Friends of the Tay Watershed Association
Submission to the Town of Perth (Submitted August 20, 2023)
Caivan Ltd. Application for Amendments to Official Plan and Zoning By-Law, and for Plan of Subdivision, Perth Golf Course Development

The Friends of the Tay Watershed Association wish to submit the following comments and recommendations for the referenced Caivan Ltd. applications for the development of the Perth Golf Course.

As noted in the accompanying letter, our association has significant concerns with this proposed development in its present size and form because of the environmental sensitivity of the site and its location. In the opinion of the association, the proposed site is one of the two most environmentally sensitive areas of the Tay watershed (the other being the Provincially Significant Tay Marsh) and is unique in terms of both its natural heritage and the number and variety of environmental issues on and adjoining the site. This would be the largest housing development undertaken along the Tay River – and in the Tay watershed.

The site environmental issues include:

- The ***site location*** at the confluence of two streams (Tay River and Grants Creek) on the upstream border of the Town, both of which have proved vulnerable to flooding and drought in the past – and increasingly, in recent years. Any activity on this site has potential to impact the quality and quantity of the stream flow in the Town, and on adjoining properties.
- Sections of the site located within **Source Water Protection Zone 2**, of the Tay River, upstream of the Town of Perth water intake.
- ***Wetlands*** *on the proposed development site* and along a large percentage of its south and north borders, one of which is designated 'Provincially Significant'. The wetlands provide a needed mitigation benefit to Perth in terms of water quality and flow.
- ***Loss of wildlife habitat*** inside the large, developed site, and, potentially, in the neighbouring properties and wetlands.

Considering the foregoing, it would not seem reasonable to grant blanket approval to the construction project, particularly in this era of weather uncertainty and extremes due to climate change. The obvious questions must be: "Is a large construction site & development immediately upstream of the town the most logical option for growth for Perth?"

The association's comments relate to:

- Recommendation for Protection of Tree Cover in the Development
- Proposal for a Conservation Design Approach for the Development
- Recommendation for Mitigation of Impermeability in the Site
- Summary Recommendations re Conservation and Climate Change

Recommendation Regarding Protection of Tree Cover

The Environmental Impact Study (EIS) (Kilgour) provides an evaluation of the tree cover including an inventory of tree species across seven treed Ecological Land Classification units. Combined, the cumulative tree coverage constitutes 23.68 ha (Appendix I – Table 3). The current tree coverage/canopy equates to 30.5% of the development site. However, four of the seven units comprising 17.865 ha will be clearcut reducing the tree canopy to 23%. The tree planting mitigation proposed would provide 1.5 trees per lot, a proposal which would replace less than a ¼ percent of the clear-cut area consisting of areas CUT1, FOD7, SWD2 and SWD3 shown in Figure 2, essentially all of the areas to be developed as residential.

Table 3 Treed ELC Units and Anticipated Area of Required Tree Clearing

ELC Unit	Anticipated Extent of Tree Clearing (ha)
CUT1	7.76
FOD5	4.81
FOD6	0.46
FOD7	9.99
FOM	0.56
SWD2	0.04
SWD3	0.06
Sum	**23.68**

Friends of the Tay note that the EIS does not identify a preferred tree canopy coverage and does not consider or recommend that the urban design of the subdivision endeavour to retain as much of the existing tree canopy as is possible but rather recommends "Tree removal should be limited to that which is necessary to accommodate construction." The message conveyed by this statement is that development takes precedence over the conservation of the natura environment. Despite the classification of the forest units, clear-cutting appears to be the preferred option.

The proposed approach does not comply with the policy intent of the Town's Official Plan per the following policy sections:

Section 5.9.3 - Principles for Community Sustainability

"a. Council's intent is to pursue a program that integrates the principles of community sustainability with community development and redevelopment. The program will be guided by the following principles:

iv) Reducing the municipality's carbon footprint by programs to improve the health and the extent of urban forest; maximizing the retention of vegetation cover, particularly tree cover and hedge rows, in land and infrastructure development; and through improvements to river corridors, road allowances and parkland in the Town."

