

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

Geri Poisson, B.A., Dipl. Eco. Restoration
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

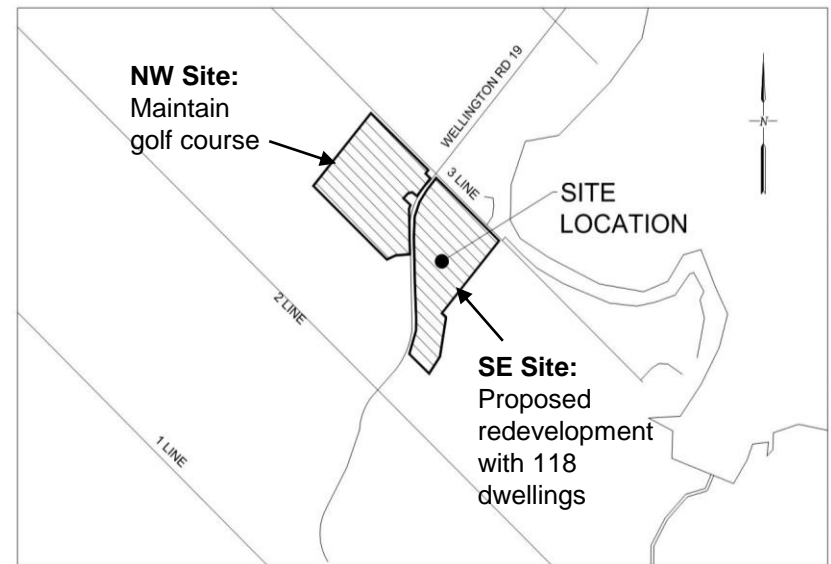


Project Description

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.

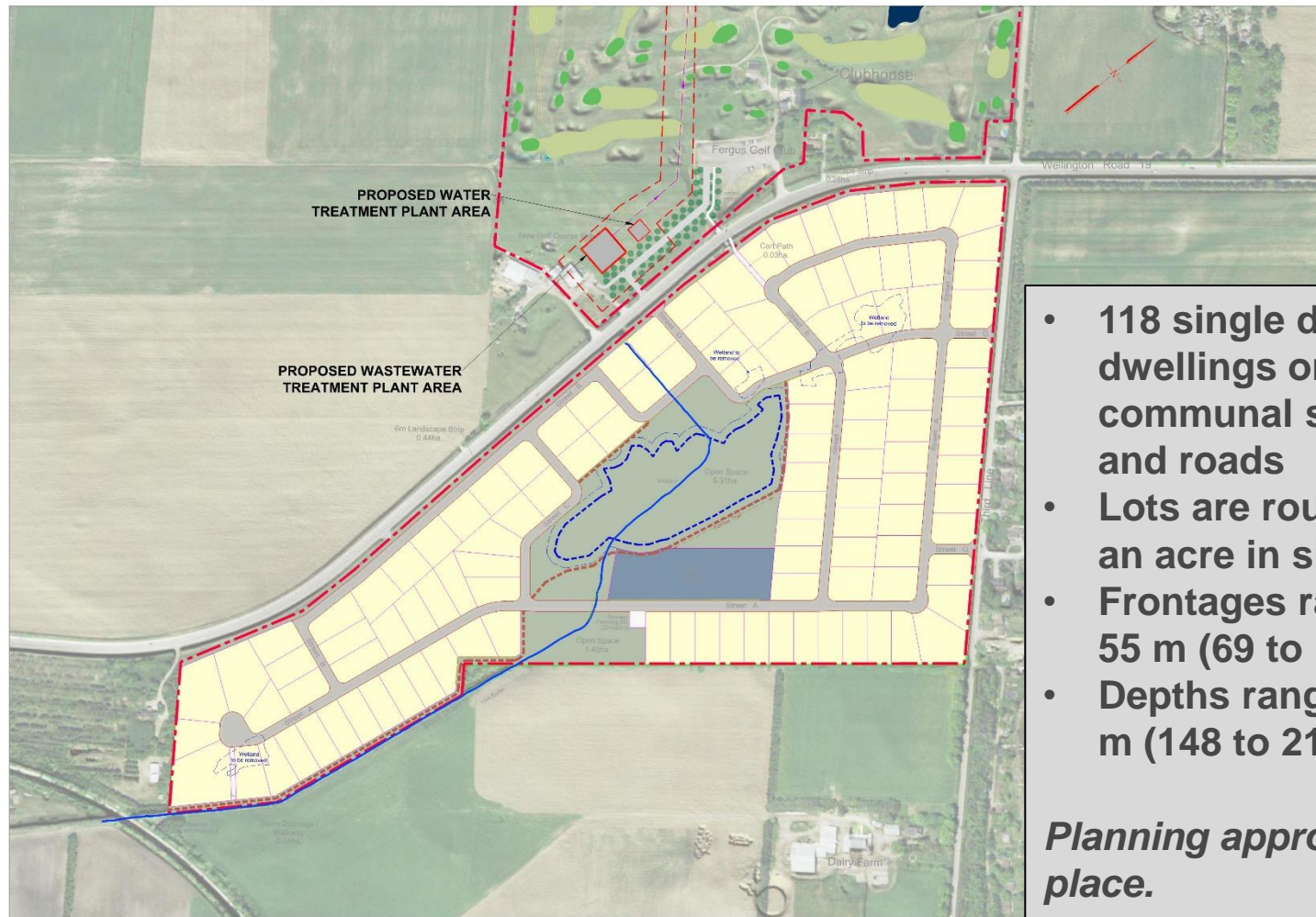
The proposed Fergus Golf Club redevelopment will consist of:

