

Fergus Golf Club Redevelopment Environmental Assessment Study

Public Information Centre #1

June 1, 2023

Belwood Hall, Township of Centre Wellington

Introductions

Geranium

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WSP

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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

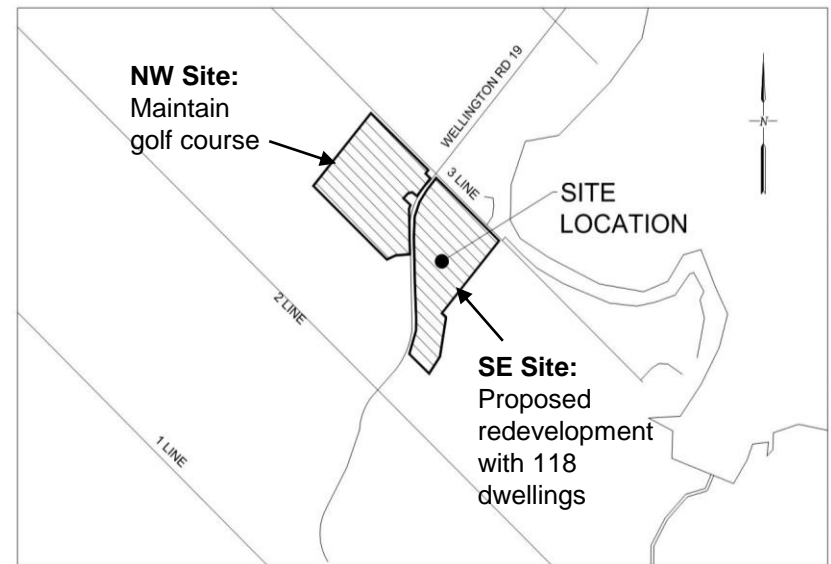
1977	Fairview Golf Course constructed on SE parcel	May 2023	Notice of Study Commencement and Public Information Centre #1
1996	Residential development approved on Fairview Golf Course Lands	June 2023	EA Public Information Centre #1
2000	Newly constructed Lake Belwood Golf Course opens on NW parcel		
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.

