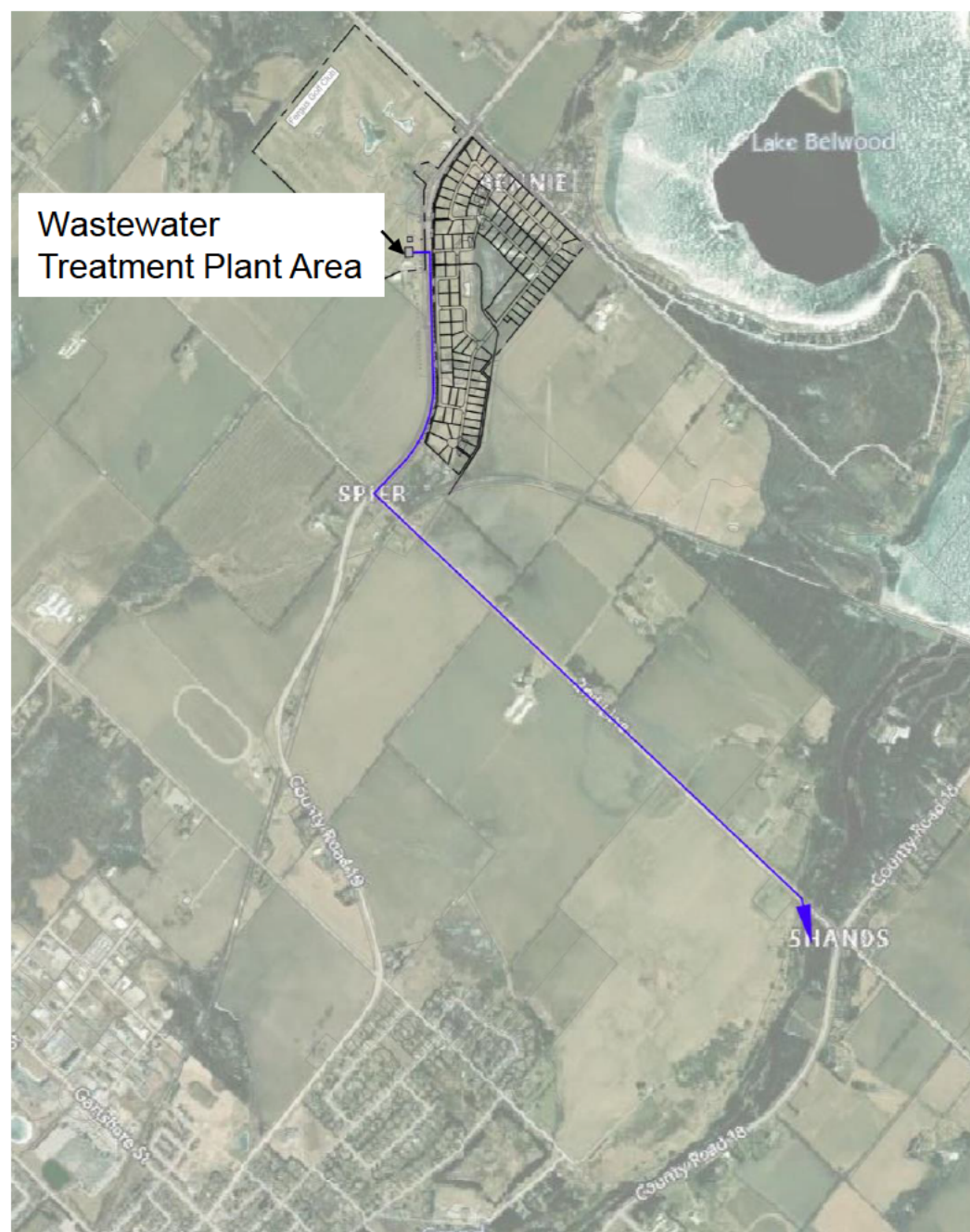


Alternative Solution 4 Wastewater

**New Communal WWTP and
Discharge Treated Sewage Effluent
to a surface receiving waterbody**

- Wastewater treated on-site and then conveyed by piping within existing municipal ROWs (Wellington County Rd 19, 2nd Line) to discharge outfall.
- Discharge outfall location is Grand River.

 DISCHARGE ROUTE



Alternative Solution

5 Wastewater

New Onsite Communal Wastewater Treatment Plant with Discharge to Irrigation Ponds

- Wastewater treated on-site and discharged to irrigation ponds within the NW Site.
- Beneficial Reuse for Golf Course Irrigation.
- No off-site works.



Example Wastewater Treatment Plant Area



Evaluation Criteria

- **Natural Environment**
 - Impacts to Designated Site / Species
 - Impacts to Surface Water Quality
 - Impacts to Groundwater Quality and Quantity
 - Impacts to Hazard Lands
 - Impacts to Vegetation and Terrestrial Habitat
 - Impacts to Aquatic Habitat
 - Source Water Protection
- **Socio-Cultural Environment**
 - Compatibility with Official Plan and Provincial Growth Plans
 - Heritage Resources (archaeological features, built heritage, and cultural landscapes)
 - Noise impacts
 - Nuisance impacts
 - Impact to existing private wells
- **Technical Environment**
 - Ability to service proposed development
 - Approvals / permitting requirements
 - Site considerations and construction requirements / complexity
 - Operation and maintenance requirements and complexity
 - Conformity with applicable guidelines and standards
- **Financial Factors**
 - Capital costs
 - Operation and Maintenance costs

Evaluation of Alternative Solutions

- The Study Team compared the alternative solutions for water and wastewater servicing based on the evaluation criteria.
- Each alternative solutions was ranked based on a range of preference.

Evaluation Order of Preference

Water Servicing Alternatives:

Least → Less → Most

Wastewater Servicing Alternatives:

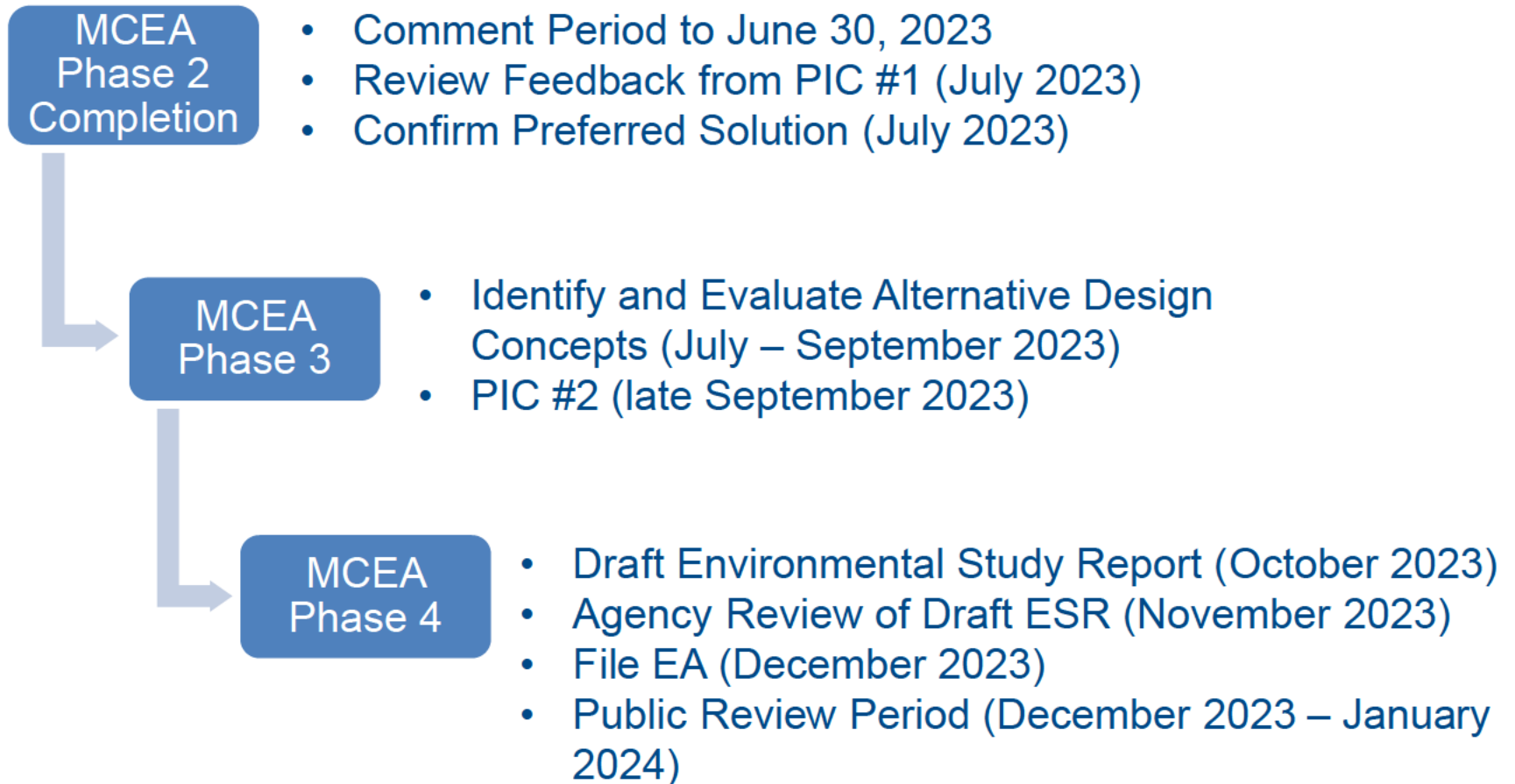
Least → Less → Somewhat → More → Most

- Based on the evaluation process, the most favorable alternatives for water and wastewater servicing were identified.
- The evaluation charts are provided on the display boards.
- The following recommended solutions will be carried forward to MCEA Phase 3.

Recommended Solutions

- New Onsite Communal Water Supply System
- New Onsite Water System with Discharge to Irrigation Ponds

Next Steps



Invitation for Participation

You are invited to provide comments by completing the comment sheet and submitting to the comment box today or FergusGolfEA@rjburnside.com by June 30, 2023.

Theyonas Manoharan, P.Eng.
Project Manager

Fergus Development Inc. / Geranium
3190 Steeles Avenue East, Suite 300
Markham, ON L3R 1G9
Tel: 905-477-1177 ext. 257

Jennifer Vandermeer, P. Eng.
Consultant Project Manager

R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 226-486-1559

Email: FergusGolfEA@rjburnside.com

A copy of the display boards and presentation will be posted on www.rjburnside.com/FergusGEA within a week following today's meeting.

Question and Answer Period

Public Information Centre #1

June 1, 2023

Belwood Hall, Township of Centre Wellington



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Attachment C

PIC #1 Comments

To: Jennifer Vandermeer R.J. Burnside & Associates Limited Guelph, Ontario

Re: Fergus Golf Club Redevelopment

Comments regarding the Environment

As a landowner on [REDACTED] I have lots of concerns about the redevelopment of the 2 pieces of land with respect to the Fergus Golf Club redevelopment. This is my list of concerns.

Loss of wildlife habitat

Loss of wetland

Loss of land surface for recharging the aquifer

Human footprint on class #1 Agricultural land

Loss of natural wildlife species

Increase in traffic Noise pollution

Increase in light pollution

Comments regarding the Water and Wastewater servicing

Depletion of water quantity

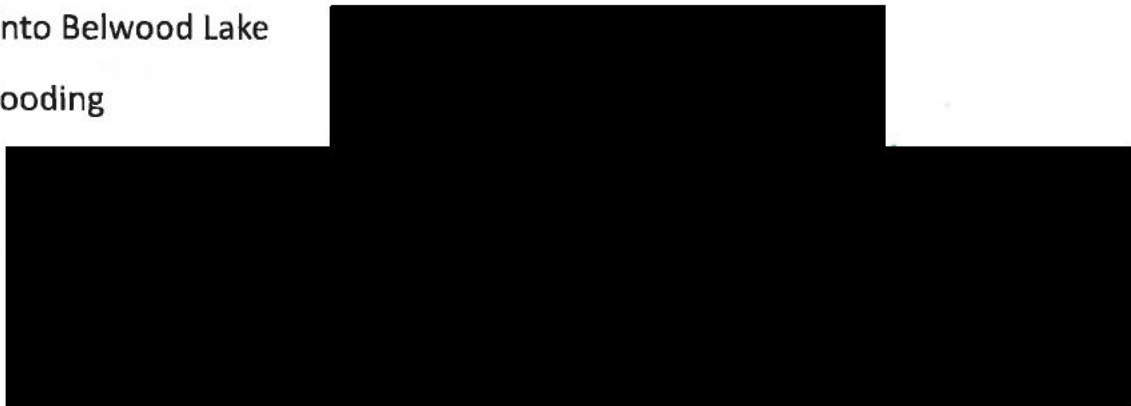
Loss of water quality

Land owner legal protection of existing drilled wells – quality and quantity of water source - in writing as a legal document

Clear understanding of the waste water system (no formal outline /diagram) of the system that will be put in place with respect to Primary, Secondary or Tertiary Water Treatment

Impact of run off into Belwood Lake

Impact of heavy flooding



Mishaal Rizwan

From: [REDACTED]
Sent: Sunday, July 02, 2023 9:20 PM
To: FergusGolfEA
Subject: Fergus Golf Course EA
Attachments: Letter to County re Concerns.pages; Letter to County re Concerns.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Theyonas & Jennifer.

I'm attaching a copy of a letter I sent to the County, Township and Geranium sometime ago outlining my concerns, comments, thoughts, and suggestions regarding the proposed development. Few of the comments will pertain directly to the EA stage but I wanted to make sure that my letter had been circulated to each of you.

Regards,

[REDACTED]

April 14, 2023

County of Wellington
Planning and Development Department
Administration Centre

[REDACTED]
[REDACTED]
[REDACTED]

Att: Aldo L Salis, MCIP, RPP
Director of Planning and Development

Re: Official Plan Amendment (OP-2022-01)
Draft Plan of Subdivision (23T-22001)
Draft Plan of Common Elements Condominium (23CD-22001)
Centre Wellington Township. File: RZ06/22
Wellington County Files: OP-2022-01; 23T-22001; and 23CD-22001
Geranium Homes

Dear Mr. Salis

We received the notification from the County of Wellington (Wellington) advising that complete applications for an Official Plan amendment , a Draft Plan of Subdivision, and a Draft Plan of Common Elements Condominium have been received for Part of Lots 9, 10,&11, Concession 3, in the Township of Centre Wellington (Twp.), formerly the Township of West Garafraxa currently known municipally as 8243, 8268, & 8282 Wellington Road 19. The proposal is to create 118 single family residential homes.

Please be advised that we wish to be notified of the decision of the proposed subdivision and it's associated applications.

We just recently received a Notice of a Public meeting from the Township of Centre Wellington at which rezoning of the before mentioned lands 8243, 8268, & 8282 Wellington Road 19, will be considered. The public meeting is to be held on Wednesday April 26. 2023. At present it appears that I will be unable to attend that meeting in person to provide my thoughts and comments on the rezoning proposed, hence I am sending a copy of this correspondence to the Township also and are advising:

Township of Centre Wellington, we wish to be notified of the decision with respect to the Proposed Zoning Bylaw Amendment and thereby preserve our Appeal Rights.

Having lived at [REDACTED] for over 40 years, directly across the road from the golf course, obviously we are not enamoured with the prospect of 118 lot residential subdivision lots being constructed on the other side of the 3rd line from us. Although we prefer the golf course to remain, we do understand that housing is needed and as such we are not vehemently opposed to this subdivision proposal **provided it is designed and constructed in a manner so as to minimize any negative impact on our property and our enjoyment of it** and also negative impact to other [REDACTED] residents and their properties.

As much as possible I group my comments, questions, and concerns into areas of associated interest.

Planning

1. The original golf course (9 holes course) will be disappearing. How does that support the intent of the existing zoning on the land?
2. Will the condominium corporation (Condo) own the golf course lands across County Road # 19 (Cr 19)? If not, how can the Condo assure the Twp. that they will be able to maintain the sewage disposal and water supply systems in perpetuity when they don't have ownership of the lands these facilities are on?
3. What assurance can be given that the golf course north of Cr 19 will not disappear in the future, in a similar manner as the original course?
4. The lot intensity on the proposed subdivision lands is increasing 300%. What impact does this have on adjacent land uses? Particularly, the impact on the adjacent dairy farm. Detailed warnings need to be given to future lot owners in the subdivision regarding, adjacent farming operations, odour, noise etc. Unfortunately the proposed development will have an impact on agriculture operations and vice versa.
5. What is the Minimum Distance of Separation, MDS requirement between an active farming operation and a residential residence given the 300% increase in intensity of proposed lots? How will the impact of the farming operations be buffered and minimized from future home owners?

Environmental

1. The proposed plan will remove a large percentage the existing bush hence, habitat will be lost for the deer, fox, coyote, wild turkeys, smaller animals and birds. Will this be restored/compensated? How?
2. Dust control during pregrading works, site servicing, and house building operations is essential to allowing us, as well as our neighbours, continued use and enjoyment of our properties. It is estimated that build-out will take up to 5 years! That means

loss of use of our outside lot, deck, and patio for a 6 year period. How will we be protected. The predominate wind which is from the west will blow directly across the 3rd line and spread dust which will cover every part of our property. We will not be able to have windows or doors open! We have experienced this previously when the Township regraded and resurfaced the 3rd Line but that was only for a few weeks. **How will the effect of dust be minimized? I suggest that property be entirely revegetated immediately after pregrading operations are complete** and that servicing and house building operations be completed in a controlled manner (preferred contiguously).

3. Noise control during construction activities. I realize that worker safety is paramount but the general construction noise along with the reverse warning systems for 6 years will be most annoying. If the servicing and house building operations were completed in controlled segments at least the closest noise would be for a limited time. Construction operations must be restricted to a reasonable timetable and enforced.
4. Sound buffering for the proposed houses, if needed, I trust will not require a wooded fence along the entire 3rd Line. Wooden sound attenuation fences look good for the first few years but then as the wood fades and requires maintenance they begin to look like a patch work quilt. If sound attenuation is required, I trust it can be addressed by sound dampening within the house construction and by sound fencing around rear patios and decks.
5. Will the impact of a nitrate plume from the lots (ie Lawn fertilizers, etc.) in the proposed subdivision affect any of the existing shallow aquifer wells? The shallow aquifer is impacted by Belwood Lake water levels and flows towards the lake. What is the nitrate loading and how much will it impact Belwood Lake?