Section 8.1.3.10 – Residential Design Principles
"Council recognizes the importance of planning communities which are safe, functional and have a sense of human scale. The image of Perth as a community with a high quality of life, a' small town atmosphere' and livable residential neighbourhoods is intended to be sustained by having regard for the following residential principles in the review of residential development or redevelopment projects."

More specifically:
"10. *Landscaping and open space:* all residential development shall include a generous area devoted to open space to be utilized as privacy areas for occupants, snow storage areas and landscaped areas. Medium and high density residential and non-residential development in designated residential areas shall incorporate a landscaping plan into any development proposal. Existing natural vegetation will be conserved wherever possible and/or enhanced with additional tree planting along street boulevards using healthy native species stock."

Comment:
The intent of the Town of Perth Plan is to conserve, not reduce, tree coverage in areas of development in the Town. The loss of some 17 ha of tree coverage not only removes important habitat but effectively loses the cooling benefit of shade trees as a measure to mitigate the impacts of climate change. The mitigation measure of street tree planting is beneficial; however, with the pervasive small lot design, limited 'green space' on the lots and the limited permeable surfaces (i.e. with up to 60% of lot frontages that may be used for parking), questions arise as to whether there will be adequate space for tree root zones that are sufficient to sustain the biological health of the trees that are planted. Small lots will also limit the size of the tree canopy coverage at maturity, without infringing on parking areas, municipal infrastructure and road allowances. The street tree planting program, despite any benefits, will not replace the loss of 17 ha of tree cover.

The effect of the present proposed plan of subdivision is to eliminate the potential retention of any urban forest or wilderness within the development. This urban design essentially ignores any attempt to retain the natural environmental attributes of the existing mature tree coverage. Retention of tree cover provides major benefits to the community environment, such as flood and drought mitigation and wildlife habitat. It also provides opportunities for recreational trail development - and adds to the realty value of properties.

Grants Creek tree cover is at 28% and declining since 2008. This includes the upper creek catchment area but reduced cover in the development will exacerbate it.

Figure 2 Map showing the proposed development and treed areas

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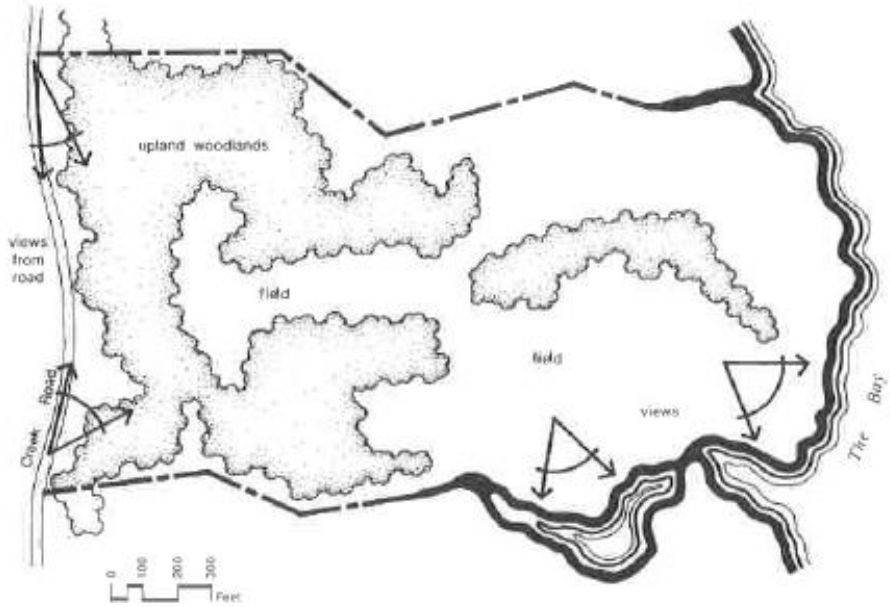
Proposal for a Conservation Design Approach for the Development