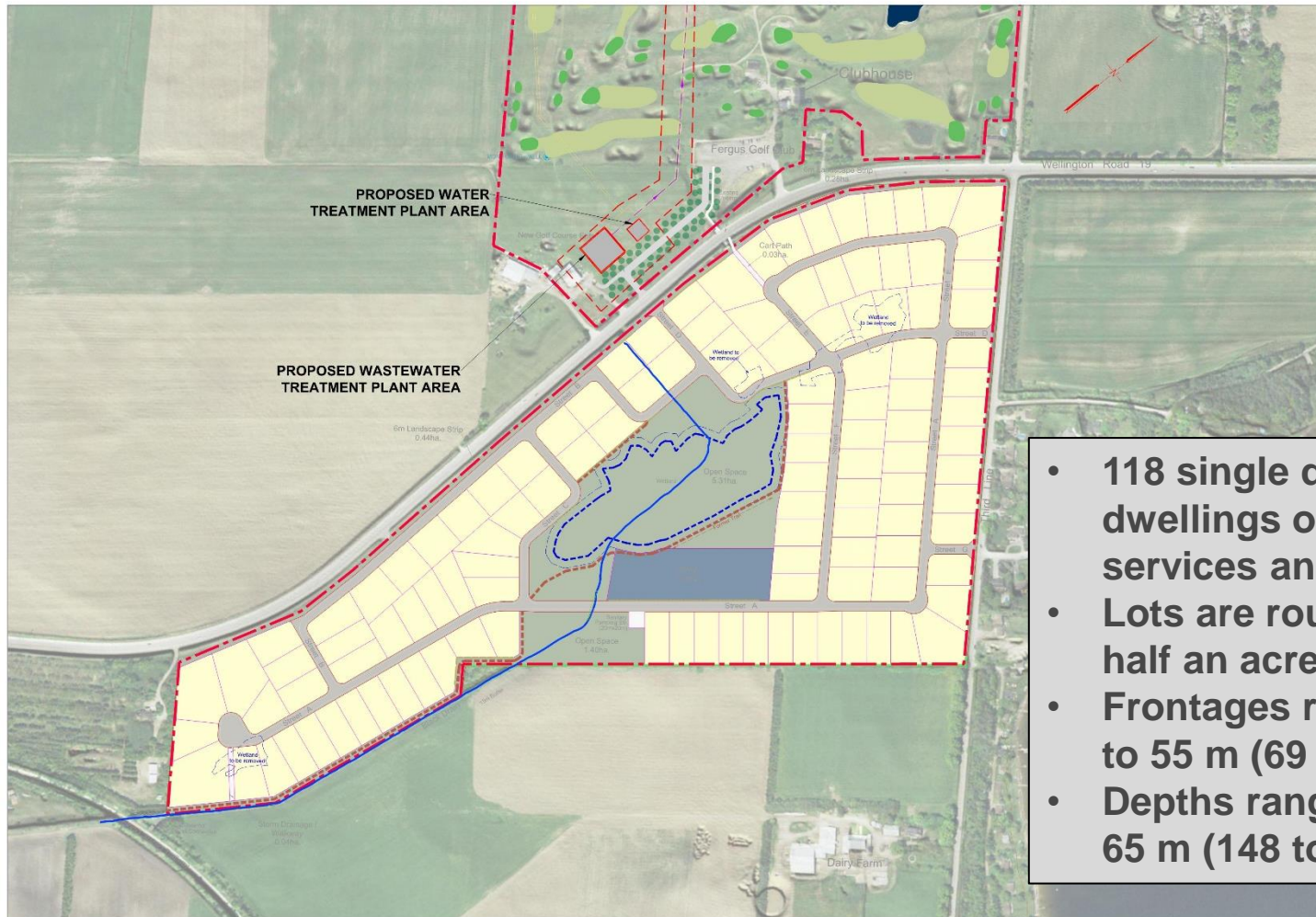
The proposed Fergus Golf Club redevelopment will consist of:

- 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:

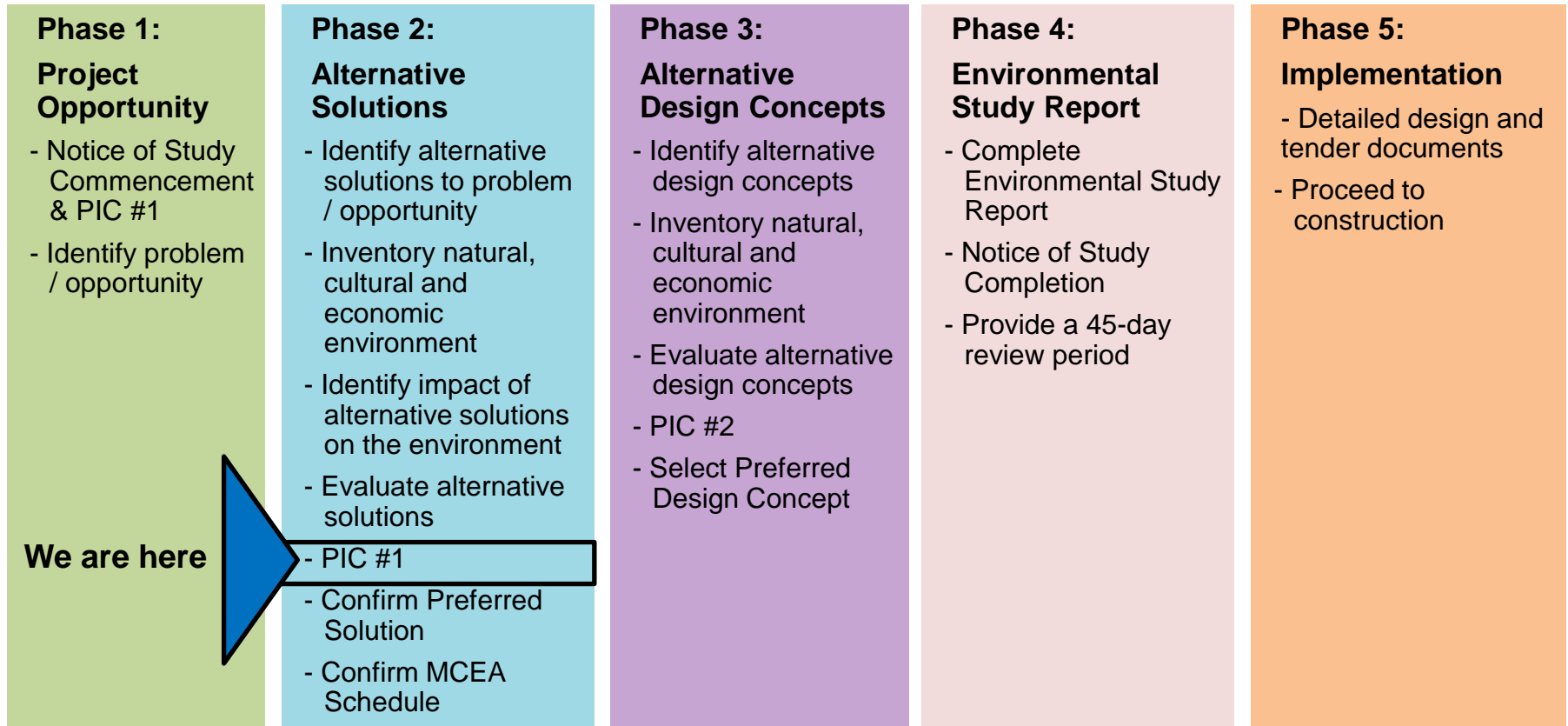
- Project Opportunity Statement
- Results of studies completed to date
- Alternative solutions considered
- Next steps