Site Drainage

1. Is the Black Drain a Municipal Drain or a private drain? Will there be any alterations and/or improvements done to the Black Drain?
2. If indeed the Black Drain is a Municipal Drain all of the improvement costs and any future maintenance costs benefitting the proposed subdivision should be assessed to the 118 subdivision lots only under the Municipal Drainage Act, and not assessed to upstream or downstream land owners.
3. Will the proposed storm water management (SWM) facility alleviate some of the downstream drainage issues? Can some of the surface drainage from the proposed subdivision be redirected, to again alleviate some of the downstream drainage issues and concerns?

4. Where is the outlet for the overland flow from a major storm not captured by the storm sewers and the subsurface drainage systems? Will the existing Rennie Blvd. land owners be affected in any way?
5. How will the existing ditch drainage problems along the 3rd line be addressed and resolved by the proposed development or will the existing mosquito hatchery remain?

Roads

1. What improvements to the 3rd line are proposed? Complete reconstruction? Dust control is imperative during that reconstruction.
2. Speed of traffic along the 3rd line is a major concern. We have lived at the [REDACTED] for over 40 years and have seen 2 accidents at this intersection and many near misses as cars speed along the 3rd Line. Also, I'm sure the accident incident records for the County will show a substantial number of accidents, unfortunately some very serious at the 3rd line County Rd 19 intersection over the past years. Increased traffic generated from the proposed 2 additional streets exiting onto the 3rd line will only increase the number of accidents and near misses. I would suggest that the 3rd line be posted at a 60Km speed limit and that the Rennie Blvd intersection be a 4 - way stop.
3. Why are the widths of the proposed road right-of-way in the new subdivision narrower than the traditional 20 metre width? I assume only to gain more land for lots. Will building set back distances be increased to provide a similar distance between the houses and vehicular traffic? If not, why not?
4. I assume that fire protection will be provided by the Township fire fighting forces. It is difficult to determine from the sketch, but is the turning radius of the cul-de-sac at the end of Street B, sufficiently large enough to accommodate Township Fire fighting equipment?
5. In view of the limited width and structural capability of the 3rd line all construction related vehicles should enter the proposed subdivision via a county Road 19 access point and be prohibited from using a 3rd line access point.

Wastewater Collection/Treatment System

1. I assume the Condo Corporation will own and operate the wastewater collection/treatment system. Will that also include ownership of the land the treatment system is located on?
2. Is there sufficient distance between the nitrate plume from the treatment system and the proposed water supply wells as well as from the Irvine Creek and its tributaries to the north.

Water Supply and Distribution System

1. Again similar to my question about the Waste Water Treatment system, will the lands that the Water supply and distribution systems sit on be owned by the Condo Corporation?
2. Will the distribution system be sized to accommodate fire protection flows? Will there be fire hydrants as part of the system?
3. Has it been determined whether the storage for fire protection be housed in an above ground or grade level reservoir?

I trust the foregoing concerns will be considered, my questions answered and and a commitment to address the various concerns during the planning and detailed stages of the subdivision development and where appropriate implemented during the construction works.

Regards,

██████████

Cc: Township of Centre Wellington, Att: Kerri O'Kane, Municipal Clerk
Township of Centre Wellington, Att: Chantalle Pellizzari, Development Coordinator
Geranium Homes, Att: Jennifer Ormiston

Mishaal Rizwan

From: [REDACTED]
Sent: Tuesday, July 04, 2023 4:17 PM
To: FergusGolfEA
Cc: [REDACTED]
Subject: Comments on website and development meeting

Follow Up Flag: Follow up
Flag Status: Flagged

Fergus Golf Club Developers:

I attended your meeting in June, and I just tried to use your "fillable form," which DOES NOT WORK. You can type your name, and then if you try to type your address in the next line, it causes the form to fill out the address in every space. Can your company at least have some professionalism as you conduct this "public consultation"?

My name is [REDACTED], the address affected by your development plan is [REDACTED]. In other words, we are the second farm on the right side of Third Line, after Harbodale Dairy. As was noted in the meeting that night, your "500 m" zone of effect falls very far short of who is going to be affected by this development. Third line from WR-19 to our property is at least 1.5 km, and we have another neighbor on our other side who would also be affected and who is likely about 2 km from WR-19. FYI, they were not sent ANY information from you re the last meeting, though they attended the one previously. In any case, you need to expand your view of the affected area significantly. We will be affected by water usage, traffic, noise, etc. from this development, especially since there will be 2 entrances to it on Third Line.

Of more concern is the lack of demonstrating what formulas you used to calculate the water usage per household in this proposed 118-unit single family development, which, given the estimated price per home, is sure to be multigenerational. I believe the number of people per household using water was claimed by you to be 3.09? That is completely unrealistic. There are certainly going to be far more people per house than this, and therefore the calculations of how much daily water usage will be incurred is also flawed. I would like to see how you arrived at such minimized calculations, as this is misleading.

We are all concerned in the current global environmental crisis about our continued access to water. For your presenters to simply claim that "you will never run out of water" without any knowledge of OUR water usage, nor what will happen to the aquifers in this area in the future, is unethical and again misleading. What's even more concerning is that once you have built these homes, and sold them, your corporation seems to be absolved of any responsibility to deal with problems that may arise. I see no accountability here; a housing association at this development certainly will not want to take responsibility for our water problems that may ensue down the road as a consequence of your poor planning.

I would like some kind of legally binding statement or documentation from your corporation that you are responsible for maintaining our access to a safe and uninterrupted water supply once this development happens. Anything less seems to be very damaging to those of us who live here. We all know this is not some answer to the affordability crisis as your presenters tried to claim at the first meeting. This is purely about profits - at the expense of residents, the municipality, and the environment.

If your website had provided more information about exactly how you came to the calculations you are presenting as facts, I would be a bit more appreciative of the effort. But this is just a performative exercise on the part of your corporation, and we all know it.

Please make note of a a larger "affected zone" in your future analyses that would include a more accurate estimate of water use, traffic implications, noise abatement, and how the environment will be adversely affected by your destruction of a wetland that you so cleverly call "wetland compensation."

Regards

████████████████████



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix D

PIC #1 Question and Answer Summary Period

**Fergus Golf Course Redevelopment Environmental Assessment (EA)
Public Information Centre #1 – June 1, 2023
Summary of Questions and Answer Session**

Attendees:

Councillor Bronwynne Wilton
15 local residents

Geranium Representatives and Consulting Team in Attendance:

Theyonas Manoharan, Bobby Wang – Geranium
Steven Roorda, Anne Egan, Mishaal Rizwan, Jennifer Vandermeer – Burnside
Gregory Padusenko, WSP
Mateus Lewandowski, TYLin
Brian Edwards, Ainley Group
Hugh Handy, Evan Wittman – GSP Group

Questions and Answers:

1. We are concerned about the existing wells. You said that the development would have no impact on the existing wells, how do you know?
 - a. WSP response:
 - i. We have monitoring wells installed within the same aquifer along the outside of the development property. Water levels are measured in these wells. As it is standard practice, the drawdown in these wells measured during the pumping test was extrapolated to the closest private wells to determine if there will be any potential impacts. The impacts are estimated to be is less than 0.5 metres, which is minimal compared to the available drawdown of approximately 20 m.
 - ii. We are also retrieving water for the proposed development from a deeper and isolated aquifer, which has no impact on the shallow aquifer. As such, no impact to the shallow resident private wells is expected.
2. How long was the pumping test run at the production wells?
 - a. WSP response: The test was conducted over three days.
3. Is this a minimum duration and when did you do the pumping tests?
 - a. WSP response: This 3-day test period is the standard pumping test duration. The tests were run in late-Summer 2022. (Post Meeting Note: The 3-day test period is the minimum standard established by the Ministry of Environment, Conservation and Parks).
4. Where are the closest wells used for reference?
 - a. WSP response: Using the study area map provided on the PIC display boards, the properties used for reference were described by the responder. (Post Meeting Note: monitoring wells are installed along the property boundary of the site between the production well and the private wells).
5. Are all findings theoretical since you did not measure the actual resident wells?

- a. WSP response: Findings are based on the physical pumping test completed for our proposed well and extrapolated to private wells.
 - i. Details regarding measuring impacts to neighbouring wells was discussed further. (Post Meeting Note: Private well preconstruction surveys to confirm current function will be completed for a radius of 1 km around the production wells prior to the commencement of construction.)
6. You stated there is one proposed well for the development, but isn't there two wells shown on drawings?
 - a. WSP response: The second well is the back-up (redundant) well, which will be constructed within the same deeper and isolated aquifer. The redundant well has not yet been constructed.
7. There appears to be another well at the rear entrance to the subdivision.
 - a. Burnside response: All wells within the SE Site for the proposed development will be decommissioned, irrigation on the NE Site would remain, but irrigation on the SE Site will be removed.
8. Wastewater treatment typically includes 3-part treatment, primary, secondary and tertiary treatment. How will these three parts of wastewater treatment be accommodated onsite?
 - a. Burnside response: The wastewater treatment facility will include all of these levels of treatment. Primary treatment will be provided in the initial settling tanks, to separate the solids from the liquid. Secondary treatment is provided through the aerobic biological treatment process. Tertiary treatment will be provided using final filters and disinfection equipment.
 - i. The design is a standard practise throughout all of Ontario and is safe for human contact. There is no smell as the water will be highly treated and the system works all winter. The Ministry of Environment, Conservation and Parks (MECP) makes sure of this.
9. What is the Black Drain?
 - a. Burnside response: The Black Drain is an existing Municipal Drain, designated under the Drainage Act, and intercepts surface drainage and is completely separate from the wastewater treatment. It is a drainage channel that intercepts surface water from farms and homes and goes to Irvine Creek.
10. What happens with flooding events?
 - a. Burnside response: The stormwater management design anticipates significant rainfall and flooding events and the grading design will intercept all surface flows and direct them to the onsite Stormwater Management Facility.
11. Is Fergus aware of this project? {Post Meeting Note: This question is assumed to be referring to the Township of Centre Wellington}
 - a. Burnside response: Yes
12. From our observation, the ponds are usually full, what happens in winter? Will there be odor issues, and do you have enough storage for when the golf course is not running?
 - a. Burnside response:

- i. Irrigation will be required on the golf course on an ongoing basis. The highly treated effluent will be used during all available spring/summer/fall months when irrigation is feasible. The MECF will make sure there are contingency measures in place regarding pond storage when the course is closed, there will be enough storage and a contingency plan to ensure surface overflow does not happen. In the rare case of potential overflow, the pond will be pumped down, if needed.
- ii. There will be no odour issues as the water will be treated (treated with primary, secondary, and tertiary treatment at the onsite wastewater treatment facility).

13. What is the final decision date?

- a. Burnside response: There is no date yet for the completion of the Environmental Assessment (EA). The preferred alternative is likely what will proceed, but this must be confirmed through further steps. (Post Meeting Note: anticipated notice of completion is January 2024).

14. Question regarding culture and natural environment: We would like to see the thought process of how you reached the conclusions that you are claiming now regarding the protection of environmental features onsite.

- a. Burnside response: We will have all the relevant reports and technical memos available on the EA webpage. Beacon, who is undertaking the natural heritage studies for the project is not here today. However, Beacon is preparing a memo to document the findings of their review of the natural heritage features on the NW Site and once ready, their memo will be added to the EA webpage.

15. What is the do-nothing solution mentioned during the presentation?

- a. Burnside response: This is to serve as baseline for all the other alternatives that we are considering/evaluating. The Do Nothing does not provide any new housing and is not consistent with the Official Plan. The lands are designated as for development, and housing development (originally 41 units) was previously approved.

16. We have concerns about the previously approved residential designations on this site as they are too old.

- a. The Official Plan Amendment (OP-2022-01) and Zoning By-law Amendment (RZ06/22) submitted to permit the proposed redevelopment have been approved (Official Plan Amendment by the Province through Wellington County Official Plan Amendment 119, and Zoning By-law Amendment by Township Council). These amendments take the place of existing site-specific policies and regulations that were in effect on the former Fairview Golf Course land, and now apply to the entire Fergus Golf Course properties on the north and south side of Wellington Road 19.

17. The Problem Opportunity Statement refers to market demand, we don't see this as the need. Council and Municipal planners should look at alternatives. Have you considered the market needs for these housing that you are putting in? We believe you should target for first time home buyers. You should think about affordable housing.

- a. GSP Group response: Our planners are looking at public interest. (Post Meeting Note: all types of residential development contribute to the goal of more housing).
18. We don't believe recreational/seasonal housing is what we need right now.
- a. GSP Group response: The Official Plan Amendment is approved by the Province. A Zoning By-Law Amendment is ongoing at the County level, so residents can continue to comment as part of that process. (Post Meeting Note: These are intended to be marketed as permanent homes not seasonal homes).
 - b.
19. Do we not need recreational land use (the golf course)?
- a. Geranium response: The County OPA has already been approved, which includes the current land designations proposed.
20. We have concerns about the irrigation demand at the golf course, some years irrigation will not be needed.
- a. Burnside response: We will have a contingency plan in place and commitment to irrigate. We have also looked at the historical flow and demand to determine a reasonable amount so that irrigation covers the need. Currently, there are irrigation wells onsite that are pumped into the ponds to top-up for the current needs.
21. Is water flow from paved driveways going through the same treatment process?
- a. Burnside response:
 - i. Stormwater grading is designed to send this water to the stormwater management facilities on site to clean and slowly release to prevent flooding the Black Drain.
 - ii. Stormwater and wastewater are two separate systems. Stormwater is treated by wet ponds following the Ministry of Environment, Conservation and Parks and conservation Authority requirements including settlement of solids.
 - iii. Stormwater Drainage flows will be re-directed through the proposed site grading and stormwater sewer system.
22. Are you considering tile beds for wastewater treatment?
- a. Burnside response:
 - i. No.
 - ii. We are proposing treatment in a facility, which will include primary, secondary and tertiary treatment.
 - iii. All discharge from this facility will be treated and put into the irrigation pond. (Post Meeting Note: an MECP permit will regulate this process).
23. Who is responsible for the monitoring the treatment system? Will it be the Condo Corporation (Condo), will the Condo have dedicated staff? How will they be held accountable?
- a. Burnside response: Typically monitoring is done through maintenance agreements between the Condo and a Maintenance contractor. The Condo will also be held accountable by the Ministry of Environment, Conservation, and Parks (MECP). The MECP would issue an

Environmental Compliance Approval with testing requirements and annual reporting requirements.

24. If there was a recession resulting in default or insolvency, who is responsible for the treatment plants to keep operating?
 - a. Geranium response:
 - i. We will enter into a responsibility agreement with the municipality to address this issue if a potential insolvency happens. (Post Meeting Note: Responsibility agreements are common practice).
 - ii. Additionally, we will have reserve funds set aside for this purpose in the case of insolvency where the municipality will need to take over the operation of the treatment plants. This is typical process.
 - iii. When the last home is sold, the Condo assumes responsibility.
25. Is there an upper limit for stormwater management?
 - a. Yes, management of stormwater is based on a 100-year storm event – for this area it is the 4-year Chicago Storm. Included is a freeboard of an additional 0.3m above the highest expected storm volumes for an additional safety factor.
26. If this project is built, will it be with municipal guidelines from within the last 10 years?
 - a. Municipal guidelines are updated regularly – the most recent document is dated in 2018.
27. What codes are used for the buildings to face climate change?
 - a. Burnside response: The Building Code is updated every 5 years and the next version launches March 2024 with significant updates to account for impacts from climate change.
28. We have concerns regarding the water taking requirements. Where were these numbers retrieved from? Also, there are more water uses apart from just drinking water, are those other uses (such as lawn irrigation, shower use, etc.) factored into the design?
 - a. Water usage is based on both the MECP and Municipal standards. A per-capita usage has been shown to be as low as 200 l/cap/day. The standard we have used on this site is 350 l/cap/day which introduces a reasonable safety factor.
29. Has the Consultant considered the impact of multigenerational families moving in when determining water and sewer needs? No longer is it three people per home and at times you can have 10 people living in a house.
 - a. Answer for 28 and 29 (Ainley Group):
 - i. Water demand looks at maximum day demand which incorporates the highest possible use for a single-family unit in this case.
 - ii. This is a very conservative estimate, and we also consider fire flows requirements as well.
 - iii. This also considers water for lawns, etc.
 - iv. We have also considered demographic standards for the municipality.
30. Lots of studies have been done but we have no access to see the reports. Can the environmental reports be made available?

- a. Councillor Walton response: These reports are all available on County's official website filed with the planning application.
31. Why did you move away from septic beds for individual homes to a wastewater treatment plant?
- a. Burnside response: It was always communal treatment; septic was not proposed, even in the previous development proposal from the 1990s. A wastewater treatment facility is much more efficient and provides a higher quality of treatment. Additionally, controls and agreements are in place that ensure a higher level of treatment continues with the proposed treatment system.
32. On average, how many people are you estimating per household for these proposed units for your water demand calculations?
- a. Ainley Group response: We are following the Township's standard of 3.094 persons per household. In addition, we test beyond the standard assumption to be conservative. The numbers we use are very robust, people don't consume as much water as they used to.
33. We are the neighboring residents who have been living here for a long time. We received a signed form from Golf North ensuring our well integrity. What is the process if Geranium wrote similar agreements for adjacent landowners.
- a. Geranium response: We will look into these agreements.
 - b. Burnside response: As part of the Permit to Take Water (PPTW) analysis of effects to residents is a requirement with the MECP. Pre-condition surveys for nearby wells are done with permission to take measurements. If a resident refuses, then these measurements cannot be done. This is done before construction begins for wells within the zone of influence.
34. For your proposed wells as the source of your water supply, how large is the zone of influence for your wells?
- a. WSP response: This is discussed in detail in the Hydrogeological Report available on the Township's website.
 - b. Geranium response: this issue is also considered and is stipulated in the Permit to Take Water that we are required to apply for. (Post Meeting Note: The conservation estimate of zone of influence is approximately 1 km).
35. My neighbours did not get the notice. Information has not been well provided.
- a. Burnside response: The Township provided a list of addresses based on a 500 m radius. Notices were mailed to this list. We also advertised this open house twice in the local newspaper. We can look into this list and potentially expand it for future EA study notifications.
36. You stated that the EA doesn't affect the Planning Act Approvals. How is it separate?
- a. Burnside response: The processes are separate; however, the teams and studies are not separate.
 - b. Geranium response: The EA study and the Planning Act Approvals are considered parallel processes, but they can happen simultaneously.