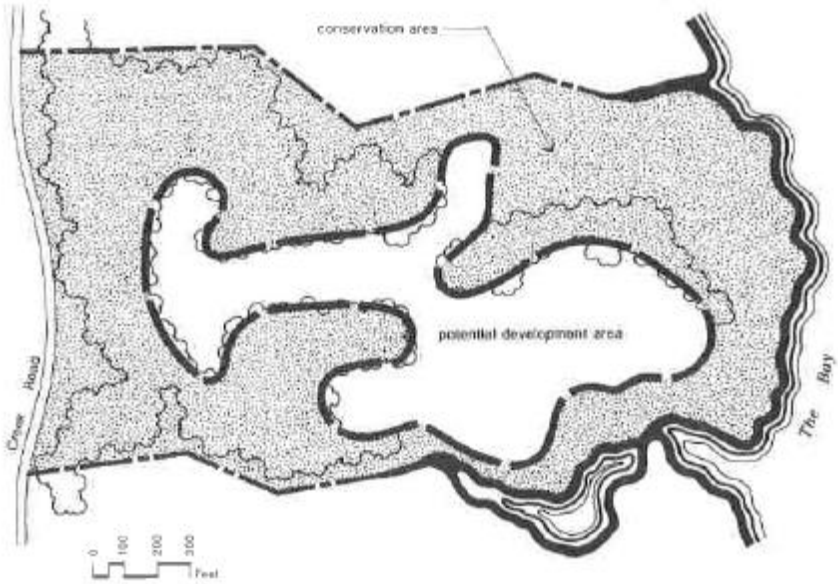
As an alternative, Friends of the Tay Watershed propose a conservation subdivision approach that assesses the natural heritage values of wetlands, wildlife habitat including Species At Risk, wildlife connectivity, woodlands, drainage patterns and soil characteristics, much as has been undertaken in the Kilgour EIS. However, Ecosites are identified and evaluated as a basis for establishing the lotting layout of the subdivision. The following diagrams illustrate the conservation design approach.

Step 1: Establish Conservation Areas



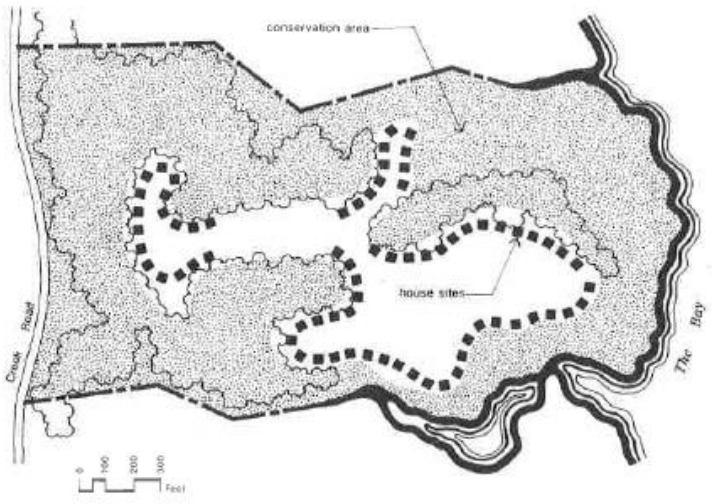
'Conservation areas' include treed areas, areas identified for their natural heritage values (wildlife habitat, SAR habitat, wetlands and wetland buffers, shorelands including riparian areas and setbacks, unique ecosites and headwater drainage areas).