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.

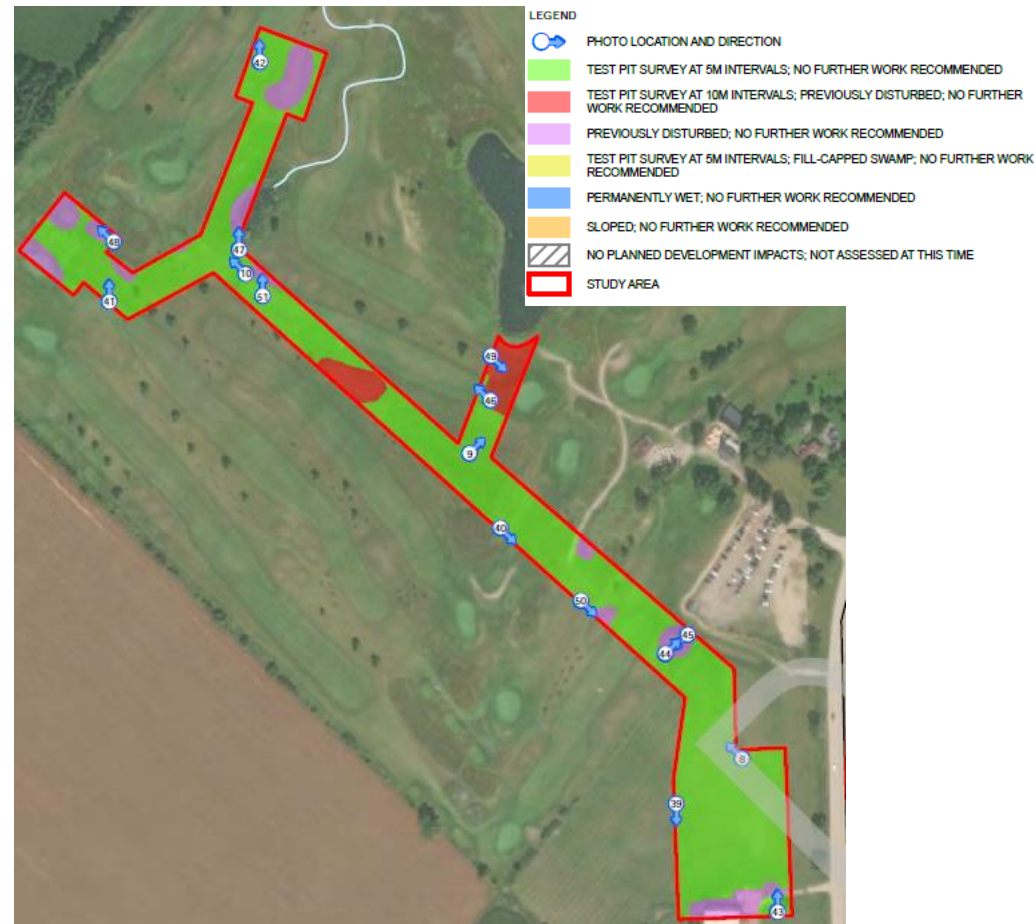
Aquatic Habitat

- 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

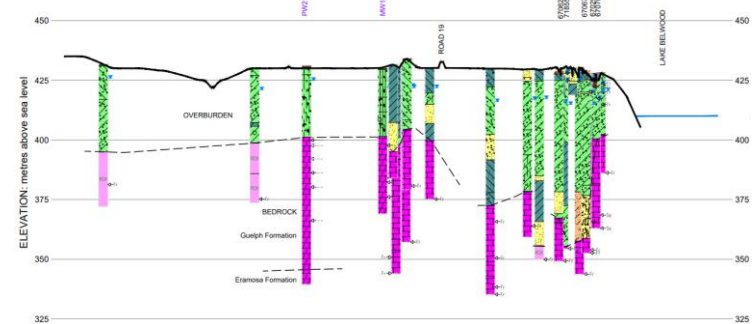
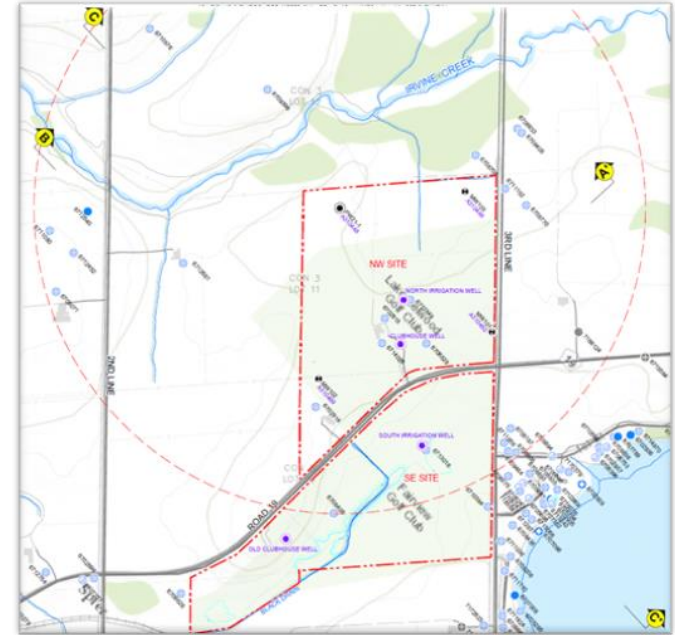
- meets the Ontario Drinking Water Quality Standards except for total dissolved solids and hardness, which will be addressed by proven treatment methods