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**Fergus Golf Course Development
Environmental Assessment, PIC #2
Summary**

Fergus Development Inc.

Distribution List

No. of Hard Copies	PDF	Email	Organization Name
0	Yes	Yes	Geranium

Record of Revisions

Revision	Date	Description
0	November 2, 2023	Draft Report
1	November 3, 2023	Final Report

R.J. Burnside & Associates Limited**Report Prepared By:**


Mishaal Rizwan
Environmental Planner
MR:af/js

Report Reviewed By:


Anne Egan, P.Eng.
Onsite Wastewater Specialist

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Attachments

- Attachment A Notice of PIC #2
- Attachment B PIC #2 Display Boards and Presentation
- Attachment C PIC #2 Comments
- Attachment D PIC #2 Question-and-Answer Period Summary

Disclaimer

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1.0 Introduction and Background

Fergus Development Inc. (Geranium) has initiated a Municipal Class Environmental Assessment (MCEA) Study to evaluate alternatives for water and wastewater servicing required for the redevelopment of part of the Fergus Golf Club lands.

2.0 Method of Notification

The Notice of Public Information Centre (PIC) #2 was advertised in the Wellington Advertiser on August 24, 2023, and August 31, 2023.

A distribution list for property owners within 1,000 m of the Study Area was provided by the Township. Property owners identified on this list were mailed the Notice of PIC #2.

The Notice was either emailed or mailed to agencies, Indigenous communities, and municipalities. A copy of the advertisement is provided in Attachment A.

3.0 Public Meeting Format

PIC #2 was hosted at Belwood Hall. The PIC began with an open house period whereby attendees could review the display boards and ask questions of the study team. The open house period was followed by a presentation and a question-and-answer period. The presentation provided a description of the project, introduction and background, background studies, study context, and next steps. A copy of the display boards and presentation slide deck are provided in Attachment B.

18 attendees signed in for the PIC. Two comment sheets were submitted during the PIC. All comments received that are relevant to the MCEA are summarized in Section 5.0 along with study team responses. Comments related to the Planning Act application were shared with Geranium and are being addressed through the Planning Act process.

Several opportunities to provide feedback were provided during the PIC #2 comment period. These included:

- Online comment sheets were made available on the project website (<https://www.rjburnside.com/fergusGEA/>) on September 11, 2023
- Project email address

The PIC #2 comment period was open from September 11, 2023, to October 2, 2023.

4.0 Summary of Question-and-Answer Period

A chronological summary of the question-and-answer period discussion is provided in Attachment D.

5.0 Summary of MCEA Comments Received and Study Team Responses

Table 1: General

Comments Received	Study Team Responses
<p>How many people are you assuming for the homes? Are there any scenarios for five to eight people per unit?</p>	<p>We are assuming three people per unit. Please note that we have measures in place for water conservation, including Greyter Water Systems which enable the reuse of shower water for toilet systems. We pump tested at 8 L/s, we only needed to test at 5 L/s which is the expected peak day demand. Please note that 5 L/s is the max daily demand which only occurs for a few days a year.</p> <p>The three people per household assumption was identified by the municipality in their design standards and is based on demographic studies conducted by the municipalities. Demographic studies for this area are based on single family homes.</p> <p>There are no scenarios over three people as part of the design process. However, there are enough safety factors in the design that would accommodate additional people per household. Water use tends to balance out over multiple units. Especially considering the proposed water reuse within each home, this reduces overall water use in the building and would actually support more people in each unit.</p> <p>Please note that we use three people per unit in calculations because that is what the municipality prescribes. In our calculation, we have additional safety factors. We are not sizing just for what is needed, but also for additional uses.</p>
<p>If the preferred solutions are decided for water treatment and protection of the water source, what's left to do?</p>	<p>Following the MCEA process, a draft copy of the ESR is issued to the Ministry for review (one month). When their review is done, we incorporate their recommendations and then issue the final ESR for a 30-day public review period. Everyone on Project Contact List will receive a notice that the ESR is available for review through the project website. During the 30-day public review period, members of the public can submit comments or questions to the study team. Following the MCEA process, there is still the detailed design and permitting for the water and wastewater systems.</p>

Comments Received	Study Team Responses
<p>How does the EA feed into official subdivision plans and when does that happen in the process and do adjacent landowners get plans of the subdivision, where / when does that happen?</p>	<p>The Detailed Design will incorporate the conclusions of the Environmental Study Report. The general configuration and design technologies will form the basis of the design. The Detailed Design is typically reviewed by the Municipality’s Engineering Department. The municipality doesn’t allow a design without seeing the completed EA plugged into design parameters. We currently just have approval on the planning side. Configuration is a part of that approval that will be the basis of the design, EA goes to the public with a 30-day period. For detailed design, it’s typically all with municipality engineer department review details.</p>

Table 2: Surface Water Drainage / Groundwater

Comments Received	Study Team Responses
<p>The water flow analysis assumes that deep aquifer wells have no interaction with the shallow wells of homeowners. In your report you say the permit holder will replace if permanently impacted. You use a radius of 1 km from test well; why isn’t it done from actual wells? Who choose the 1 km radius, I’m just outside 1 km as are many others.</p>	<p>The new supply test well for the development is a bedrock well on the NW portion of property. It is quite a deep well completed at 84 meters below ground and is a good aquifer, with good water supply. The aquifer is well protected from surficial contamination with 20-30 m of till thickness with a lot of clay, which separates the two and this is why the bedrock and shallow overburden system don’t interact in terms of water level drawdown as observed during test pumping. The interactions are limited by clay, which is difficult to flow through.</p> <p>The pumping test was run for three days with monitoring of water levels at a network of monitoring wells at various depths and distances. For water demand in this area, there are average and maximum days demands. Maximum day demands are the highest predicted demand and are typically only required for brief periods during the year. Pumping was undertaken at a rate greater than the max day demand for three days to measure aquifer response. Based on the pumping test and analysis, the water level response of the deep aquifer, as you move out 500 m, you expect 1 m drop in bedrock aquifer at the planned max demand rate. That’s a 1 m drop for a well over 100 ft deep, which some of the closer wells may experience. 1 m of water drop is not expected to impact operation of such deep wells. This is part of the reason for doing well surveys to understand and assess impact.</p>

Comments Received	Study Team Responses
	<p>Safeguards are a function of the Ministry of Environment Conservation and Parks (MECP); they require a Permit to Take Water. We will need to apply for a Permit to Take Water (PTTW) for operation of the well. As part of this, MECP reviewers will review the studies and monitoring program. The permit will include a monitoring program and a condition that requires the permit owner to take the necessary action to restore the water supply of any wells where their operation is affected as a result of the active pumping.</p> <p>During the pumping test (rate was 8 L/s as opposed to the required 5 L/s maximum demand), 1 km away in the deeper (bedrock) wells, the maximum water level drop was 40 cm. The analysis of the pumping test data shows that under the planned max daily rate of 5 L/s drawdown is not expected in wells that are beyond 1 km. Under max day demands there isn't expected to be any impact. A monitoring program will be required under the permit to confirm.</p>
<p>I live directly west on 2nd Line where the well is. When the golf course was put in, it was a dry summer and they impacted our water, and it was only for irrigation.</p>	<p>That is the purpose of a well survey for wells in immediate vicinity that may be susceptible. If a pump is set relatively high within a specific well, that's a consideration that may need to be looked at further.</p>
<p>What if years from now someone runs out of water, what is the recourse? After Geranium hands over to the Condominium Corporation, who is liable if my water is impacted?</p>	<p>For the time being, during construction Geranium is responsible. Geranium will be here for three to five years and will continue to monitor concerns. As part of the approvals process, we did these studies to demonstrate no unacceptable impacts to surrounding wells.</p> <p>We have to apply for a Permit to Take Water as part of the development, which has stipulations for maintaining potable use for residents. This gets transferred to Condominium Corporation once they take over. There's an additional agreement with the municipality – a municipal responsibility agreement. The treatment plants will be privately owned and operated. In the event of extreme situations (insolvency, etc.), the municipality will have to take over the systems. This is funded by a reserve fund provided to the municipality.</p>
<p>When was testing done? The cottages are seasonal and use more water in the summer. What did you test?</p>	<p>Testing was completed in Fall 2021. Monitoring wells were installed on the golf course property.</p>

Comments Received	Study Team Responses
<p>Who is liable for water if a major weather event like a yearlong drought occurs? I was sent a drawing of the area of influence by Geranium / Burnside. This gives you a perspective of what they are looking at. The study says at 500 m it's a 2 m drawdown.</p>	<p>The draw down is 2 m if you are pumping that amount steadily. Please note that we are not pumping continuously. Also, at the planned max day rate of 5 L/s (lower than the pumping test), the expected drawdown at 500 m is 1 m.</p>

Table 3: Wastewater

Comments Received	Study Team Responses
<p>When membranes are changed every ten years, what happens to them?</p>	<p>They are typically disposed of at the landfill; however, we have reached out to the membrane vendor to discuss alternatives. If we do not hear back from the vendor, we can include a design specification for the contractor to investigate alternatives for recycling</p>
<p>I would like to have the assurance in writing that once you test my well that there is a process I can take if our water goes dry or quality changes. All infrastructure is to be put into place from golf course, WW treatment to be done, must be in place before building the development.</p>	<p>If the well within the zone of influence is proven to be affected by our water taking, the actions to rehabilitate the affected well would be stipulated in the Permit to Take Water which we will follow.</p> <p>Wells must be built before the development. Prior to the treatment plant being commissioned , pipes through entire development and wastewater and pumping station will all be put into place first.</p>
<p>When will you actually be starting, what's your time frame for drilling the well to use?</p>	<p>A test well was already drilled. While we have the planning approval, we still need to go through the Environmental Assessment (EA) process for the preferred solution. The next step will be the detailed design of each component (run off grading, SWM etc.). This will all go through the municipality's engineers and go back and forth with revisions. We ideally want to start construction sometime next year; Spring 2024 is the goal.</p>
<p>If the wastewater system covers 500 ppl (four per household); how is there going to be sufficient capacity for whole community.</p>	<p>The system will accommodate all the flow and treat it to the level for disposal. MECP has an obligation for Geranium and the Condominium Corporation to monitor and make sure this system continues to operate properly.</p> <p>Sounds like you're asking if the system is appropriately sized. Similar redundancies as with the water system are accounted for by the wastewater system. The wastewater treatment system is also larger than a septic system for a single dwelling so there are treatment efficiencies with the larger</p>

Comments Received	Study Team Responses
	system. Additionally, the Greyter System will be incorporate into the development through which the shower water will be treated and reused for the toilet system.

Table 4: Water Supply and Distribution

Comments Received	Study Team Responses
For the UV primary disinfection alternative, do you have to use chlorine?	Yes, chlorine would be used for secondary disinfection. Both UV treatment and chlorine would be involved for this alternative.
What material is the membrane made of?	The softening membranes utilize a proprietary thin-film polymer membrane.

6.0 Next Steps

A copy of this report has been posted on the project webpage and an email will be sent to all PIC #1 and PIC#2 participants who asked to be added to the Project Contact List as well as interested residents who have asked to be kept informed of study progress to advise them of this updated webpage content.

The project webpage will be maintained and updated with additional information as the study progresses.

In Phase 4, the Draft Environmental Study Report (ESR) will be prepared. The Draft ESR will be circulated to agencies and Indigenous communities who have requested a copy for review.

The final ESR is anticipated to be filed in mid-December 2023. After filing, the document will be circulated to all parties on the Project Contact List for the 30-day public review period.



BURNSIDE

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Attachment A

Notice of PIC #2

Notice of Public Information Centre #2

Municipal Class Environmental Assessment

Fergus Golf Club Redevelopment

The Study

Fergus Development Inc. is undertaking a Municipal Class Environmental Assessment (MCEA) Study to evaluate alternatives for water and wastewater servicing required for the redevelopment of part of the Fergus Golf Club lands. The site location and approximate extent of the Study Area are shown on the map.

The Process

The project is being conducted in accordance with the planning and design processes for 'Schedule C' projects, as outlined in the Municipal Class Environmental Assessment (2023), which is approved under the Environmental Assessment Act. The MCEA process includes consultation with agencies, stakeholders, Indigenous communities and public; an evaluation of alternative solutions to address the problem; alternative design concepts for the preferred solution; an assessment of potential environmental impacts; and identification of reasonable measures to mitigate any potential adverse impacts. At the conclusion of the Study, an Environmental Study Report (ESR) will be prepared for public review.



Opportunity to Participate

Public consultation is important to this Study. Fergus Development Inc. would like to ensure that anyone interested in this Study can provide input. Fergus Development Inc. is inviting the public to attend the second Public Information Centre (PIC).

PIC #2 will present the results of environmental and technical studies completed to date, the alternative solutions considered and the preferred solution, and the alternative design concepts considered for the preferred solution. PIC #2 will be held as an "Open House" with materials pertaining to the study on display and members of the study team on hand to answer questions related to the project. A short presentation will be provided (see timing below).

Public Information Centre #2

Date: Monday September 11, 2023
Time: 6:00 - 8:00 p.m.
Presentation: 6:30 p.m.
Location: Belwood Hall
36 Queen Street, Belwood, ON N0B 1J0

For More Information

To provide comment, request additional information about this Study or to be added to the Project Contact List to receive future notices, please email or contact either of the following Project Team members:

Theyonas Manoharan, P.Eng. Project Manager Fergus Development Inc. 3190 Steeles Avenue East, Suite 300 Markham, ON L3R 1G9 Tel: 905-477-1177 x 257	Jennifer Vandermeer, P.Eng. Consultant Project Manager R. J. Burnside & Associates Limited 292 Speedvale Avenue West, Unit 20 Guelph, ON N1H 1C4 Tel: 226-486-1559
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Email: FergusGolfEA@rjburnside.com

For more information, including study documentation, please visit the study webpage at: www.rjburnside.com/fergusgea/

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

This Notice first issued on August 24, 2023.



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Attachment B

PIC #2 Display Boards and Presentation

Attachment B

Fergus Golf Club Redevelopment Environmental Assessment Study



Public Information Centre #2

September 11, 2023, 6 p.m. - 8 p.m.
Belwood Hall, Township of Centre Wellington



Welcome

to Public Information Centre #2 for the Fergus Golf Club Redevelopment Environmental Assessment Study

Please Sign In

Meet with Study Team Members

Review the display materials and discuss your questions and ideas with the Study Team

Listen to the **presentation at 6:30pm** and participate in the Question & Answer Period

Please fill out a comment sheet and return it to the comment box today or FergusGolfEA@rjburnside.com by

October 2, 2023



Purpose of Public Information Centre #2

PIC #2 is the second of three mandatory public contact points under the 2023 Municipal Class Environmental Assessment (MCEA) process for Schedule C Projects.

The purpose of PIC #2 is to:

- Provide a summary of PIC #1
- Provide an opportunity to participate and give input
- Discuss the servicing design concepts



PIC #2 will present:

- Project Opportunity Statement
- Results of Technical Investigations
- Preferred Solution
- Alternative design concepts considered
- Next steps



Project Description

The Fergus Golf Club lands are located along the western side of 3rd Line, on both the northern side (“NW Site”) and southern side (“SE Site”) of Wellington Road 19.

The proposed Fergus Golf Club redevelopment will consist of:

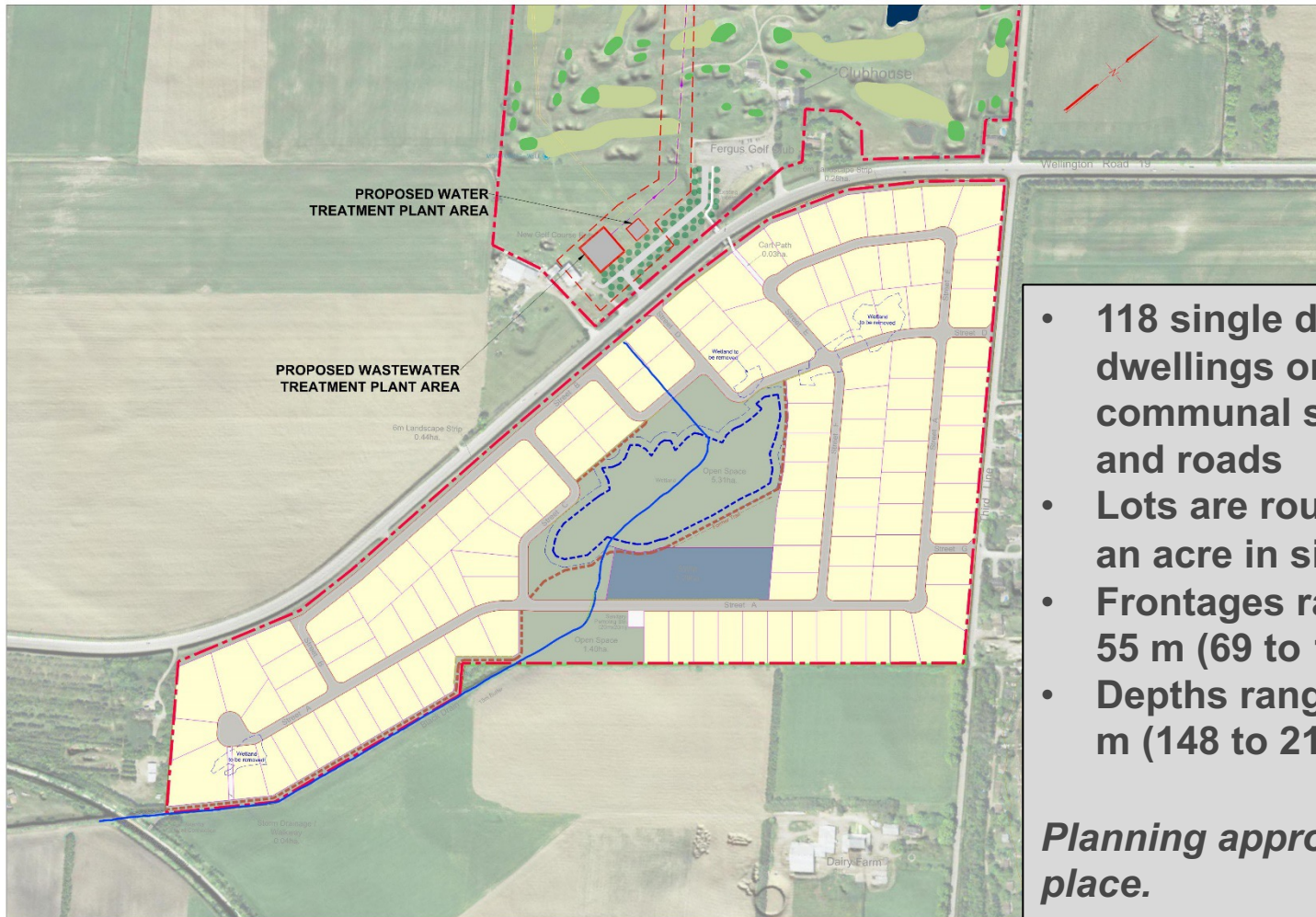
- The existing northwestern golf course (the “NW Site”)
- Redeveloping the southeast golf course (the “SE Site”) into a private condominium development with 118 single family dwellings.