- 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

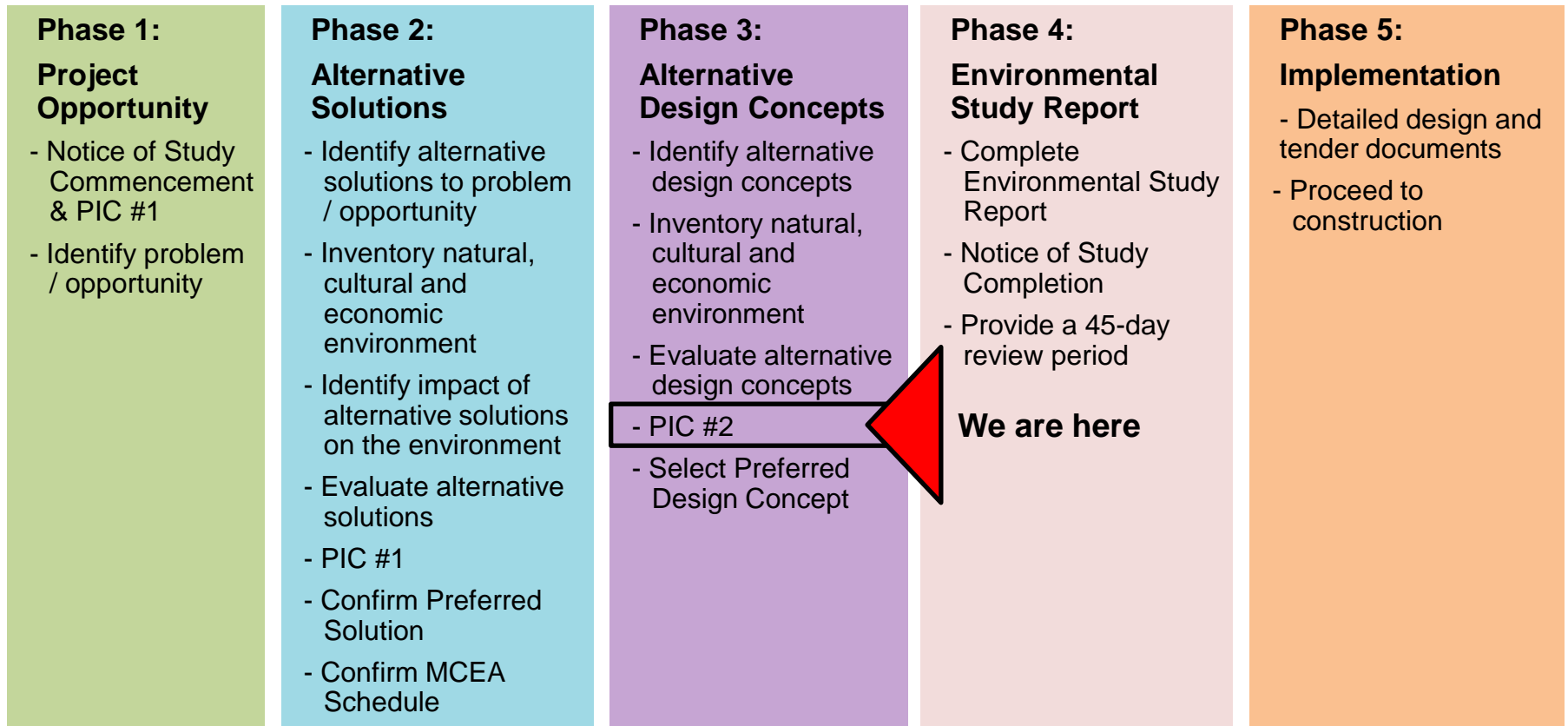


- 118 single detached dwellings on private communal services and roads
 - Lots are roughly half an acre in size
 - Frontages range 21 to 55 m (69 to 180 ft)
 - Depths range 45 to 65 m (148 to 213 ft)
- Planning approvals are in place.*

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

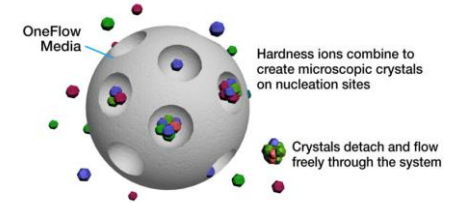
Primary Disinfection Treatment

- 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.