Step 2: Identify Potential Development Areas



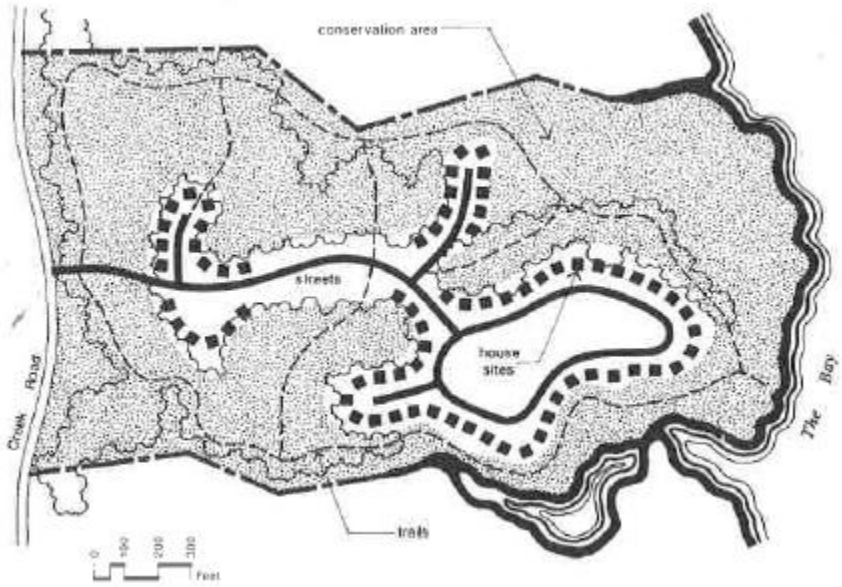
The areas that would be deemed **suitable for development** are those which, in the Caivan proposal, include open spaces occupied by fairways and other developed components of the golf course and exclude the areas identified for conservation. The conservation design approach will reinforce existing drainage (and stormwater) patterns that will provide an implicit benefit to sustaining the biological health of the tree cover.

Step 3: Locate Potential House Sites



This third step identify **potential house sites**, where the principal consideration is maximizing the number of homes that will have attractive situations, including views of the water, wetlands and interior open spaces. From a real estate perspective, homes without views should, whenever possible, at least abut wooded open space at the needs of their backyards for screening, privacy and rural feeling. The lot yield will be based on optimizing the developable lands. Smaller lots are more feasible where a conservation environment provides the background setting.