A Schedule C Municipal Class Environmental Assessment (MCEA) Study is being undertaken for the proposed water and wastewater servicing for the proposed redevelopment.



Study Area Map

Planned Redevelopment



- 118 single detached dwellings on private communal services and roads
- Lots are roughly half an acre in size
- Frontages range 21 to 55 m (69 to 180 ft)
- Depths range 45 to 65 m (148 to 213 ft)

Planning approvals are in place.

Project Opportunity Statement

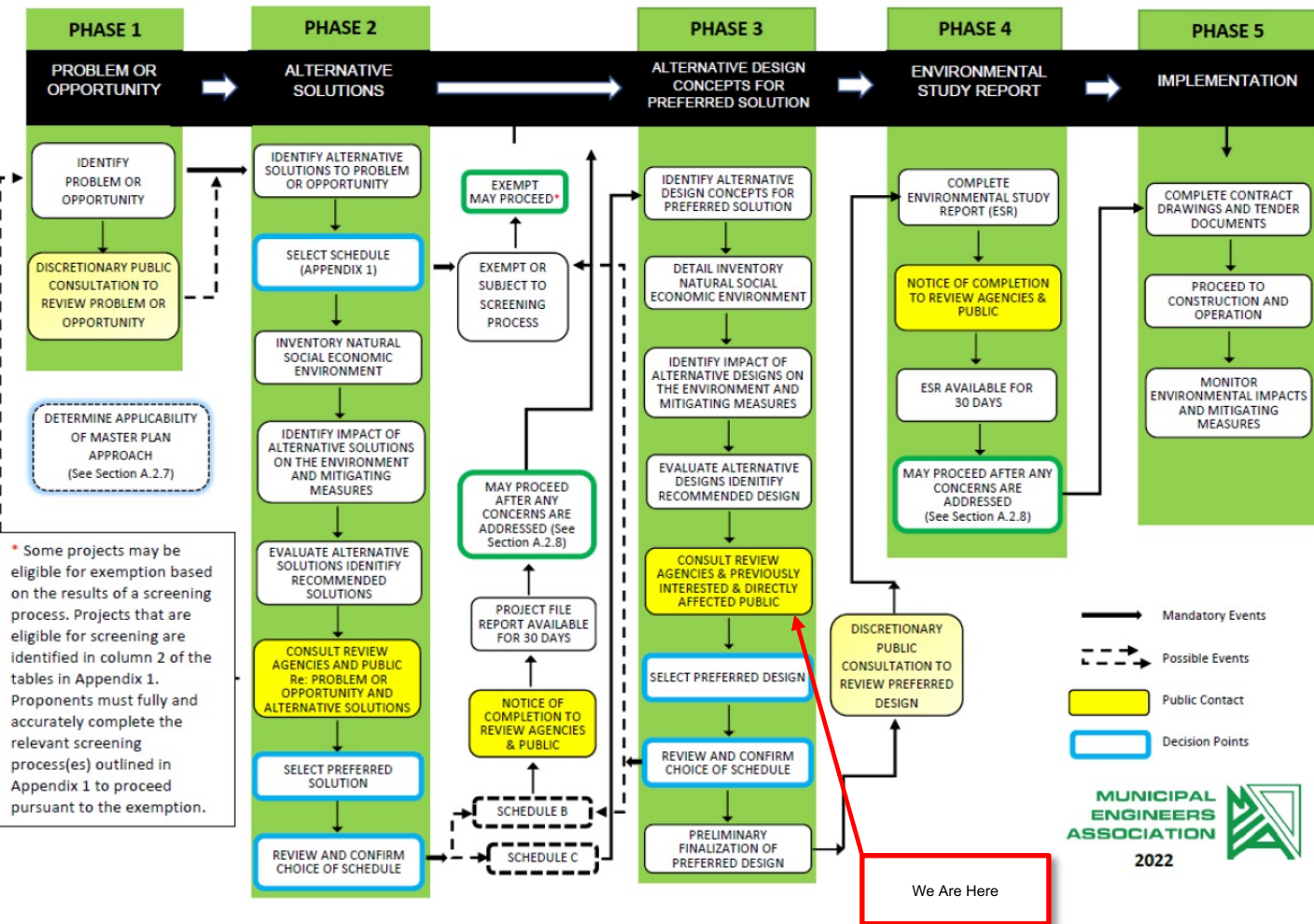
The project opportunity statement defines the principal starting point in the undertaking of the MCEA Study and assists in defining the scope of the project. The Project Opportunity Statement for this MCEA Study is as follows:

*Fergus Development Inc. is undertaking the redevelopment of a part of the Fergus Golf Club lands, which will provide single detached rural recreational-based housing, based on the findings of a servicing study, on the SE Site. This redevelopment will contribute to satisfying the need and market demand for recreational focused housing in the Township of Centre Wellington and the County of Wellington. To service the new housing units, Fergus Development Inc. needs to **consider options to provide cost-effective and environmentally sound means of providing a potable water supply and wastewater servicing.** Alternatives will be examined as part of the MCEA Study including the impacts of alternatives on the natural, socio-cultural, technical and financial environment.*

The Project Opportunity Statement is a requirement of the MCEA process.

The EA Process

The Study is being carried out in accordance with the planning and design process for Schedule C projects as outlined in the 2023 Municipal Class Environmental Assessment, which is approved under the **Ontario Environmental Assessment Act**. Upon completion of the study, an Environmental Study Report (ESR) will be prepared and made available for public review and comment.





Technical Studies

The following studies were completed in conjunction with the Planning Act applications, which also inform the EA Study:

- Planning Justification Report by GSP Group
- Community Design Guidelines by GSP Group
- Functional Servicing Report by R.J. Burnside & Associates Limited (Burnside)
- Stormwater Management Report by Burnside
- Water Servicing Study by TYLin International Canada Inc.
- Environmental Impact Assessment by Beacon Environmental (Beacon)
- Natural Heritage Memo by Beacon
- Environmental Noise Report by Jade Acoustics
- Transportation Report by BA Group
- Stage 1 and 2 Archaeological Assessment by WSP (Golder)
- Preliminary Geotechnical Investigation by WSP (Golder)
- Hydrogeological Investigation by WSP (Golder)
- Water Supply Investigation by WSP (Golder)
- Water Supply Memo by WSP (Golder)



Summary of Key Technical Studies

Natural Heritage Resources

- All significant habitat and natural heritage areas being preserved / protected from development. Enhancements are provided in other areas.

Archaeological Resources

- Stage 1 and 2 Archaeological Assessments cleared both the entire SE Site and the NW Site of archaeological resources.
- First Nation communities participated in field work and pre-consultation.

Hydrogeological Conditions

- Site characterized by low permeability surficial soils, a desirable site condition.
- Existing golf course serviced by groundwater wells and an onsite septic system.
- Existing golf course wells draw water from the deep bedrock aquifer.
- The deep bedrock aquifer is separated from shallow wells by the low permeability soil overburden that extends 20m to 30m below grade.
- There is no identified interaction between shallow water wells and the deep bedrock wells on the site.



Alternative Solutions - Water

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to an Existing Municipal Water Supply System

- Requires new watermain from existing system in Fergus along Wellington Road 19 to development site.
- Requires reservoir, booster pumping station, re-chlorination and backup power on NW Site.

3. New Onsite Communal Water Supply and Treatment System

- Commissioning of new onsite wells.
- Requires raw water supply main.
- Requires new onsite communal water treatment plant (WTP), reservoir and backup power.
- Requires water distribution system via feedermain from WTP to the subdivision.

Alternative Solutions - Wastewater

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to Existing Municipal Wastewater System

- Conveyance of untreated wastewater via sewage pumping station and new forcemain from development within Wellington County Road 19 right-of-way (ROW) and within local road ROWs to the existing wastewater treatment plant (WWTP) in Fergus.

3. New Communal WWTP and Subsurface Discharge

- Wastewater treated on-site and discharged to dispersal beds within the NW Site; No off-site works.

4. New Communal WWTP and Discharge Treated Sewage Effluent to a surface receiving waterbody

- Wastewater treated on-site and then conveyed by piping within existing municipal ROWs (Wellington County Rd 19, 2nd Line) to discharge outfall.
- Discharge outfall location is Grand River.

5. New Communal Wastewater Treatment Plant and Discharge to Existing Irrigation Ponds followed by Beneficial Reuse for Golf Course Irrigation

- Wastewater treated on-site and discharged to irrigation ponds within the NW Site; No off-site works.

Alternative Solutions Evaluation Criteria

- **Natural Environment**
 - Impacts to Designated Site / Species
 - Impacts to Surface Water Quality
 - Impacts to Groundwater Quality and Quantity
 - Impacts to Hazard Lands
 - Impacts to Vegetation and Terrestrial Habitat
 - Impacts to Aquatic Habitat
 - Source Water Protection
- **Socio-Cultural Environment**
 - Compatibility with Official Plan and Provincial Growth Plans
 - Heritage Resources (archaeological features, built heritage, and cultural landscapes)
 - Noise impacts
 - Nuisance impacts
 - Impact to existing private wells
- **Technical Environment**
 - Ability to service proposed development
 - Approvals / permitting requirements
 - Site considerations and construction requirements / complexity
 - Operation and maintenance requirements and complexity
 - Conformity with applicable guidelines and standards
- **Financial Factors**
 - Capital costs
 - Operation and Maintenance costs

Evaluation of Alternative Solutions – Water

Criteria	1: Do Nothing	2: Connect to Existing Municipal Water Supply System	3: New Onsite Communal Water Supply System
Natural Environment	No impact over existing conditions.	Higher impact due to length of watermain / impact footprint.	Lower impact associated with Water Treatment Plant (WTP) footprint.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>	<i>Less Preferred</i>
Socio-Cultural Environment	Not consistent with Official Plan (OP). Does not contribute to housing per Bill 23. Continuation of golf course operations on SE Site may have potential impacts to shallow groundwater.	Consistent with OP. Contributes to housing per Bill 23. Potential for impact to archaeological resources. Construction noise and traffic impacts greater due to length of watermain.	Compatible with OP. Contributes to housing per Bill 23. No known archaeological impacts. Noise from onsite WWTP operation can be mitigated. No traffic impacts anticipated. Visual impacts can be screened.
<i>Ranking</i>	<i>Less Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>
Technical Criteria	No services to lands designated for development. No construction or operations and maintenance (O&M) requirements. Does not necessarily mean that no further development in the community would occur.	Requires an increase in water taking from existing municipal water supply – capacity to be confirmed. Requires approvals. Moderate complexity in O&M.	Can adequately service development. Requires approvals. Moderate complexity in O&M.
<i>Ranking</i>	<i>Least Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>
Financial Criteria	No capital or O&M costs.	Capital Costs ~ \$10M (Developer responsibility). Moderate O&M costs (Developer responsibility). Capital costs for upgrades to existing water supply system unknown (Developer responsibility).	Capital Costs ~ \$10M (Developer responsibility). Moderate O&M costs (Developer responsibility).
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>	<i>Less Preferred</i>
Overall Ranking	<i>Less Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>
Meets Project Opportunity (PO) Statement	No. Does not meet Project Opportunity Statement. Not a viable alternative.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.
Recommendation	Not Carried Forward	Not Carried Forward	Carried Forward

Evaluation of Alternative Solutions – Wastewater

Criteria	1: Do Nothing	2: Connect to Existing Municipal Wastewater System	3: New Onsite Water System with Subsurface Discharge	4: New Onsite Water System with Discharge to Waterbody	5: New Onsite Water System with Discharge to Irrigation Pond
Natural Environment	No impact over existing conditions.	Higher impact due to length of forcemain / impact footprint.	Moderate impact associated with dispersal beds footprint.	Higher impact due to discharge within Grand River floodplain.	Lower impact associated with only onsite discharge piping to the pond.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>	<i>Somewhat Preferred</i>	<i>Least Preferred</i>	<i>More Preferred</i>
Socio-Cultural Environment	Not consistent with Official Plan (OP). Does not contribute to housing per Bill 23.	Consistent with OP. Contributes to housing per Bill 23. Potential for impact to archaeological resources. Construction noise and traffic impacts greater due to work in urban area.	Consistent with OP. Contributes to housing per Bill 23. Potential for archaeological resources in dispersal bed areas. Noise from onsite WWTP operation can be mitigated. No traffic impacts anticipated. Visual impacts can be screened.	Consistent with OP. Contributes to housing per Bill 23. Potential for archaeological resources along discharge route and outfall. Noise associated discharge route construction. Noise from onsite WWTP operation can be mitigated. Traffic impacts associated with discharge route. Visual impacts can be screened.	Consistent with OP. Contributes to housing per Bill 23. No known archaeological impacts. Noise from onsite WWTP operation can be mitigated. No traffic impacts anticipated. Visual impacts can be screened.
<i>Ranking</i>	<i>Somewhat Preferred</i>	<i>Least Preferred</i>	<i>Somewhat Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>
Technical Criteria	No services to lands designated for development. No construction or O&M requirements. Does not necessarily mean that no further development in the community would occur.	Insufficient treatment capacity at existing WWTP to accommodate development. Would require upgrades to existing WWTP. Requires long forcemain. Less O&M.	Can adequately service development. Requires approvals.	Can adequately service development. Requires more complex approvals due to outfall. More complex equipment compared to Alternatives 3 and 5. More operator attention.	Can adequately service development. Requires approvals.
<i>Ranking</i>	<i>Least Preferred</i>	<i>Less Preferred</i>	<i>More Preferred</i>	<i>Somewhat Preferred</i>	<i>Most Preferred</i>
Financial Criteria	No capital or O&M costs.	Capital Cost for forcemain ~ \$5M (Developer responsibility). Capital costs for existing WWTP upgrades unknown. Lowest O&M costs (Developer responsibility).	Capital Costs ~ \$5M (Developer responsibility). Moderate O&M costs (Developer responsibility).	Capital Costs ~ \$7.5M (Developer responsibility). Highest O&M costs (Developer responsibility).	Capital Costs ~ \$2.5M (Developer responsibility). Additional O&M costs associated with management of irrigation of effluent (Developer responsibility).
<i>Ranking</i>	<i>Most Preferred</i>	<i>Somewhat Preferred</i>	<i>Less Preferred</i>	<i>Least Preferred</i>	<i>Somewhat Preferred</i>
Overall Ranking	<i>More Preferred</i>	<i>Less Preferred</i>	<i>Somewhat Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>
Meets PO Statement	No. Does not meet Project Opportunity Statement. Not a viable alternative.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.	Yes. Meets Project Opportunity Statement.
Recommendation	Not Carried Forward	Not Carried Forward	Not Carried Forward	Not Carried Forward	Carried Forward

Alternative Design Concepts – Water (Primary Disinfection Treatment)

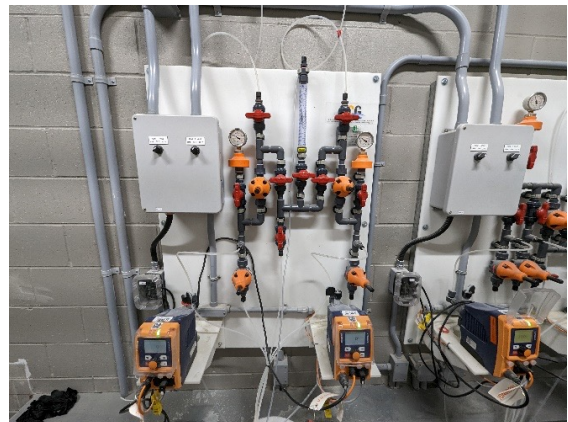
1a. Ultraviolet Primary Disinfection

- Uses ultraviolet light to inactivate pathogens (i.e., Cryptosporidium and Giardia¹).
- Minimal to no impact to taste and odour of water.
- Effective as part of a multi-barrier approach to provide a second form of treatment.

1b. Chlorine Primary Disinfection

- Inactivates pathogens in water (i.e., bacteria and viruses).
- Ineffective against Cryptosporidium¹.
- Results in a distinctive odour and taste in treated water.

Note 1: Cryptosporidium and Giardia have not been detected in the groundwater source.



Alternative Design Concepts – Water (Aesthetic Treatment for Hardness)

2a. Ion Exchange

- Salt-based water softener (resin) which replaces calcium and magnesium ('hard' ions) with sodium.
- When resin is saturated with magnesium and calcium, the system is cleaned to flush the minerals away, replacing them with sodium.
- Cleaning of resin produces wastewater containing salt that is detrimental to proposed irrigation system.



2b. Softening Membranes

- Utilizes differential pressure to remove calcium and magnesium ('hard' ions) using semi-permeable membranes.
- This process does not generate salt in the wastewater stream.
- Cleaning of membranes is required.



2c. Crystallization Technology

- Typically used as a decentralized household use system for reducing water hardness.
- Utilizes crystallization technology to change state of minerals from ionic to crystals.
- Crystals are filtered out of the solution and minerals stay suspended in water as they flow through the system in crystalline form.



Alternative Design Concepts – Water (Storage)

3a. Above Ground

- Store treated water in a standpipe.
- Can be visually seen.
- Easily accessible to maintain and repair.
- Maintains minimum gravity pressure in the system.

3b. Below Ground

- Store treated water in an inground reservoir.
- Minimal visual impact.
- Difficulty to access for maintenance and repair.