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

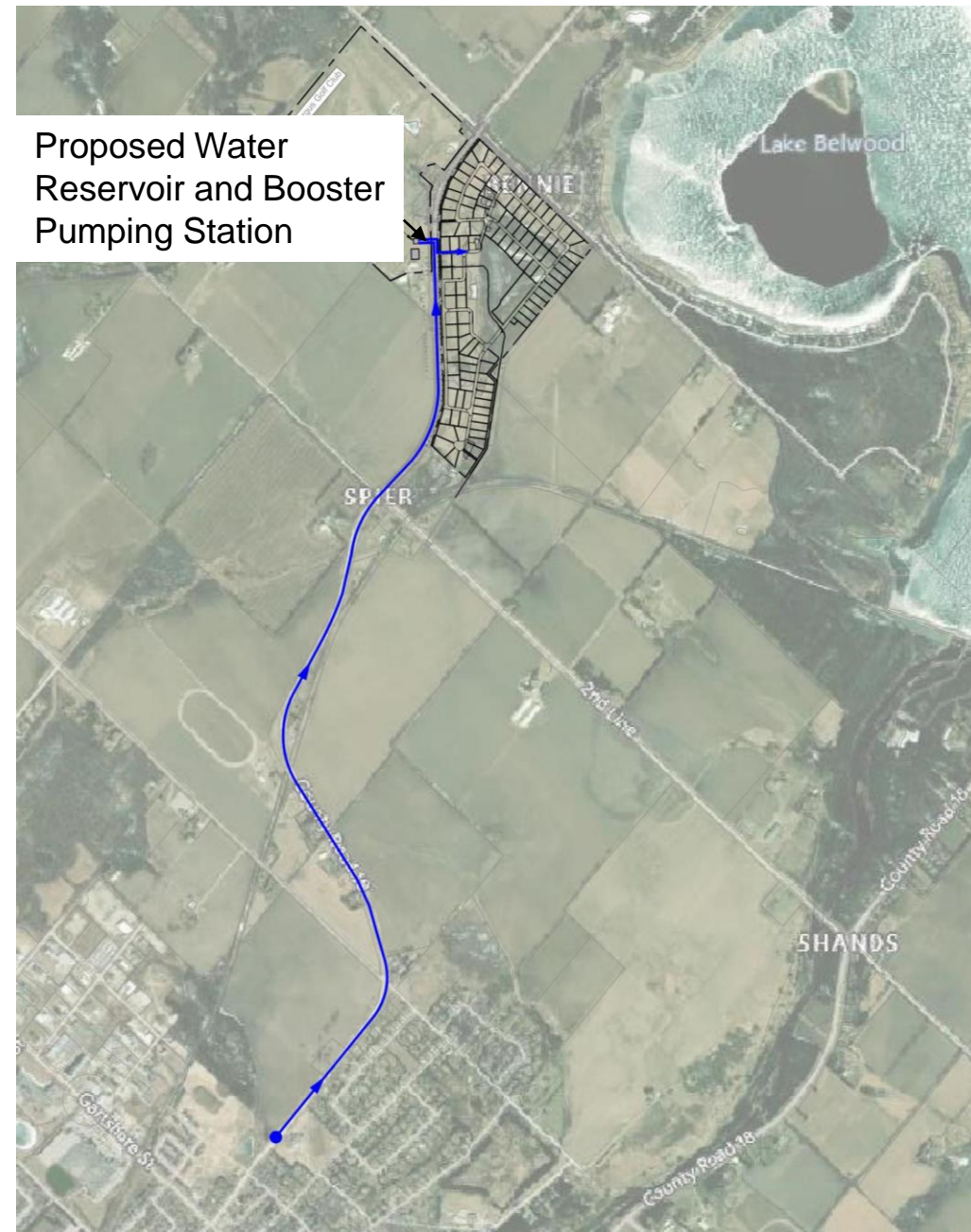


PROPOSED WATERMAIN



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.