Step 4: Design Road Alignments and Trails

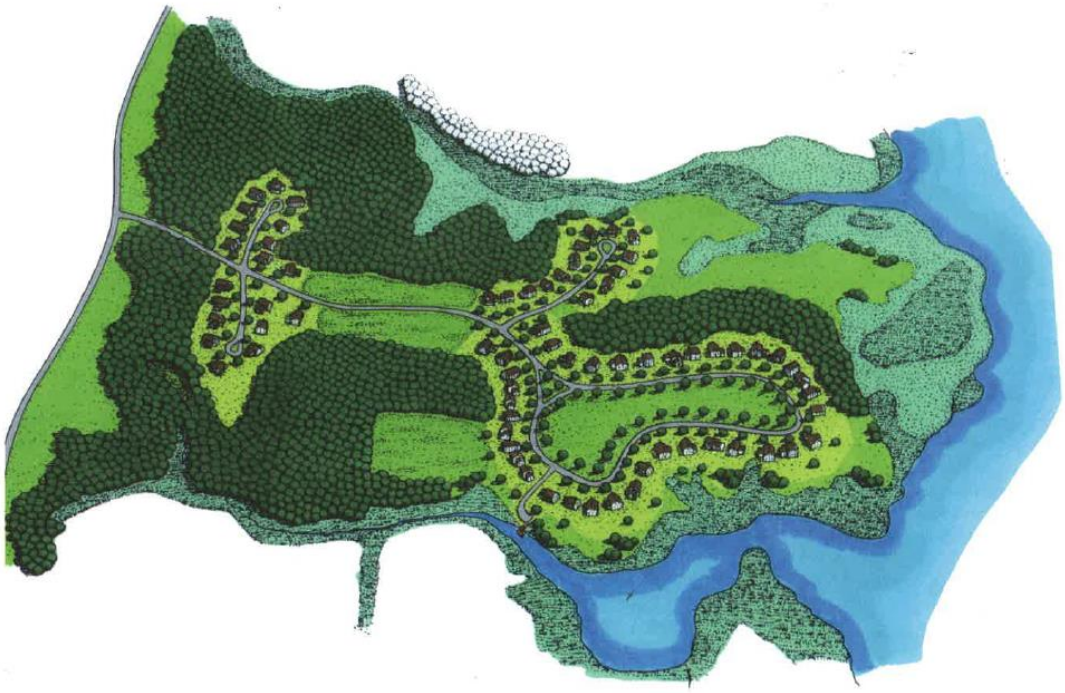


The final step in the subdivision design is **to align the streets and trails** with the housing sites wherein the specifics of the lotting pattern are determined. The design facilitates pedestrian travel and authenticates the human scale interaction with the natural environment.

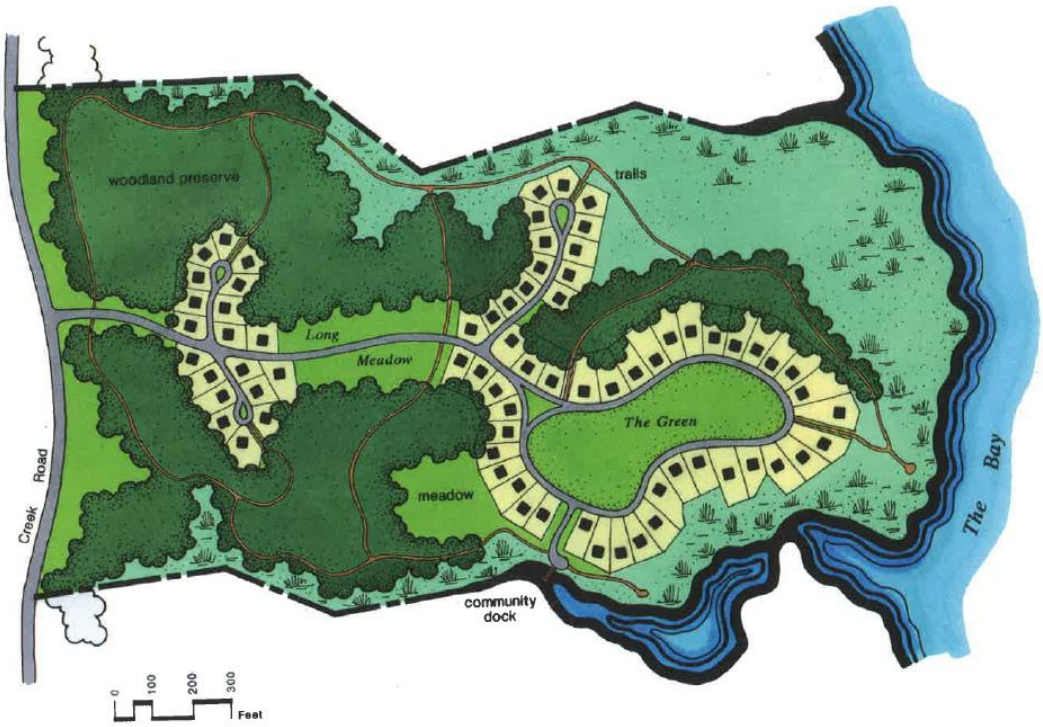
The application of the '**conservation design approach'** is illustrated in the conceptual designs **below** showing the prospective lots lines for a subdivision and the pictorial of the visual of the project.