Alternative Design Concepts - Wastewater

1. **Membrane Bioreactor (MBR)**
 - Involves both biological aeration processes and filtration through microfiltration membrane.
2. **Sequencing Batch Reactor (SBR)**
 - Uses conventional biological treatment processes in a single reactor tank.
 - Treats one batch of wastewater at a time.
3. **Aerobic Foam Media Trickling Filter**
 - Passive system.
 - Intermittently sprays wastewater over treatment media.
 - Microorganisms that grow on the media treat the liquid.
4. **Moving Bed Biofilm Reactor (MBBR)**
 - Uses conventional aerobic biological treatment processes with enhanced treatment with a media in a bioreactor.
 - Microorganisms grow on the media.
 - Requires clarifier tanks before and after bioreactor.

* For all alternatives, the treated effluent is further filtered, and UV disinfection applied.





Evaluation Criteria - Water

- **Natural Environment**
 - Impacts to natural environment (general)
- **Socio-Cultural Environment**
 - Operational nuisance impacts (noise, odour)
 - Operational traffic impacts
 - Visual impacts
- **Technical Environment**
 - Ability to meet water treatment / storage criteria
 - Land area requirements
 - Modularity
 - Operation and maintenance requirements and complexity
- **Financial Environment**
 - Comparative capital costs
 - Estimated operations and maintenance costs
 - Estimated 20-year life cycle costs

Evaluation Criteria - Wastewater

- **Socio-Cultural Environment**
 - Operational nuisance impacts (noise, odour)
 - Operational traffic impacts
- **Technical Environment**
 - Ability to meet effluent criteria
 - Land area requirements
 - Modularity
 - Operation and maintenance requirements and complexity
- **Financial Environment**
 - Comparative capital costs
 - Estimated operations and maintenance costs
 - Estimated 20-year life cycle costs

Evaluation of Alternative Design Concepts – Water (Disinfection)

Criteria	1a: Primary Disinfection – Ultraviolet Disinfection	1b: Primary Disinfection - Chlorine
Natural Environment	None.	Negative impact on natural environmental in the event of a spill.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Least Preferred</i>
Socio-Cultural Environment	Minimal traffic impact due to regular inspection and maintenance. Minimal operational nuisance.	Minimal noise related to pump operation. Minimal chlorine odour. Ventilation system required to ensure cycling of air for chemical room. Moderate operational nuisance.
<i>Ranking</i>	<i>Most Preferred</i>	<i>More Preferred</i>
Technical Criteria	Requires regular cleaning by mechanical wipers, ultrasonics, or chemicals. Inspection of UV chamber interior required every six months. Safe for operators (no chemical handling, transportation, or storage). Requires less contact time than Alternative 1b.	Cleaning and maintenance of components is required every six months and equipment and chlorine storage tank to be inspected and cleaned annually. Chemical delivery every 3 to 4 weeks. Regular inspection of the equipment, chlorine solution and free chlorine residual levels, adjustment of equipment and dosage rates as required. All forms of chlorine are highly corrosive and toxic as such, pose a risk to operators and require increased training and safety procedures than Alternative 1a.
<i>Ranking</i>	<i>Most Preferred</i>	<i>More Preferred</i>
Financial Criteria	High estimated capital costs (Developer responsibility). Moderate estimated O&M costs (Developer responsibility).	Moderate estimated capital costs (Developer responsibility). High estimated O&M costs (Developer responsibility).
<i>Ranking</i>	<i>Most Preferred</i>	<i>More Preferred</i>
Overall Ranking	<i>Most Preferred</i>	<i>More Preferred</i>
Recommendation	Recommended	Not Carried Forward

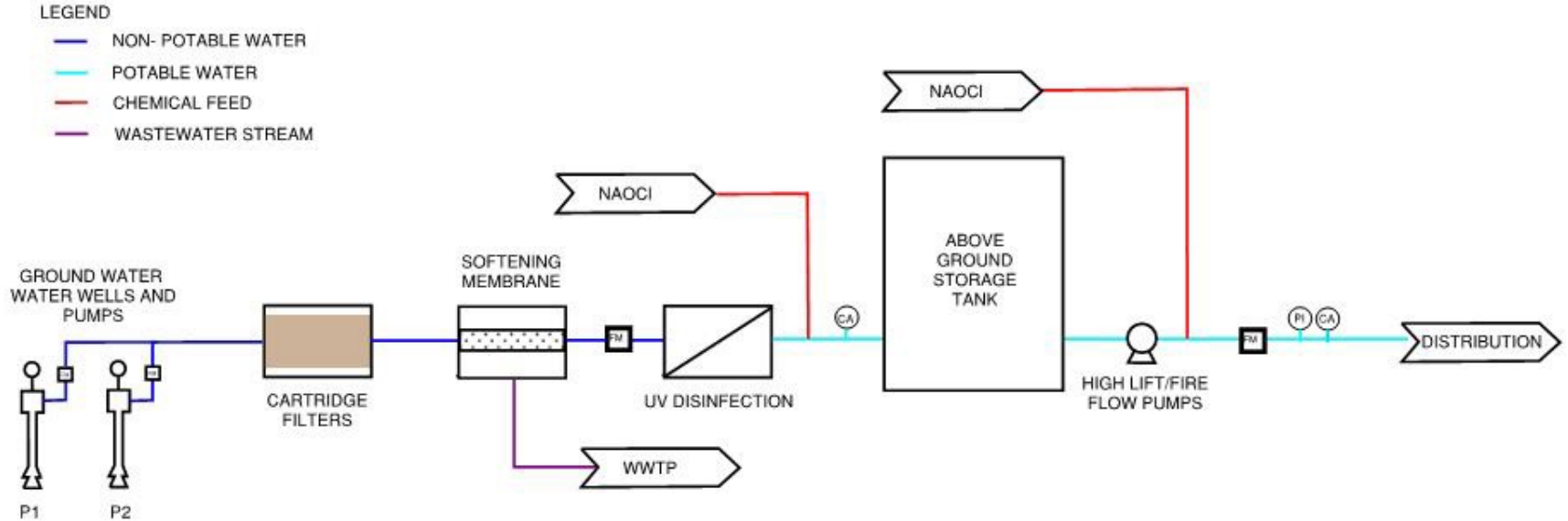
Evaluation of Alternative Design Concepts – Water (Aesthetic Treatment for Hardness)

Criteria	2a: Aesthetic (Hardness) – Ion Exchange	2b: Aesthetic (Hardness) – Softening Membranes	2c: Aesthetic (Hardness) – Crystallization Technology
Natural Environment	Potential impact to soils as result of spray irrigation to golf course.	Minimal to no impact.	Minimal to no impact.
<i>Ranking</i>	<i>Least Preferred</i>	<i>Most Preferred</i>	<i>Most Preferred</i>
Socio-Cultural Environment	Minimal noise related to pump operation. Moderate noise for short duration during operation/cleaning. Higher operational nuisance. Minimal traffic impact due to salt deliveries (3 to 4 weeks) and regular inspection and maintenance.	Minimal noise related to pump operation. Higher operational nuisance. Minimal traffic impact due to regular inspection and maintenance.	Minimal noise and operational nuisance. Maintenance for each residential unit within the development would be required. Minimal to no traffic.
<i>Ranking</i>	<i>More Preferred</i>	<i>More Preferred</i>	<i>More Preferred</i>
Technical Criteria	Ion exchange resin needs to be replaced every 8-12 years. Chemical delivery (dry salt) required every 3 to 4 weeks. Regular regeneration of resin is required. Periodic inspection and maintenance of brine tank.	Membranes replacement (approx. every 10 years). Regular cleaning of membranes is required. Periodic inspection and maintenance.	Media or cartridge replacement range is from 1 to 3 years. No drainage required. Pre-filter to be replaced every 3 to 6 months. Periodic inspection and maintenance. Residents would be responsible for operation.
<i>Ranking</i>	<i>More Preferred</i>	<i>Most Preferred</i>	<i>Least Preferred</i>
Financial Criteria	Moderate estimated capital and O&M costs (Developer responsibility). O&M costs include: - Regular regeneration and maintenance of resin. - Re-supply of dry salt. - Moderate energy consumption.	Moderate estimated capital and O&M costs (Developer responsibility). O&M costs include: - Cleaning of membranes. - Membrane replacement (every 10 years). - Higher energy consumption than Alternative 2a.	High estimated capital and O&M costs (Developer responsibility). Installation is required at all residential units when compared to a single system at the water treatment plant. O&M costs include: - Media or cartridge to be replaced every 1 to 3 years. - Low energy consumption.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Most Preferred</i>	<i>More Preferred</i>
Overall Ranking	<i>More Preferred</i>	<i>Most Preferred</i>	<i>Least Preferred</i>
Recommendation	Not Carried Forward	Recommended	Not Carried Forward

Evaluation of Alternative Design Concepts – Water (Storage)

Criteria	3a: Storage - Above Ground	3b: Storage - Below Ground
Natural Environment	Minimal to no impact.	Minimal to no impact.
<i>Ranking</i>	<i>Most Preferred</i>	<i>Most Preferred</i>
Socio-Cultural Environment	Minimal noise and no odour. Minimal operational nuisance. Can be observed at grade. Less architectural options compared to Alternative 3b. Susceptible to vandalism.	Minimal noise and no odour. Moderate operational nuisance (difficult to service and inspect). Cannot be observed at grade.
<i>Ranking</i>	<i>More Preferred</i>	<i>More Preferred</i>
Technical Criteria	Larger building footprint as a result of two separate structures. Can be expanded vertically, if required. Second tank can be provided for additional capacity with similar foundation design, if required. Manways provided for easy access. Defects/leaks are easily identified and repaired. More prone to freezing during the winter.	Minimal increase in footprint. Reservoir can be integrated into the below ground foundation design of the WTP. Additional water reservoir cells can be constructed. Complexity to expand a subgrade reservoir is higher than expanding an above ground tank due to excavation, existing foundation constraints, and shoring. Increased confined space training and safety procedures. Difficult identifying and repairing cracks and leaks. Natural protection against the extreme cold and heat, easier to maintain temperate.
<i>Ranking</i>	<i>Most Preferred</i>	<i>More Preferred</i>
Financial Criteria	Moderate estimated capital costs (Developer responsibility) due to: - Less excavation and shoring systems - Dependent on soils and groundwater - Insulation and mixing required	High estimated capital costs (Developer responsibility) due to: - Deeper and larger excavation and shoring systems - Dependent on soils and groundwater - Insulation and waterproofing required
<i>Ranking</i>	<i>Most Preferred</i>	<i>More Preferred</i>
Overall Ranking	<i>Most Preferred</i>	<i>More Preferred</i>
Recommendation	Recommended	Not Carried Forward

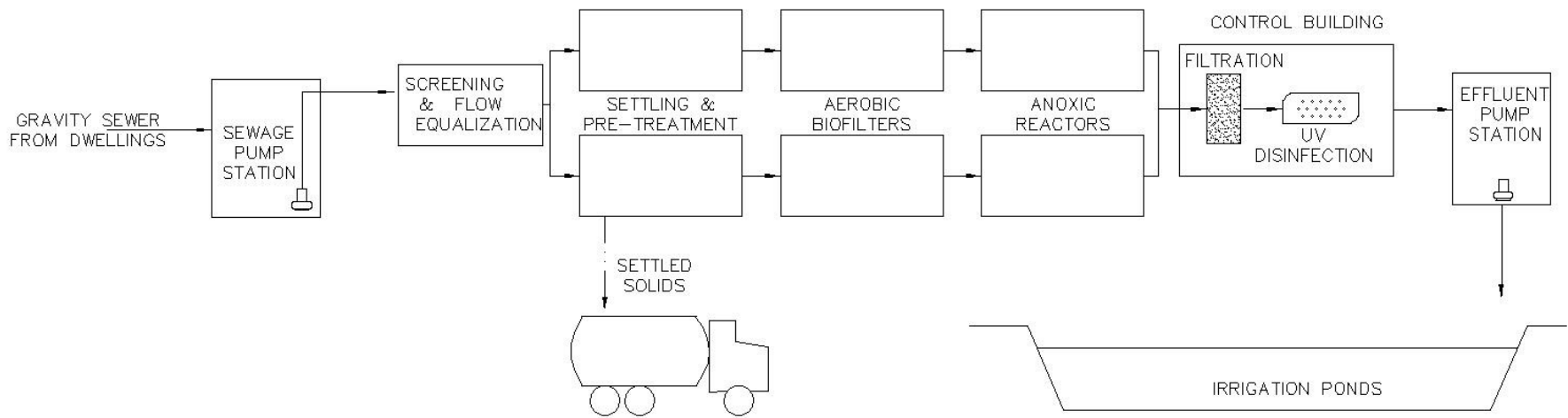
Preferred Water Treatment Design Solution



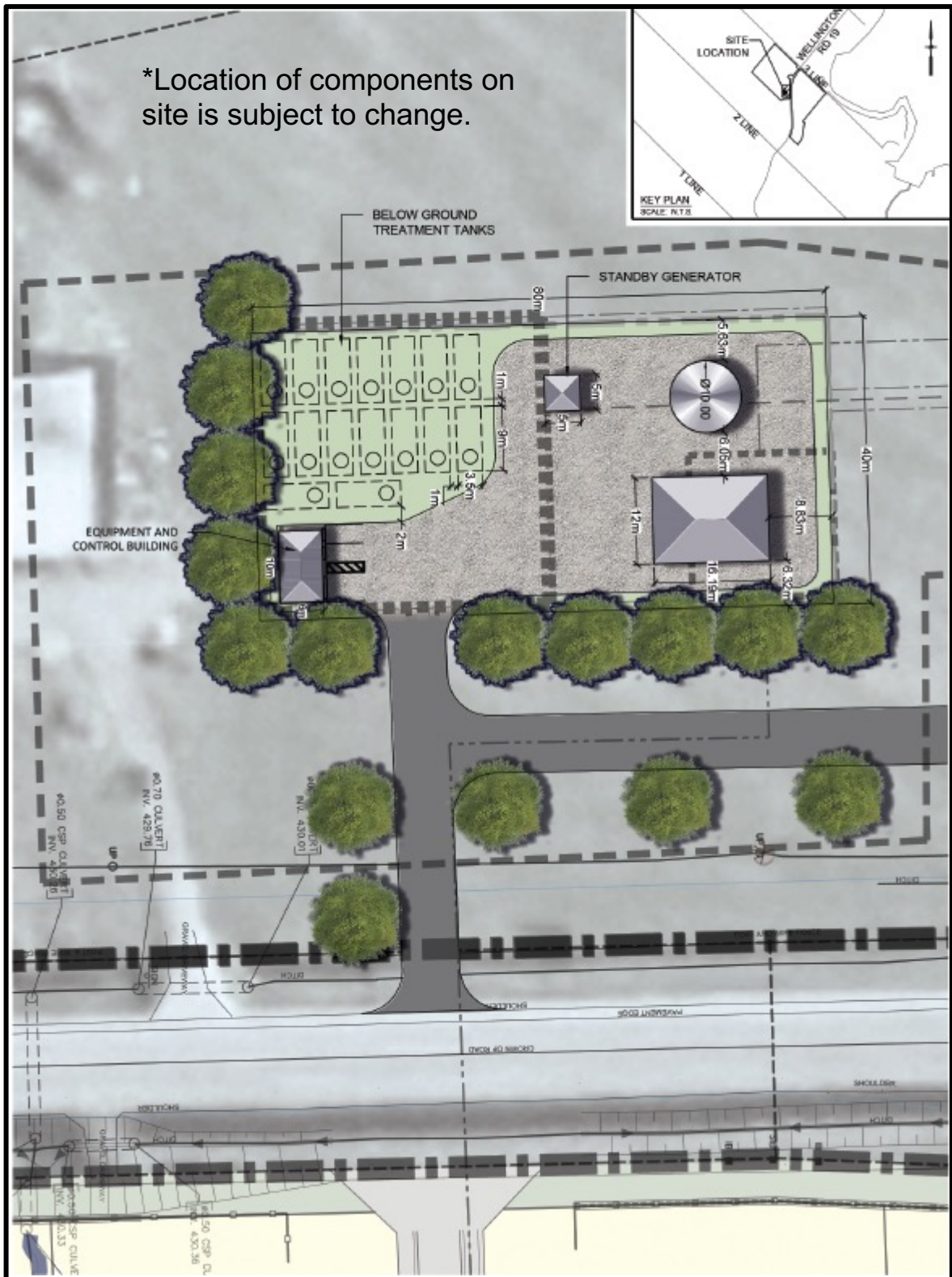
Evaluation of Alternative Design Concepts – Wastewater

Criteria	1: Membrane Bioreactor (MBR)	2: Sequencing Batch Reactor (SBR)	3: Aerobic Foam Media Trickling Filter	4: Moving Bed Biofilm Reactor (MBBR)
Socio-Cultural Environment	Noise associated with the operation of the MBR system can be mitigated to ensure applicable noise guidelines are met at the proposed and existing noise sensitive receptors.	Noise associated with the operation of the SBR system can be mitigated to ensure applicable noise guidelines are met at the proposed and existing noise sensitive receptors.	Limited mechanical equipment with this technology, no air blowers or large equipment, so minimal noise generation.	Noise associated with the operation of the MBBR system can be mitigated to ensure applicable noise guidelines are met at the proposed and existing noise sensitive receptors.
<i>Ranking</i>	<i>Less Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>	<i>Less Preferred</i>
Technical Criteria	Best available technology for phosphorus removal. Can meet objectives for other parameters (BOD, TSS, pathogens) Somewhat inconsistent nitrate removal performance; may require supplemental equipment/ processes. System can be modular. Less resilient to low flows and loadings during initial phase as dwellings gradually become occupied. Plant may struggle to meet effluent objectives during initial phases of development due to low incoming sewage volumes. Operator on site 3x per week for system checks. Highest level of mechanical parts and complex equipment. Requires air blowers.	Above ground building to house UV disinfection equipment, chemical dosing, controls, air blowers, tertiary filters. Below ground concrete tanks to contain SBR aerobic and anoxic processes. Similar to Alternative 4. Operator on site 3x per week for system checks. Moderate level of mechanical parts and complex equipment. Requires air blowers. System is somewhat modular. Can be constructed as multiple parallel treatment trains but may require more initial capital outlay than other options. Less resilient to low flows and loadings during initial phase as dwellings gradually become occupied. Plant may struggle to meet effluent objectives during initial phases of development due to low incoming sewage volumes.	Above ground building to house UV disinfection equipment, chemical dosing, controls, tertiary filters. Below ground tanks would contain most of treatment equipment and processes or could be entirely housed in above ground containers. Similar overall footprint to Alternatives 2 and 4. Smallest building footprint. Operator on site 1x per week for system checks. Minimal mechanical parts and no complex equipment. No air blowers required. High degree of flexibility to accommodate multiple treatment trains and modular installation. More resilient to low flows and loadings during initial phase as dwellings gradually become occupied.	Above ground Control Building to house UV disinfection equipment, chemical dosing, controls, air blowers, tertiary filters. Below ground tanks to contain most of the treatment equipment and processes including bioreactors, clarifiers, anoxic tanks. Similar to Alternative 2. Operator on site 1x per week for system checks. Moderate level of mechanical parts and complex equipment. Requires air blowers. System is somewhat modular. Can be constructed as multiple parallel treatment trains. Less resilient to low flows and loadings during initial phase as dwellings gradually become occupied. Plant may struggle to consistently meet effluent objectives during initial phases of development due to low incoming sewage volumes.
<i>Ranking</i>	<i>Less Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>	<i>Somewhat Preferred</i>
Financial Criteria	\$3.4M capital costs. \$160K to \$180K O&M costs. \$6.2M life cycle cost. (Developer responsibility)	\$3.1M capital costs. \$160K to \$180K O&M costs. \$5.9M life cycle cost. (Developer responsibility)	\$2.5M capital costs. \$60K to \$80K O&M costs. \$3.6M life cycle cost. (Developer responsibility)	\$2.8M capital costs. \$80K to \$100K O&M costs. \$4.2M life cycle cost. (Developer responsibility)
<i>Ranking</i>	<i>Least Preferred</i>	<i>Least Preferred</i>	<i>Most Preferred</i>	<i>Somewhat Preferred</i>
Overall Ranking	<i>Less Preferred</i>	<i>Less Preferred</i>	<i>Most Preferred</i>	<i>Somewhat Preferred</i>
Recommendation	Not Carried Forward	Not Carried Forward	Recommended	Not Carried Forward