Example Water Treatment Plant



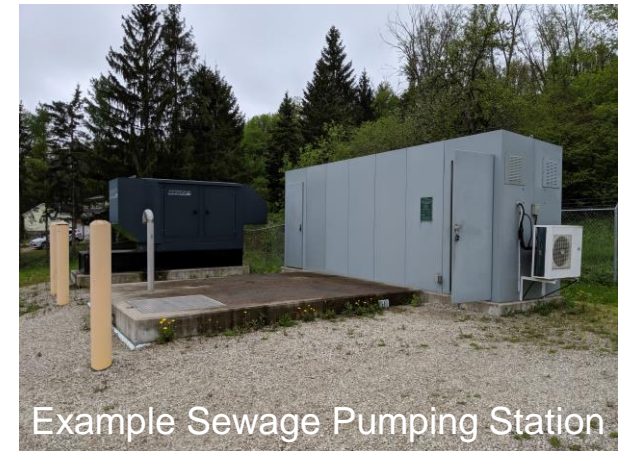
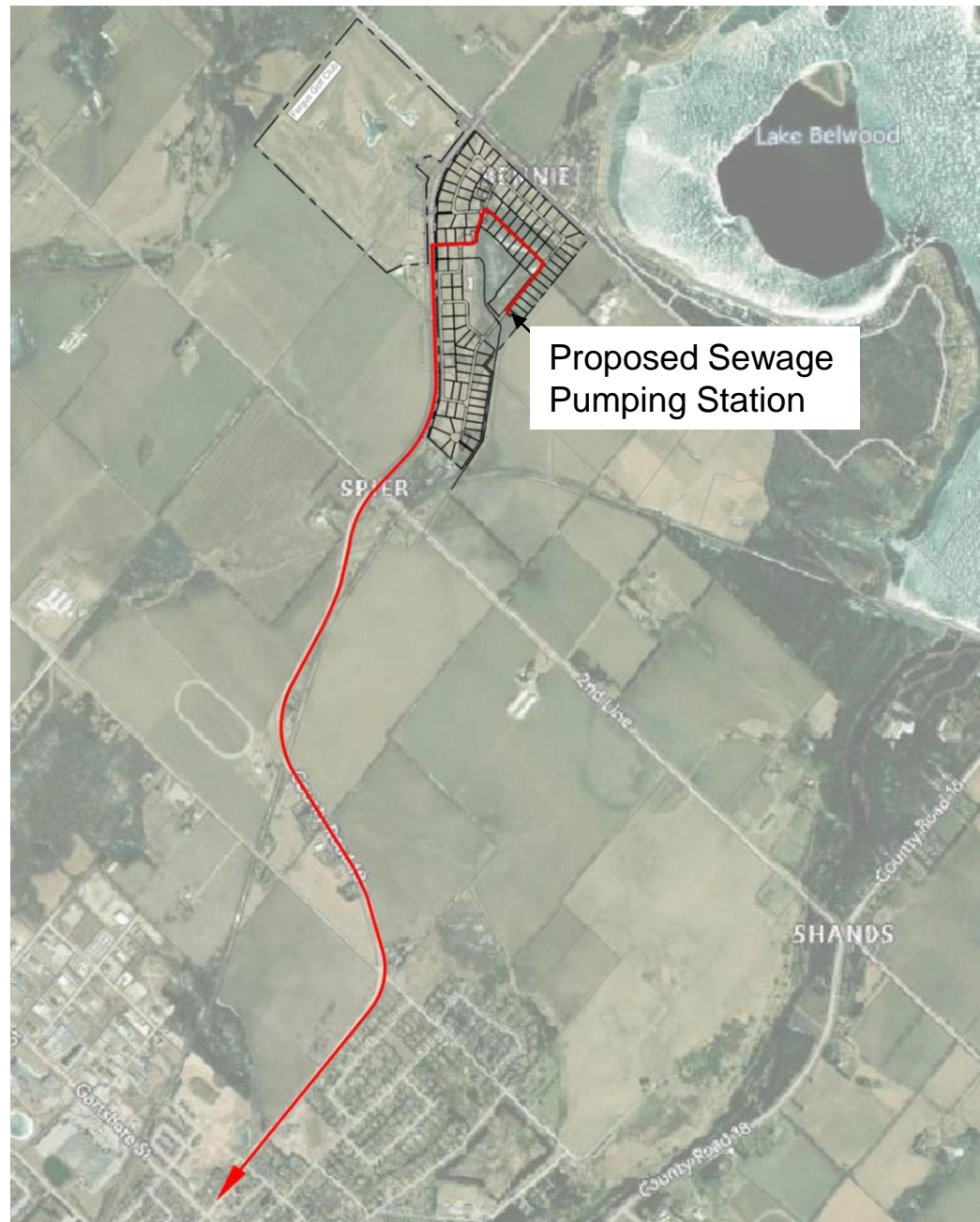
Alternative Solutions - Wastewater