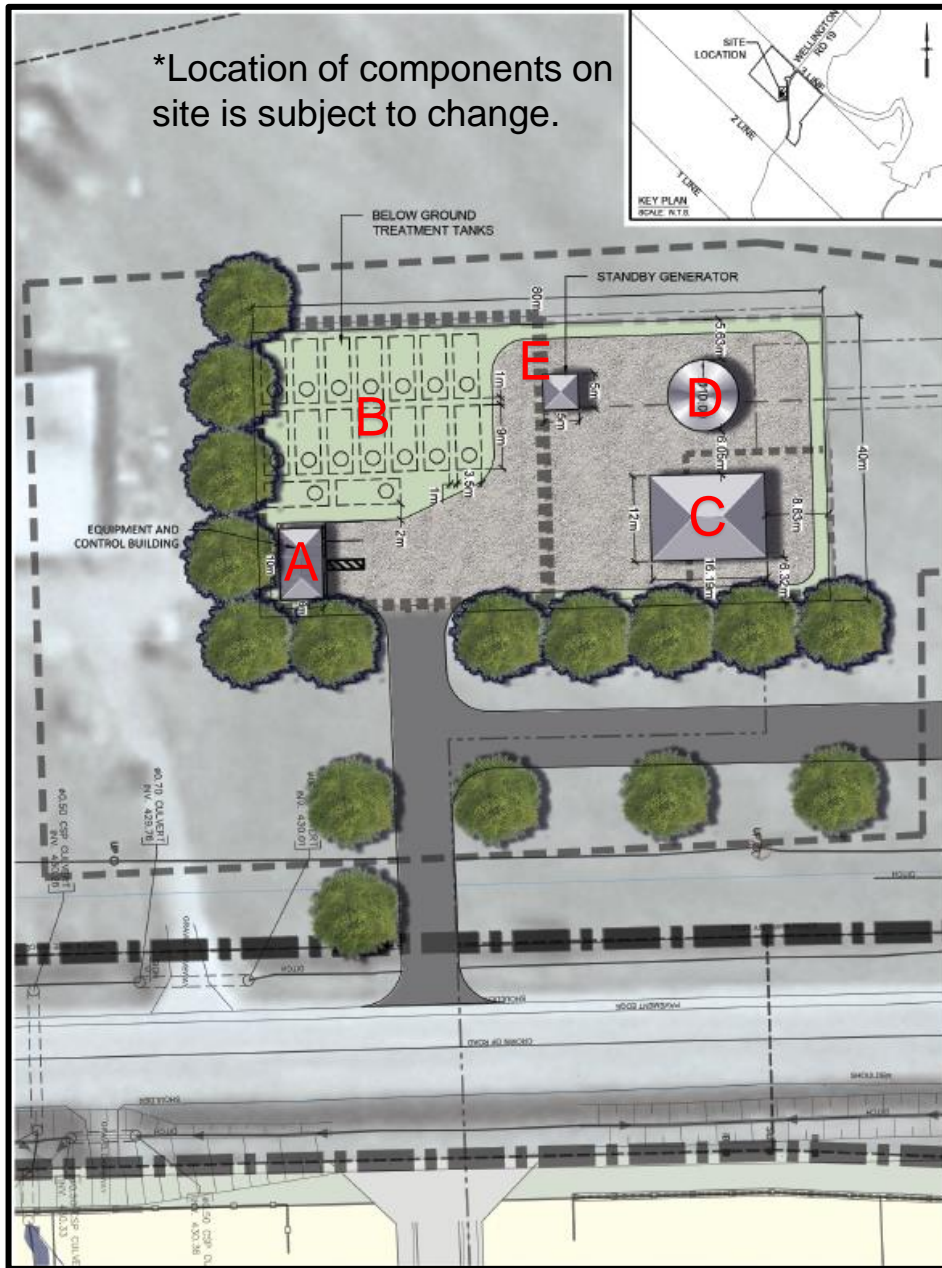
Recommended Design Concepts

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