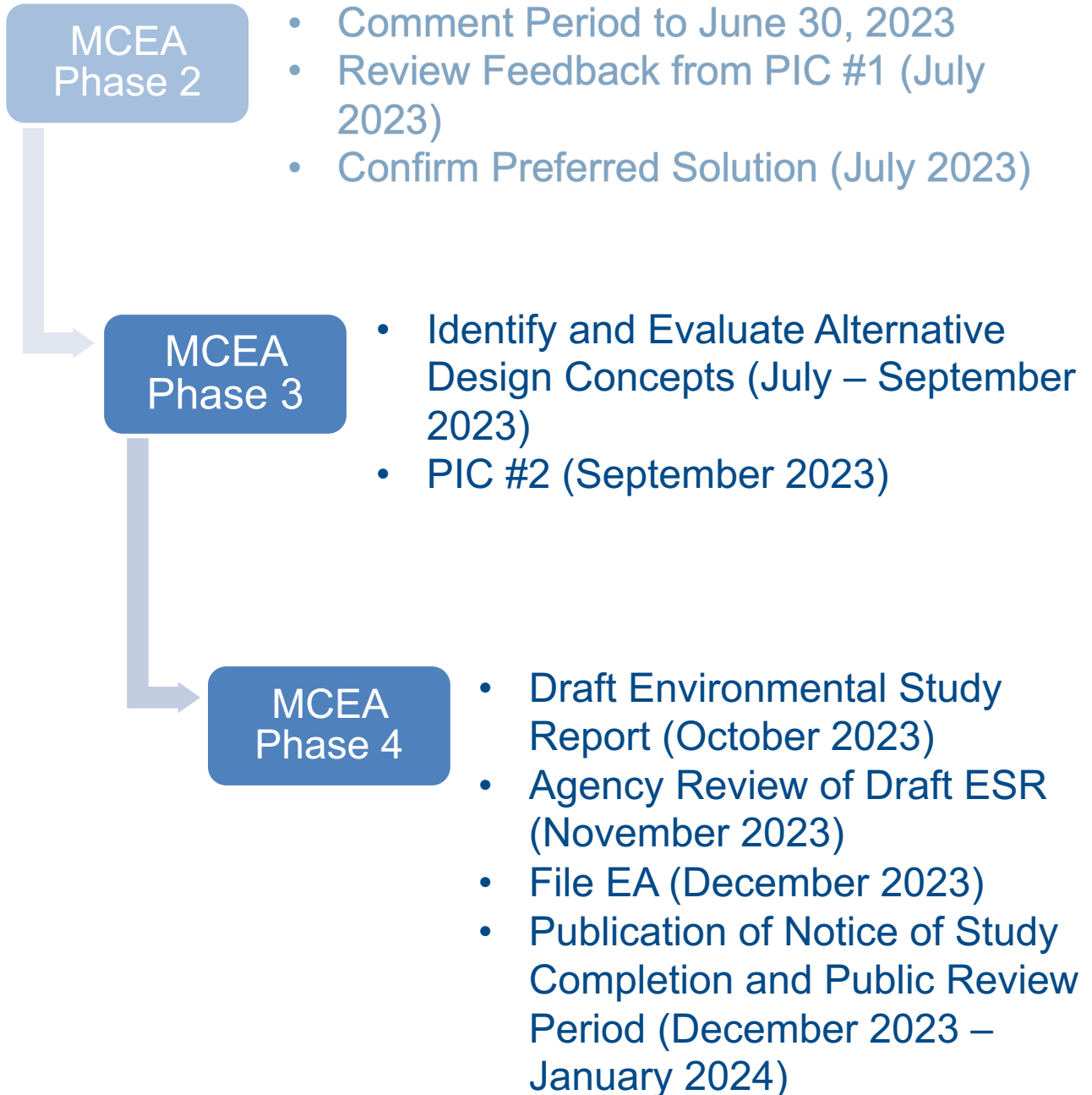
Preferred Wastewater Treatment Design Solution



Proposed Site Plan Concept



Next Steps





Invitation for Participation

Thanks for participating in this PIC.

Public input is an important component of the decision-making process.

You are invited to provide comments by completing the comment sheet and submitting to the comment box today or FergusGolfEA@rjburnside.com

by October 2, 2023.

**Theyonas Manoharan, P.Eng.
Project Manager**

Fergus Development Inc. / Geranium
3190 Steeles Avenue East, Suite 300
Markham, ON L3R 1G9
Tel: 905-477-1177 ext. 257

**Jennifer Vandermeer, P. Eng.
Consultant Project Manager**

R. J. Burnside and Associates Limited
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Guelph, ON N1H 1C4
Tel: 226-486-1559

Email: FergusGolfEA@rjburnside.com

A copy of the display boards and presentation is available at www.rjburnside.com/FergusGEA

Fergus Golf Club Redevelopment Environmental Assessment Study

Public Information Centre #2

September 11, 2023

Belwood Hall, Township of Centre Wellington

Introductions

Geranium

Theyonas Manoharan, P.Eng.
Project Manager

GSP Group

Hugh Handy, MCIP, RPP
Vice President

Evan Wittmann, MCIP, RPP
Planner

Ainley Group / TYLin

Brian Edwards, B.Sc., BAS
Water Servicing Advisor

Beacon

Carolyn Glass, B.Sc., MES
Senior Ecologist

Burnside

Jennifer Vandermeer, P.Eng.
Project Manager and EA Lead

Steven Roorda, P.Eng.
Senior Project Manager

Anne Egan, P.Eng.
Wastewater Servicing Lead

WSP

John Piersol, M.Sc., P.Geo.
Hydrogeologist

Consultant Team



Environmental Assessment Lead,
Civil Engineering



Transportation



Land Use Planning,
Landscaping Architecture,
Urban Design



Acoustic Engineering



Water Treatment
Design



Hydrogeology,
Geotechnical,
Archaeology
Environmental



Legal



Natural Heritage



Legal

Purpose of Public Information Centre #2

PIC #2 is the second of three mandatory public contact points under the 2023 Municipal Class Environmental Assessment (MCEA) process for Schedule C Projects.

The purpose of PIC #2 is to:

- Provide a summary of PIC #1
- Provide an opportunity to participate and give input
- Discuss the servicing design concepts



PIC #2 will present:

- Project Opportunity Statement
- Results of Technical Investigations
- Preferred servicing solution
- Alternative design concepts considered
- Next steps

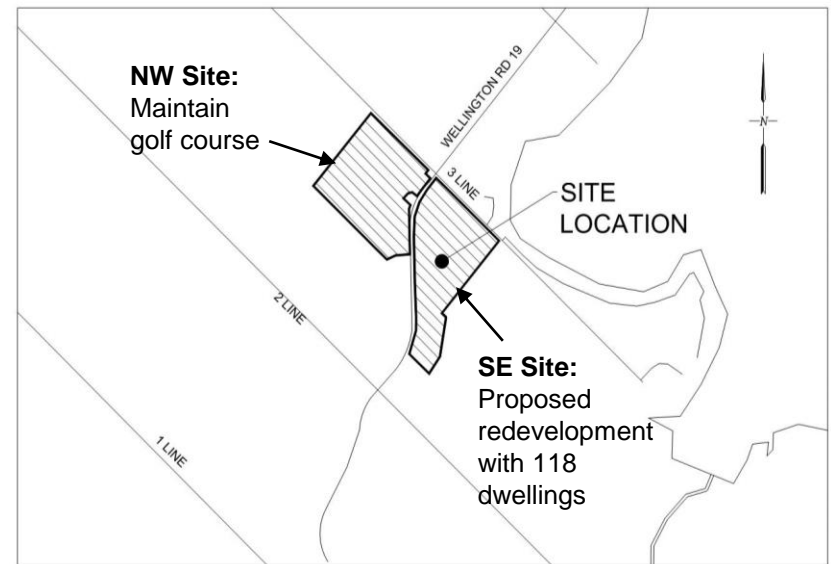


Project Description

The Fergus Golf Club lands are located along the western side of 3rd Line, on both the northern side (“NW Site”) and southern side (“SE Site”) of Wellington Road 19.

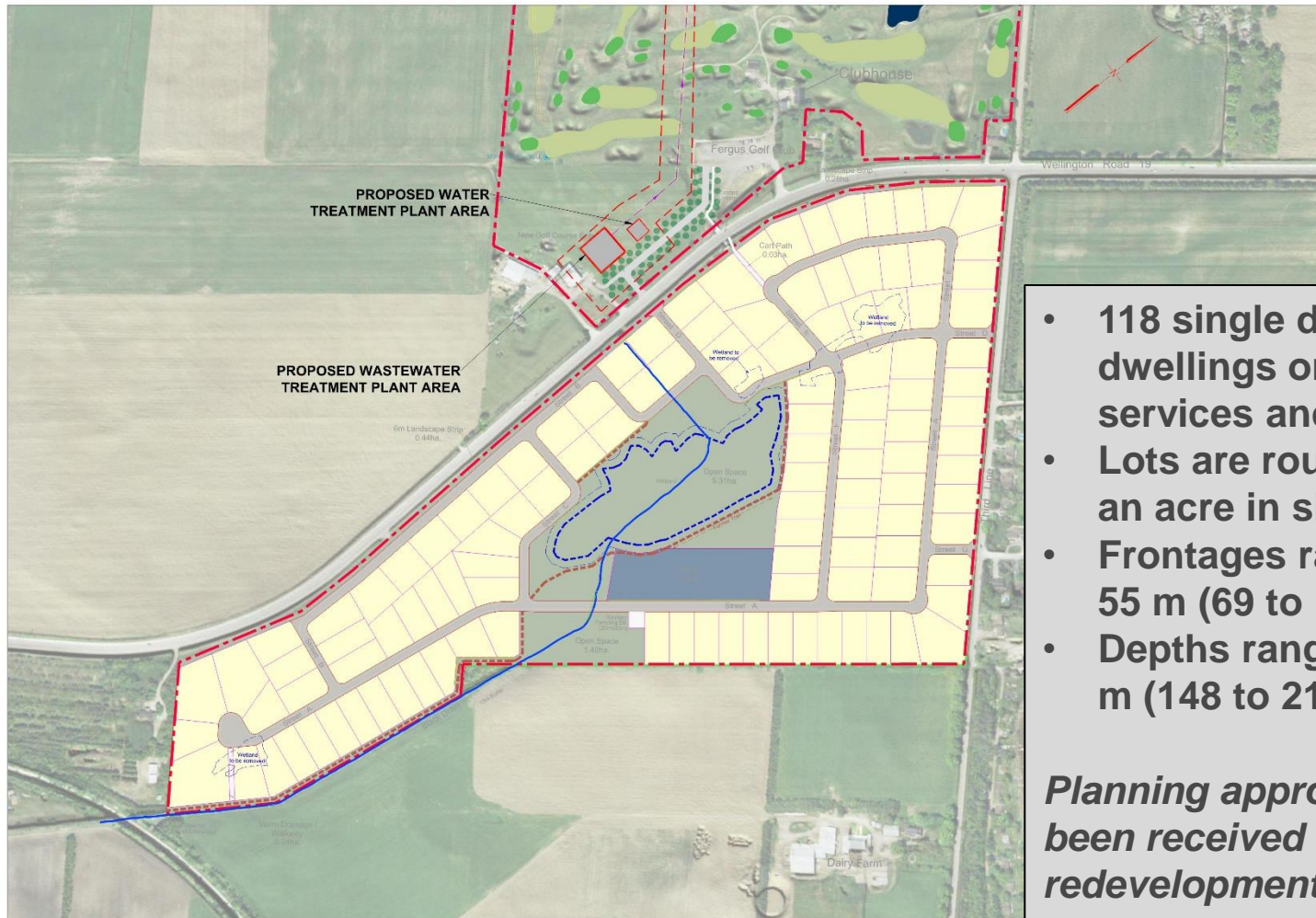
The proposed Fergus Golf Club redevelopment will consist of:

- The existing northwestern golf course (the “NW Site”)
- Redeveloping the southeast golf course (the “SE Site”) into a private condominium development with 118 single family dwellings.



Study Area Map

Planned Redevelopment

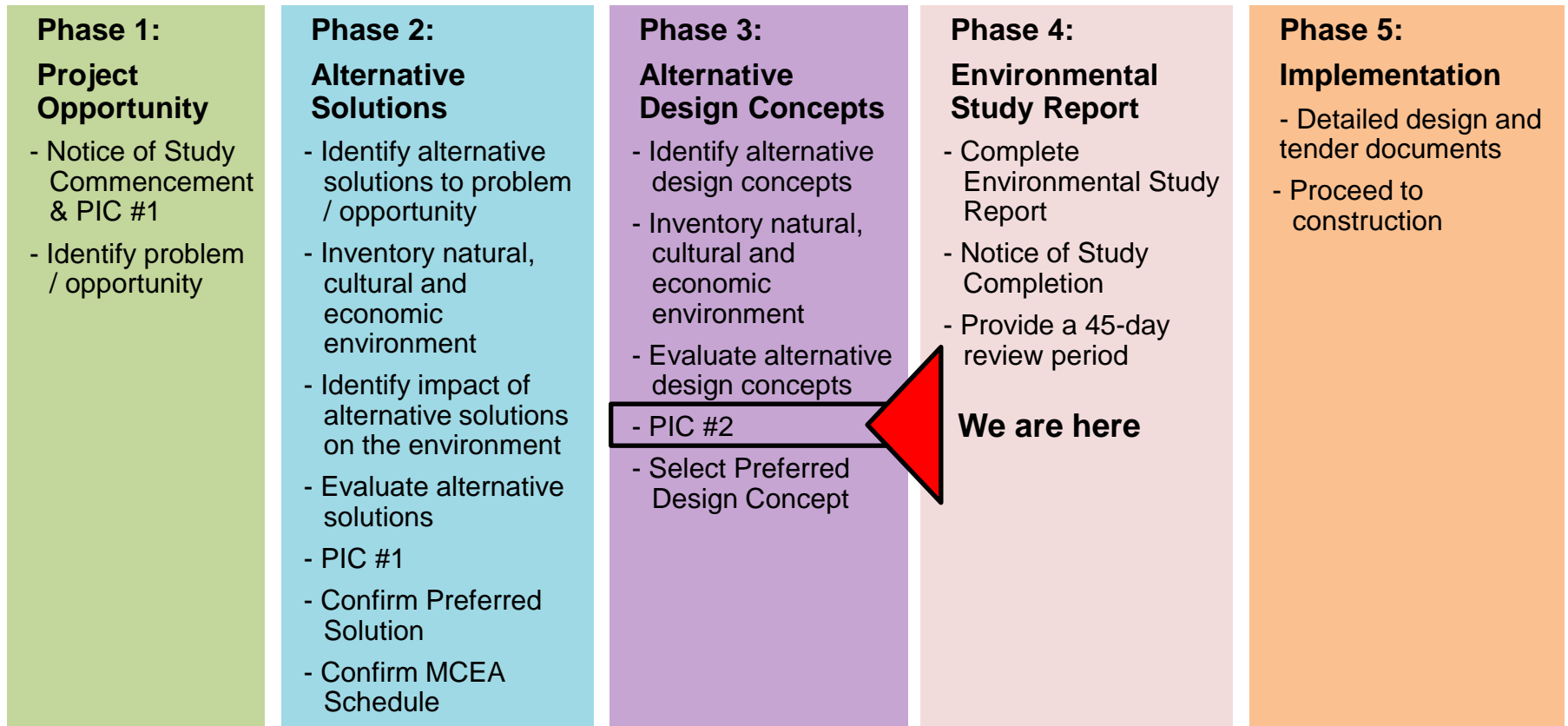


- 118 single detached dwellings on private services and roads
 - Lots are roughly half an acre in size
 - Frontages range 21 to 55 m (69 to 180 ft)
 - Depths range 45 to 65 m (148 to 213 ft)
- Planning approvals have been received for this redevelopment*

Study Context

- To undertake water and wastewater servicing for the proposed redevelopment, the Province requires completion of a Schedule C Municipal Class Environmental Assessment (MCEA) Study.
- The 2023 MCEA is an approved Class EA process under the Environmental Assessment (EA) Act.
- Involves completion of Phase 1 to Phase 4 of the MCEA process.
- At the completion of Phase 4, the project will proceed to implementation (Phase 5).