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



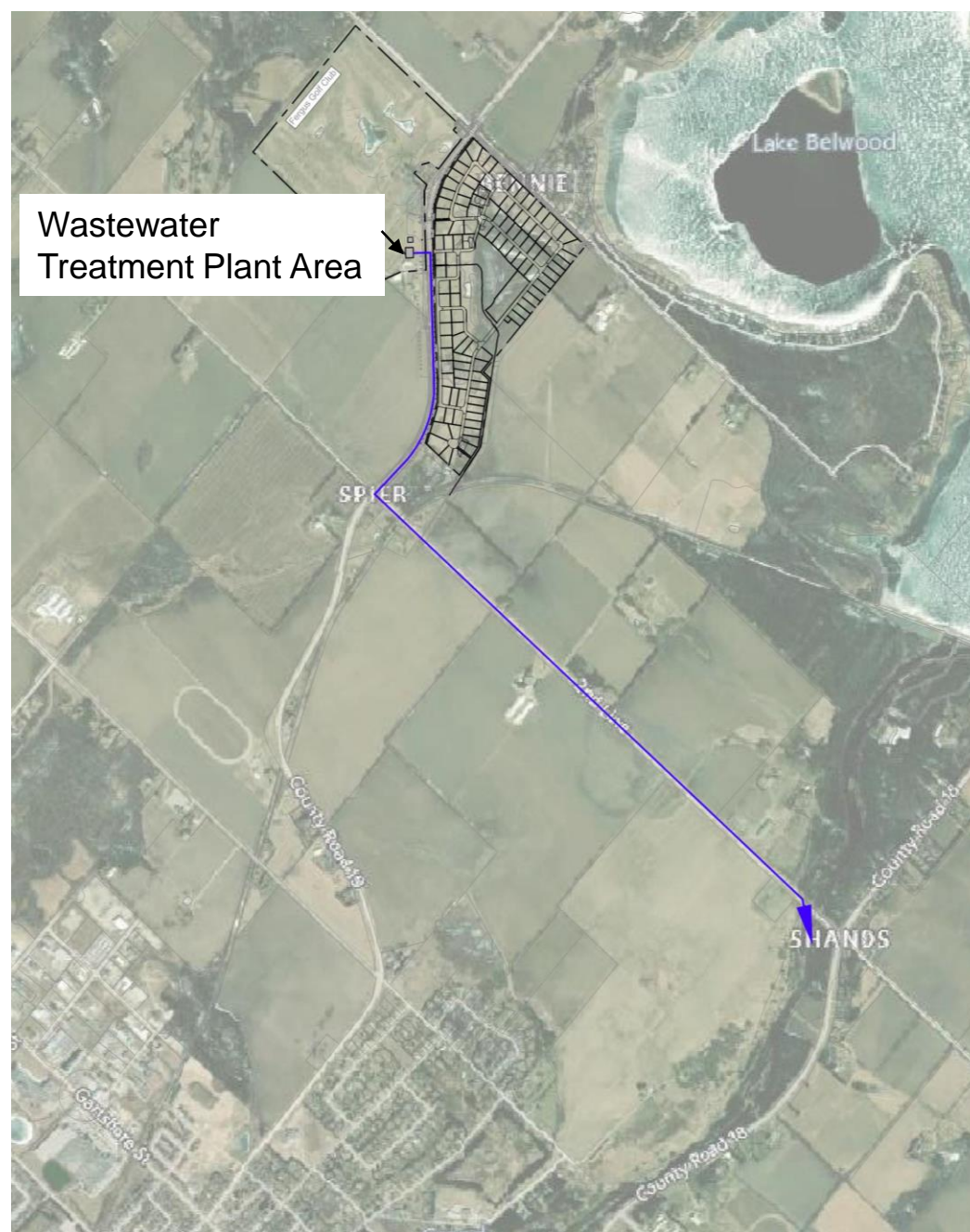
- PROPERTY BOUNDARY
- PROPOSED FORCEMAIN



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

- PROPERTY BOUNDARY
- PROPOSED FORCEMAIN

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:

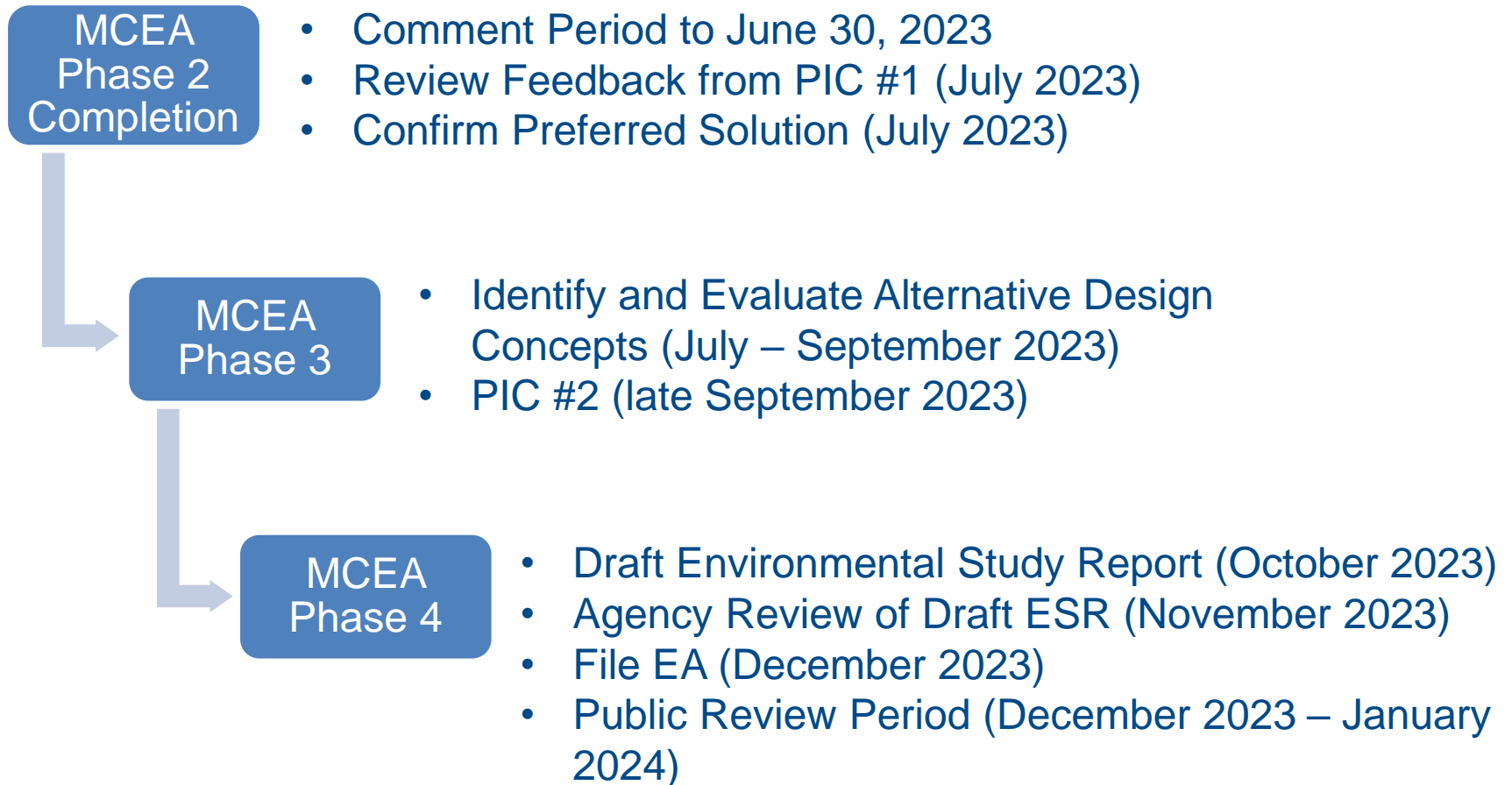
Least → Less → Somewhat → More → Most

- 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.

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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