The MCEA Process



Project Opportunity Statement

The project opportunity statement defines the principal starting point in the undertaking of the MCEA Study and assists in defining the scope of the project. The Project Opportunity Statement for this MCEA Study is as follows:

*Fergus Development Inc. is undertaking the redevelopment of a part of the Fergus Golf Club lands, which will provide single detached rural recreational-based housing, based on the findings of a servicing study, on the SE Site. This redevelopment will contribute to satisfying the need and market demand for recreational focused housing in the Township of Centre Wellington and the County of Wellington. To service the new housing units, Fergus Development Inc. needs to **consider options to provide cost-effective and environmentally sound means of providing a potable water supply and wastewater servicing**. Alternatives will be examined as part of the MCEA Study including the impacts of alternatives on the natural, socio-cultural, technical and financial environment.*

The Project Opportunity Statement is a requirement of the MCEA process.

Phase 2 Alternative Solutions

Technical Studies

The following studies were completed in conjunction with the Planning Act applications, which also inform the EA Study:

- Planning Justification Report by GSP Group
- Community Design Guidelines by GSP Group
- Functional Servicing Report by R.J. Burnside & Associates Limited (Burnside)
- Stormwater Management Report by Burnside
- Water Servicing Study by TYLin
- Environmental Impact Assessment by Beacon Environmental (Beacon)
- Natural Heritage Memo by Beacon
- Environmental Noise Report by Jade Acoustics
- Transportation Report by BA Group
- Stage 1 and 2 Archaeological Assessment by WSP (Golder)
- Preliminary Geotechnical Investigation by WSP (Golder)
- Hydrogeological Investigation by WSP (Golder)
- Water Supply Investigation by WSP (Golder)
- Water Supply Memo by WSP (Golder)

Summary of Key Technical Studies

Natural Heritage Resources

- All significant habitat and natural heritage areas being preserved / protected from development. Enhancements are provided in other areas.

Archaeological Resources

- Stage 1 and 2 Archaeological Assessments cleared both the entire SE Site and the NW Site of archaeological resources.
- First Nation communities participated in field work and pre-consultation.

Hydrogeological Conditions

- Site characterized by low permeability surficial soils, a desirable site condition.
- Existing golf course serviced by groundwater wells and an onsite septic system.
- Existing golf course wells draw water from the deep bedrock aquifer.
- The deep bedrock aquifer is separated from shallow wells by the low permeability soil overburden that extends 20m to 30m below grade.
- There is no identified interaction between shallow water wells and the deep bedrock wells on the site.

Alternative Solutions - Water

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to an Existing Municipal Water Supply System

3. New Onsite Communal Water Supply and Treatment System

Alternative Solutions - Wastewater

1. Do Nothing

- No improvements or changes to address the project opportunity statement.
- **Mandatory alternative that must be considered in accordance with the 2023 MCEA Process.**

2. Connect to Existing Municipal Wastewater System

3. New Communal WWTP and Subsurface Discharge

4. New Communal WWTP and Discharge Treated Sewage Effluent to a surface receiving waterbody

5. New Communal Wastewater Treatment Plant and Discharge to Existing Irrigation Ponds followed by Beneficial Reuse for Golf Course Irrigation

Alternative Solutions Evaluation Criteria

- Impacts to Natural Environment
- Impacts to Socio-Cultural Environment
(including noise, heritage resources, archaeology, etc.)
- Impacts to Technical Environment
- Financial Factors

Evaluation of Alternative Solutions

- The Study Team compared the alternative solutions for water and wastewater servicing based on the evaluation criteria.
- Each alternative solution was ranked based on a range of preference.

Evaluation Order of Preference

Water Servicing Alternatives:

Least → Less → Most

Wastewater Servicing Alternatives:

Least → Less → Somewhat → More → Most

- Based on the evaluation process, the most favorable alternatives for water and wastewater servicing were identified and carried forward as Recommended Solutions for Phase 3 of the MCEA process.

Recommended Solutions

- **New Onsite Communal Water Supply and Treatment System**
- **New Onsite Communal Wastewater Treatment Plant System with Discharge to Irrigation Ponds**

Phase 3 Alternative Design Concepts

Alternative Design Concepts – Water

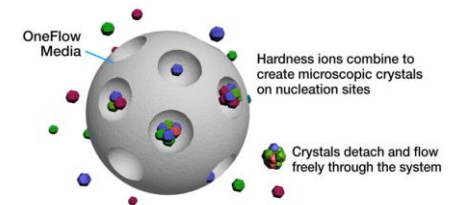
Disinfection Treatment

- 1a. Ultraviolet Primary Disinfection
- 1b. Chlorine Primary Disinfection



Aesthetic Treatment for Hardness

- 2a. Ion Exchange
- 2b. Softening Membranes
- 2c. Crystallization Technology



Storage

- 3a. Above Ground
- 3b. Below Ground



Alternative Design Concepts – Wastewater

1. **Membrane Bioreactor (MBR)**
2. **Sequencing Batch Reactor (SBR)**
3. **Aerobic Foam Media Trickling Filter**
4. **Moving Bed Biofilm Reactor (MBBR)**



Alternative Design Concept Evaluation Criteria

Water Servicing

- **Natural Environment**
 - Impacts to natural environment (general)
- **Socio-Cultural Environment**
 - Operational nuisance impacts (noise, odours)
 - Operational traffic impacts
 - Visual impacts
- **Technical Environment**
 - Ability to meet water treatment / storage criteria
 - Land area requirements
 - Modularity
 - Operational and Maintenance requirements and complexity
- **Financial Factors**
 - Comparative and capital costs
 - Estimated operation and maintenance costs
 - Estimated life cycle costs

Wastewater Servicing

- **Socio-Cultural Environment**
 - Operational nuisance impacts (noise, odours)
 - Operational traffic impacts
- **Technical Environment**
 - Ability to meet water treatment / storage criteria
 - Land area requirements
 - Modularity
 - Operational and Maintenance requirements and complexity
- **Financial Factors**
 - Comparative and capital costs
 - Estimated operation and maintenance costs
 - Estimated life cycle costs

Evaluation of Design Concepts

- The Study Team compared the alternative design concepts for water and wastewater design concepts based on the evaluation criteria.
- Each design concept was ranked based on a range of preferences.

Evaluation Order of Preference

Water Servicing Alternatives:
Least → More → Most

Wastewater Servicing Alternatives:
Least → Less → Somewhat → More → Most

- Based on the evaluation process, the most favorable design concepts for water and wastewater servicing were identified.
- The following recommended design concepts will be carried forward to implementation.

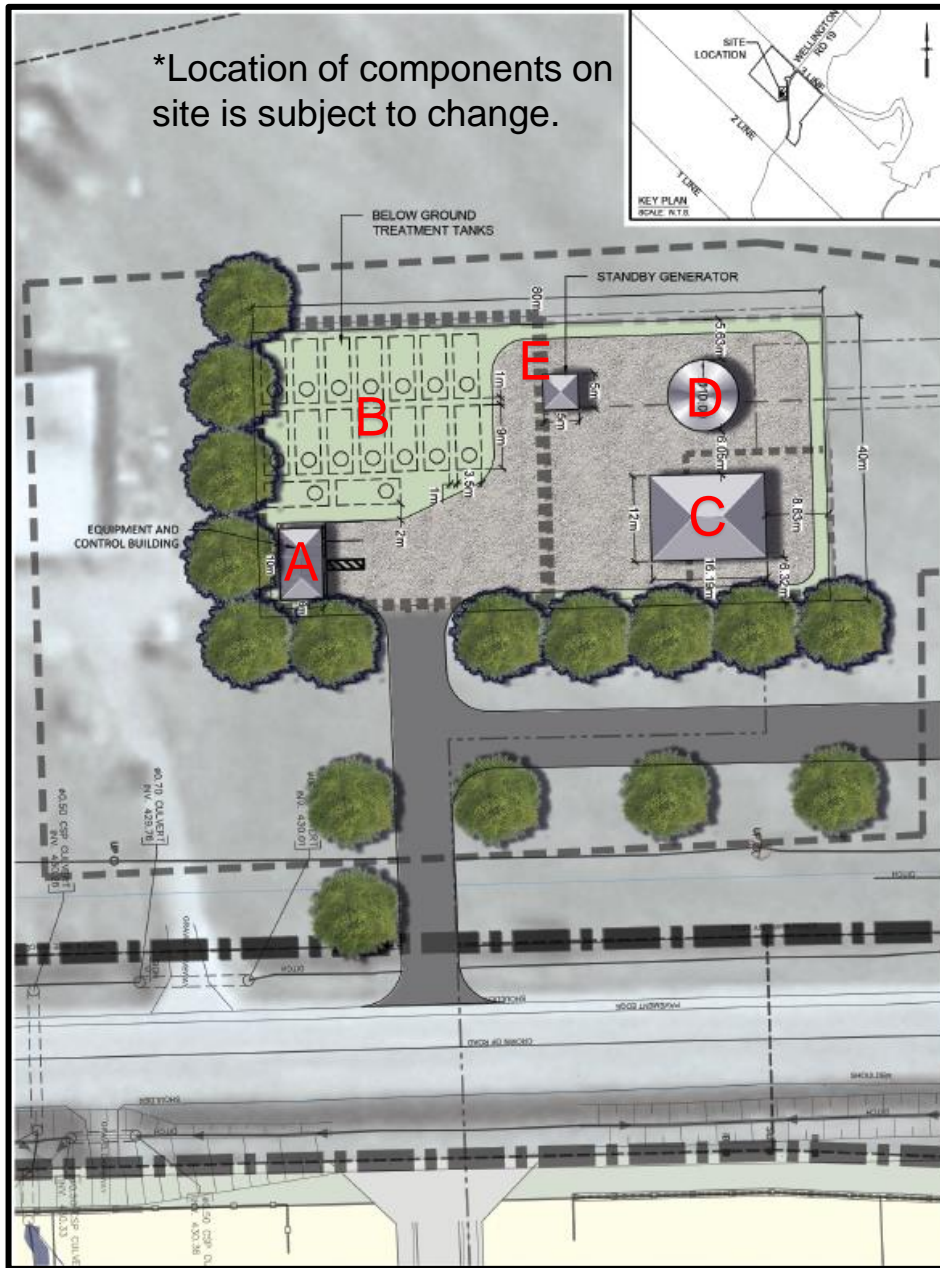
Recommended Design Concepts

Water Servicing:

- Primary Disinfection – Ultraviolet Disinfection
- Aesthetic (Hardness) – Softening Membranes
- Storage - Above Ground

Wastewater Servicing:

- Aerobic Foam Media Trickling Filter



Proposed Site Plan Concept

Water and Wastewater Treatment Areas

- Driveway entrance off Wellington Road 19
- Landscaping to provide visual barrier
- **Wastewater Treatment System Elements:**
 - A. Equipment and Control Building
 - B. Below ground treatment tanks
- **Water Treatment System Elements:**
 - C. Treatment Building
 - D. Standpipe
 - E. Standby Power Generator

Next Steps

MCEA Phase 2
(Complete)

- Comment Period to June 30, 2023
- Review Feedback from PIC #1 (July 2023)
- Confirm Preferred Solution (July 2023)

MCEA Phase 3

- Identify and Evaluate Alternative Design Concepts (July – September 2023)
- PIC #2* (September 2023)

MCEA Phase 4

- Draft Environmental Study Report (October 2023)
- Agency Review of Draft ESR (November 2023)
- File EA (December 2023)
- Publication of Notice of Study Completion and Public Review Period (December 2023 – January 2024)

**PIC #2 is the second of two PICs for this study.*

Invitation for Participation

You are invited to provide comments by completing the comment sheet and submitting to the comment box today or FergusGolfEA@rjburnside.com by October 2, 2023.

Theyonas Manoharan, P.Eng.
Project Manager

Fergus Development Inc. / Geranium
3190 Steeles Avenue East, Suite 300
Markham, ON L3R 1G9
Tel: 905-477-1177 ext. 257

Jennifer Vandermeer, P. Eng.
Consultant Project Manager

R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 226-486-1559

Email: FergusGolfEA@rjburnside.com

A copy of the display boards and presentation is available at www.rjburnside.com/FergusGEA

Question and Answer Period

Public Information Centre #2

September 11, 2023

Belwood Hall, Township of Centre Wellington



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Attachment C

PIC #2 Comments



3190 Steeles Ave. E Suite 300
 Markham ON L3R 1G9
 www.geranium.com

**Fergus Golf Club
 Redevelopment
 Environmental
 Assessment Study**



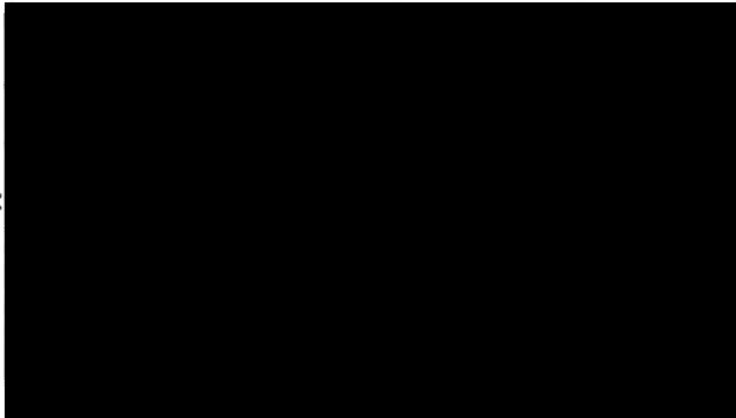
292 Speedvale Ave. W, Unit 20
 Guelph, ON N1H 1C4
 www.rjburnside.com

Scan completed form and email to FergusGolfEA@rjburnside.com or mail to one of the Study Team members noted on back of page. Alternatively, you can email your comments directly to us.

A digital version of this form is available on the project website:
<https://www.rjburnside.com/fergusGEA/>

COMMENT SHEET

Name:
Public Information Centre #2 **Address:**
Date: September 11, 2023 **Postal Code:**
Time: 6:00pm – 8:00pm **Phone:**
Location: Belwood Hall **Email:**
 36 Queen St., Belwood ON



Comments provided will be addressed by the Project Team in a Public Information Centre Summary Report.

Comments/Questions/Suggestions (additional space on back of page):

LEFT TURN LANES ON #19

INTERNET / CCL WILL IT BE

UNDERGROUND



3190 Steeles Ave. E Suite 300
Markham ON L3R 1G9

www.geranium.com

Fergus Golf Club Redevelopment Environmental Assessment Study



292 Speedvale Ave. W, Unit 20
Guelph, ON N1H 1C4

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COMMENT SHEET

Name

Public Information Centre #2

Address

Date: September 11, 2023

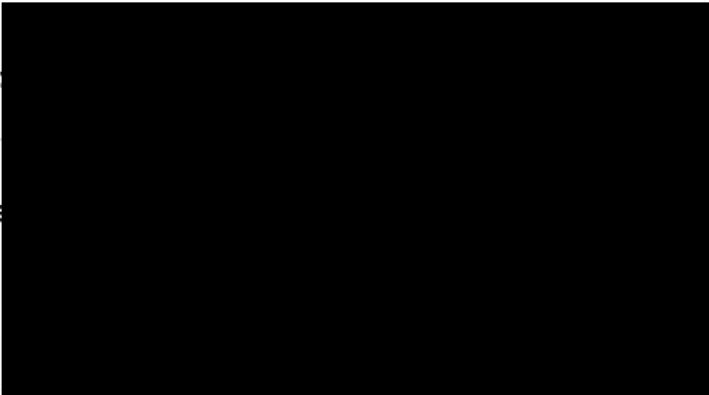
Postal Code

Time: 6:00pm – 8:00pm

Phone

Location: Belwood Hall
36 Queen St., Belwood ON

Email



Comments provided will be addressed by the Project Team in a Public Information Centre Summary Report.

Comments/Questions/Suggestions (additional space on back of page):

We would appreciate participating in the water well survey -

We also have concerns about the increase of volume of traffic which directly affects the corner of the 2nd Line and County Road 19.

Geranium and R.J. Burnside & Associates Limited thank you for your involvement in the Fergus Golf Club Redevelopment. Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. Project information and comment sheet will be made accessible upon request in accordance with the Accessibility Standard for Information and Communication under the *Accessibility for Ontarians with Disabilities Act, 2005*.



BURNSIDE

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Attachment D

PIC #2 Question-and-Answer Period Summary

Fergus Redevelopment EA

PIC #2 Notes - Question and Answer Period

1. **For clarification, with the UV primary disinfection alternative, you said you must use chlorine?**
 - a. Yes, you use chlorine for secondary disinfection. Both UV treatment and chlorine would be involved for this alternative.
2. **You said you will need to change the membranes every 10 years, what happens to them?**
 - a. They are typically disposed of at the landfill. We have reached out to the membrane vendor, if we don't hear back, we can include a design specification for the contractor to investigate alternatives for recycling.
3. **What material is the membrane made of?**
 - a. The preferred wastewater design does not include a membrane. The treatment media for the preferred wastewater treatment is made of a synthetic foam, it is polyurethane based.
 - b. We will look into that.
 - c. *Post-Meeting Note: The softening membranes utilize a proprietary thin-film polymer membrane.*
4. **For your water flow analysis, you made a huge assumption that deep aquifer wells have no interaction with the shallow wells of homeowners. In your report you say permit holder will replace if permanently impacted. You use a radius of 1km from test well- why isn't it done from actual wells? Who choose the 1 km radius, I'm just outside 1 km as are many others. WSP is retained by Geranium, they are not independent and are being paid by the people who want this approved.**
 - a. Any consultant that is hired by a developer has a professional obligation. In addition, the municipality reviews everything and we follow their requirements as well as the Ministry's requirements irrelevant of who is paying us. Development pays, but we have a professional obligation to the public. This is very standard, it's not just a report that is documented, there is review.
 - b. The new supply test well for the development is a bedrock well on the NW portion of property. It is quite a deep well completed at 84 metres below ground and is a good aquifer, with good water supply. The aquifer is well protected from surficial contamination with 20-30 m of till thickness with a lot of clay, which separates the two and this is why the bedrock and shallow overburden system don't interact in terms of water level drawdown as observed during test pumping. The interactions are limited by clay, which is difficult to flow through.
 - c. The pumping test was run for 3 days with monitoring of water levels at a network of monitoring wells at various depths and distances. Water demands in this area; average and maximum days demands - max is the highest predicted demand is typically only required for brief periods during the year. Pumping was undertaken at a rate greater than the max day demand for 3 days to measure aquifer response. Based on the pumping test and analysis, the water level response of the deep aquifer, as you move out 500m, you expect 1 m drop in bedrock aquifer at the planned max demand rate. That's a 1m drop for a well over 100 ft deep, which some of the closer wells may experience. 1 m of water drop is not expected to impact operation of such deep wells. This is part of the reason for doing well surveys to understand and assess impact.
 - d. The safeguards are more of a function of MECP - they require a Permit to Take Water. It is under government legislation that protects peoples' wells. We will

need to apply for a Permit to Take Water (PTTW) for operation of the well. As part of this, MECP reviewers will review the studies and monitoring program. The permit will include a monitoring program and a condition that requires the permit owner to take the necessary action to restore the water supply of any wells where their operation is affected as a result of the active pumping.

- e. During the pumping test (rate was 8L/s as opposed to 5L/s which is the max), 1 km away in the deeper (bedrock) wells the max drop was 40 cm. The analysis of the pumping test data shows that under the planned max daily rate of 5 L/s drawdown is not expected beyond 1 km. Under max day demands there isn't expected to be any impact. A monitoring program will be required under the permit to confirm.
- 5. I live directly west on 2nd Line where the well is. When they put the golf course in it was a dry summer and they impacted our water, and it was only for irrigation.**
 - a. That is the purpose of well survey for wells in immediate vicinity that may be susceptible. If a pump is set relatively high that's a consideration that may need to be looked at further.
- 6. What if years from now someone runs out of water, what is the recourse?**
 - a. Geranium will be here for 3-5 years and will continue to monitor concerns. As part of approvals process, we did these studies to demonstrate no unacceptable impacts to surrounding wells.
- 7. How many people are you assuming for the homes?**
 - a. 3 people
 - b. Please note that we have measures in place for conservation including Greyter Water Systems which enables the reuse of shower water for toilet systems. We pump tested at 8 L/s, we only needed to test at 5L/s which is the expected peak day demand.
 - c. Please note that 5L/s is the max daily demand which only occurs for a few days a year.
- 8. We live on 3rd Line and the seasonal cottages use more water in the summer than winter. When was the testing done?**
 - a. Testing was completed in Fall 2021.
- 9. I want assurance in writing that once you test my well and neighbors that there is a process we will take if our water goes dry or quality changes. All infrastructure is to be put into place from golf course, WW treatment to be done, must be in place before building the development.**
 - a. If the well within the zone of influence is proven to be affected by out water taking, the actions to rehabilitate the affected well would be stipulated in the Permit to Take Water which we will follow.
 - b. Wells must be built before the development. Prior to the treatment plant being commissioned, pipes through entire development and wastewater and pumping station will all be put into place first.
- 10. When will you actually be starting, what's your time frame for drilling the well to use?**
 - a. While we have the planning approval, we still need to go through the Environmental Assessment (EA) process for the preferred solution. The next step will be the detailed design of each component (run off grading, SWM etc.). This will all go through the municipality's engineers and go back and forth with revisions. We ideally want to start construction sometime next year; Spring 2024 is the goal.
- 11. You've already decided how to treat water and protection of the water source, so what's left to design?**

- a. Following the MCEA process, a draft copy of the ESR is issued to the Ministry for review (1 month). When their review is done, we incorporate their recommendations and then issue the final ESR for a 30-day public review period. Everyone on project contact list will receive a notice that the ESR is available for review through the project website. During the 30-day public review period, members of the public can submit comments or questions to the study team. Following the MCEA process, there is still the detailed design and permitting for the water and wastewater systems.

12. When you did water tests, what did you test?

- a. We installed monitoring wells on the golf course property.
- b. **PIC participant Follow up Response:** Three test wells were completed in 2021 that were drawing water – two wells on Third Line and one in the NE corner of the golf course property.
- c. The calculations are extrapolated based on results.

13. Township approval on draft plans, but how does EA feed into official subdivision plans and when does that happen in the process and do adjacent landowners get plans of the subdivision, where/when does that happen? I don't understand and would like to know inputs and process. When will we be notified.

- a. The municipality doesn't let us do a design without seeing the completed EA plugged into design parameters. We just have approval on the planning side. Configuration is a part of that approval that will be the basis of the design, EA goes to the public + 30-day period. For detailed design it's typically all with municipality engineer department review details.

14. What about education provided to homeowners about living in rural communities, often developers in rural areas things are listed on title. When a homeowner is purchasing, they know they are subject to rural noises and smells. Who has a hand in that?

- a. The municipality comments on draft plan conditions and conditions of condominium. The items are dictated - certain things must be done and make sure items are addressed as part of design. There is a condition that dictates that homeowners must be aware of factors associated with nearby farms (such as odors, noise, smells). The municipality has proposed conditions to be included.
- b. There are stipulations we must include.
- c. We are working with municipality for draft conditions, subdivision agreement, condominium agreement. A lot of these things will have responsibility, advising buyers it is a rural area, etc. These conditions are approved by the County. People who have engaged previously in the planning process should be notified and we can confirm that. The notification for the EA process is separate.

15. The average value of the homes will be 1.5-2 million, yet the number of people per unit is 3. Who decided that? Are there any scenarios for 5-8 people per unit?

- a. The 3 people per household assumption was identified by the municipality in their design standards and is based on demographic studies conducted by the municipalities.
- b. Demographic studies for this area are based on single family homes.

16. Are there any scenarios for more than 3 people per household?

- a. Not as part of the design process. However, there are enough safety factors in the design that would accommodate additional people per household. Water use tends to balance out over multiple units. Especially considering the proposed water reuse within each home, this reduces overall water use in the building and would actually support more people in each unit.

- b. Please note that we use 3 people per unit in calculations because that is what the municipality prescribes. In our calculation, we have additional safety factors. We are not sizing just for what is needed, but also for additional uses.
- 17. Many water concerns, we went to a teleconference call with some of the people in the room. Who is liable for water if a major weather event like a yearlong drought occurs? I was sent a drawing of the area of influence by Geranium/Burnside. This gives you a perspective of what they are looking at. The study says at 500 m it's a 2 m drawdown.**
 - a. The draw down is 2 m if you are pumping that amount steadily. Please note that we are not pumping continuously. Also, at the planned max day rate of 5L/s (lower than the pumping test), the expected drawdown at 500 m is 1 m.
- 18. (Follow up question) This then goes back to liability - what happens if my water goes away? Will I need to find a new well? The development will not be freehold properties as it is a condo. Geranium is saying we will be here 5 years and hand over to the Municipality and they will hand over to Condominium Corporation. You cannot hold 10 homeowners liable; the handoff will only happen once all of the condos are sold.**
 - a. Yes correct, Condominium Corporation will be passed on responsibility.
- 19. When it passes to the Condominium Corporation, what guarantees do existing residents have? How will they deal with lawsuits? The circles you drew don't include half the homes you are developing. Drawdown doesn't include half the homes you are developing.**
 - a. You are misinterpreting the diagram. The diagram shows when drawing from the well, the radius is the effect of water. Homeowners across the street will get water from the water main from the treatment plant.
- 20. The issue is that you didn't extend study to where everyone lives, none of us private well owners had you come but report says you did. Ultimately, we are concerned about potential issues we have no protection from due to this development. We cannot address climate change, but this development will cause a strain on the water locally. All the water falling is going to river instead of aquifer. We're losing recharge of aquifer.**
 - a. We must match infiltration across the site predevelopment to post development. The Condominium Corporation will have obligations to ensure water balance is restored to predevelopment conditions. You can create beds of gravel to infiltrate water into the ground.
 - b. **PIC Participant Follow up Response: This isn't on diagrams on the boards**
 - c. This isn't shown on diagrams tonight as this meeting is for EA and not the Planning Act.
 - d. The EA addresses water supply and treatment. Stormwater management is by the municipality, and we are told to match or improve the conditions. This is part of the requirements of the detailed design stage of the development project.
 - e. Methods for aquifer recharge include roof leaders, which go into infiltration galleries. Sometimes options include the addition of more topsoil; the municipality asks for 6 inches; we could apply 1 foot of topsoil. There are many typical ways to maintain aquifer recharge that are proven to maintain pre-development conditions.
 - f. **PIC Participant Follow up Response: Are you using infiltration galleries?**
 - i. Yes, we will be using Low Impact Development (LID). The specific LID mode may change, but that is the intent.
- 21. If homes end up putting in pools treated with chlorine and when drained, that water and lawn treatments seep down into the Belwood Lake and wells. How can**

you make sure this is treated properly? Once people move in and start doing things homeowners do, winter road treatments will seep into wells and the lake. How can we make sure this doesn't get into wells, water is a commodity we must preserve, and the lake is habitat and used by recreational users?

- a. A Salt Management Plan is required for the project, and it limits the use of salt. The Condominium Corporation will have to use alternate methods for de-icing. The roads here aren't very steep and therefore won't need to de-ice much beyond plowing. The drainage divide is in the middle of Third Line. The west side goes towards the Golf Course and the Black Drain, on the other side to the lake. We are maintaining the existing flow pattern. Road water enters the Stormwater Management (SWM) pond where the sediments settle, this process removes salt.

22. People living on the lake know that the government requires us to put in new septic systems, I am worried if the sewage system covers 500 ppl (4 per household)- how is there going to be sufficient capacity for whole community.

- a. The system will accommodate all the flow and treat it to the level for disposal. MECP has an obligation for Geranium and Condominium Corporation to monitor and make sure this system continues to operate properly.
- b. Sounds like you're asking if the system is appropriately sized. Similar redundancies as with the water system are accounted for by the wastewater system. The wastewater treatment system is also larger than a septic treatment system for a single dwelling so there are treatment efficiencies with the larger system. Additionally, the Greyter System will be incorporated into the development through which the shower water will be treated and reused for the toilet system.

23. In 10-15 years, if the wells stop working, who is responsible for fixing or providing us with water.

- a. For the time being, during construction Geranium is responsible. We have to apply for a PTTW as part of development, which has stipulations for maintaining potable use for residents. This gets transferred to Condominium Corporation once they take over. In 10-15 years, there's an additional agreement with municipality – a municipal responsibility agreement. The treatment plants will be privately owned and operated. In the event of extreme situations (insolvency, etc.), the municipality will have to take over the systems. This is funded by a reserve fund provided to municipality.

24. So, I have to prove that the development took my water?

- a. If your water went dry, how would you typically go about addressing this?
- b. **PIC Participant Follow up Response:** I would file a lawsuit, but the Condominium Corporation would have large legal fees. If I was buying a new home, I want people buying a condo in this development to know about this risk and that people will sue the Condominium Corporation if their water is impacted. Does Geranium have an obligation to tell the homeowners about this risk?
 - i. As this is a hypothetical question, it is difficult to answer. We will review this.

25. Is there a way to ensure that before homeowners buy that they are aware they are ultimately responsible for water?

- a. The Condominium Corporation will be aware of all of this. We do not know how this will be translated. I personally just bought a condo and while I don't know how elevators work, I just trust that the Condominium Corporation knows and mitigate risk on my behalf.

- b. There will be a board of directors for the Condominium Corporation. A lawyer will review declaration and common elements that are mutually owned. There is usually a management company handling the day-to-day operations and there will be year-to-year legal advice. There are examples of this process in other townships.
- c. We will take this to the legal team and include this in the PIC #2 Summary Report.
- d. *Post-Meeting Note: The legal documentation for the future sales program will include a Disclosure Statement prepared pursuant to the Condominium Act and an Agreement of Purchase and Sale. Prospective purchasers will be presented with those documents and expected to review their contents prior to entering into a purchase agreement. Those documents will specify that the water source is from a private, communal system, which will be controlled and operated by the proposed common elements condominium corporation. The sales team will also be aware of these features and will inform prospective purchasers of them at the point of sale. Prospective purchasers will thereby be informed of the drinking water responsibilities prior to purchasing a unit.*

26. So, does the County have more approvals to go through?

- a. Yes, the condo and submission. The Township provided the County with Conditions of Draft Approval. There is also a 30-day appeal period. I see unfamiliar faces today and recognize that some of the people in attendance today were not involved in the planning process. There are no further County meetings. The Directors of the County will review, once they decide they will issue a notice, and this will have an appeal period.

27. So, there is no vote on this decision?

- a. Correct
- b. The approval is now with the County as the development has already been approved by the Township.



Notice of Study Commencement and Public Information Centre #1

Municipal Class Environmental Assessment

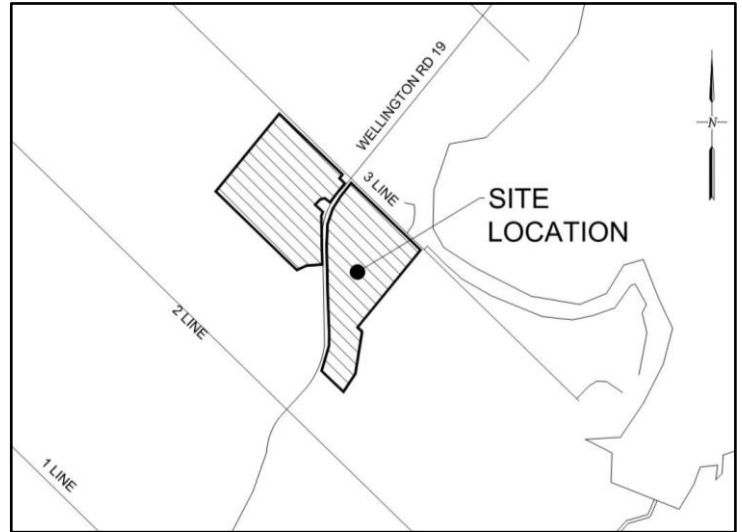
Fergus Golf Club Redevelopment

The Study

Fergus Development Inc. is undertaking a Municipal Class Environmental Assessment (MCEA) Study to evaluate alternatives for water and wastewater servicing required for the redevelopment of part of the Fergus Golf Club lands. The site location and approximate extent of the Study Area are shown on the map.

The Process

The project is being conducted in accordance with the planning and design processes for 'Schedule C' projects, as outlined in the Municipal Class Environmental Assessment (2023) which is approved under the Environmental Assessment Act. The MCEA process includes: consultation with agencies, stakeholders, Indigenous communities and public; an evaluation of alternative solutions to address the problem; alternative design concepts for the preferred solution; an assessment of potential environmental impacts; and identification of reasonable measures to mitigate any potential adverse impacts. At the conclusion of the Study, an Environmental Study Report (ESR) will be prepared for public review.



Opportunity to Participate

Public consultation is important to this Study. Fergus Development Inc. would like to ensure that anyone interested in this Study has the opportunity to provide input into the planning and design of the project. Fergus Development Inc. is inviting the public to attend the first of two Public Information Centres (PIC) for this Study.

PIC #1 will present the problem /opportunity statement, results of environmental and technical studies completed to date, the alternative solutions considered and the preliminary preferred solution. PIC #1 will be held as an "Open House" with materials pertaining to the study on display and members of the study team on hand to answer questions and discuss issues related to the project. A short presentation will be provided (see timing below).

Public Information Centre #1

Date: Thursday June 1, 2023
Time: 6:00 - 8:00 p.m.
Presentation: 6:30 p.m.
Location: Belwood Hall
36 Queen Street, Belwood, ON N0B 1J0

For More Information

To provide comment, request additional information about this Study or to be added to the Project Contact List to receive future notices, please email or contact either of the following Project Team members:

Theyonas Manoharan, P.Eng. Project Manager Fergus Development Inc. 3190 Steeles Avenue East, Suite 300 Markham, ON L3R 1G9 Tel: 905-477-1177 x 257	Jennifer Vandermeer, P.Eng. Consultant Project Manager R. J. Burnside & Associates Limited 292 Speedvale Avenue West, Unit 20 Guelph, ON N1H 1C4 Tel: 226-486-1559
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Email: FergusGolfEA@rjburnside.com

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

This Notice first issued on May 18, 2023.

Notice of Public Information Centre #2

Municipal Class Environmental Assessment

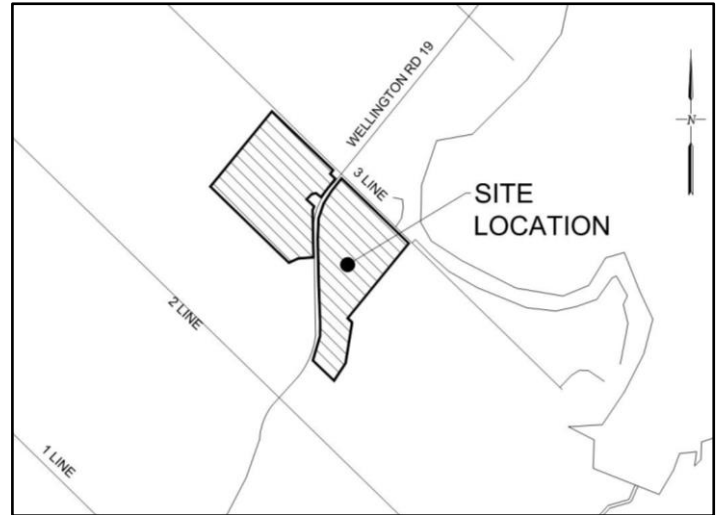
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Opportunity to Participate

Public consultation is important to this Study. Fergus Development Inc. would like to ensure that anyone interested in this Study can provide input. Fergus Development Inc. is inviting the public to attend the second Public Information Centre (PIC).

PIC #2 will present the results of environmental and technical studies completed to date, the alternative solutions considered and the preferred solution, and the alternative design concepts considered for the preferred solution. PIC #2 will be held as an "Open House" with materials pertaining to the study on display and members of the study team on hand to answer questions related to the project. A short presentation will be provided (see timing below).

Public Information Centre #2

Date: Monday September 11, 2023
Time: 6:00 - 8:00 p.m.
Presentation: 6:30 p.m.
Location: Belwood Hall
36 Queen Street, Belwood, ON N0B 1J0

For More Information

To provide comment, request additional information about this Study or to be added to the Project Contact List to receive future notices, please email or contact either of the following Project Team members:

Theyonas Manoharan, P.Eng. Project Manager Fergus Development Inc. 3190 Steeles Avenue East, Suite 300 Markham, ON L3R 1G9 Tel: 905-477-1177 x 257	Jennifer Vandermeer, P.Eng. Consultant Project Manager R. J. Burnside & Associates Limited 292 Speedvale Avenue West, Unit 20 Guelph, ON N1H 1C4 Tel: 226-486-1559
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Email: FergusGolfEA@rjburnside.com

For more information, including study documentation, please visit the study webpage at: www.rjburnside.com/fergusgea/

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

This Notice first issued on August 24, 2023.