(Reference: *Randall G. Arendt, Conservation Design for Subdivisions, A Practical Guide to creating Open Space Networks, Natural Lands Trust, American Planning Association, and American Society of Landscape Architects, Island Press, 1996*)

Conservation Design Showing Lot Fabric



Conservation Design Illustrating Housing Layout



Recommendation for Mitigation of Impermeability in the Site

The proposed **conservation design approach** would also address the issue of excess site impervious surfaces, referred to in the August 19 Staff Report (Page 38) and other submissions.

The Caivan Ltd. proposal appears to have at least 28% impervious cover in the development (18.9 ha sfd, 50.1 ha townhouses, 14.5 ha streets of the 300ha parcel), in addition to removing 75% of the tree cover. This is not in line with what many consider to be best practise for waterbody protection (example, see *Maryland Centre for Watershed Protection* reference below).

It is also not in compliance with:

- Perth's Official Plan Section 1.2.7, which has, as an objective, "To conserve the attributes of the natural physical environment such as wetlands, wildlife communities, trees and vegetation, to conserve water a quality of surface and groundwater systems and to maintain river corridors in their natural state whenever possible".

- Nor Section 5.3.c) (4) - "To ensure that alterations to natural drainage systems are prohibited or at least minimized by maximizing the retention of natural vegetation and by leaving stream channels in their natural form".

- Section 5.9 states that, "Consideration will be given to best practices in energy and water conservation, green infrastructure and the conservation of the natural environment in making future land use decisions."

Section 5.9.3.1 ii) further emphasizes that the Town has a goal of "Maintaining the integrity of the existing ecosystems through the conservation and improvement of habitat for flora and fauna and wildlife linkages and corridors. Existing sensitive ecosystems and wildlife corridors will be respected and to the greatest extent feasible, the intent will be to improve the biodiversity of plant and animal species in protected areas through conservation and compensation measures implemented or assured through planning and development approvals".
The proposed development does not comply.

Research by The *Center for Watershed Protection* in Maryland indicates that, at a minimum, <u>all of the following elements</u> are needed to maintain the possibility of effective protection of aquatic resources:

• Clustered developments that protect half or more of the forest cover, preferentially in headwater areas and around streams and wetlands to maintain intact riparian buffers
• A maximum of 20 percent total impervious area, and substantially less effective impervious area through the widespread re-infiltration of stormwater
• On-site detention, realistically designed to control flow durations (not only peaks) and

• Riparian buffer and wetland protection zones that minimize road and utility crossings as well as overall clearing.
(Ref.: The Center for Watershed Protection, Maryland has an international reputation for research on the prevention of stream degradation. https://owl.cwp.org/mdocs-posts/forest-cover-impervious-surface-area-and-the-mitigation-of-stormwater-impacts/)

In summary, Friends of the Tay Watershed Association recommend the following conservation, energy conservation and climate change mitigation measures:

1. Modification of the proposed Caivan subdivision design using the proposed ***conservation design approach*** with an emphasis on conserving the larger existing treed areas identified in Table 3 of the EIS Report and mitigating the impermeable area.
2. The immediate adoption of a **Tree Cutting by-law** under Section 135 of the *Municipal Act* to prevent any clear cutting of trees on the subject development until a tree management plan is prepared and accepted by the municipality.
3. Requiring the submission of a **tree management plan** which includes conservation of existing treed areas and the installation of street trees native to the area which cumulatively provides for a minimum 25% tree canopy cover at maturity. The tree management plan should identify:
    - The biological characteristics of each vegetation community (ECL),
    - Canopy closure or coverage
    - Dominant species and isolated rare species
    - Drainage characteristics and requirements
    - DHB – minimum 10 cm in calliper
    - Measures for protection of trees during construction (City of Ottawa measures acceptable)
    - Tree planting design specifications for street trees and continuity prescription for protection, watering and including provision for replacement of damaged or dead stock. Only native tree species to be permitted
4. Requiring a **minimum setback** of 30 m from the identified boundary of any and all wetlands in addition to the shoreline setback of 30 m from any waterbody.
5. No boundary of any lot shall be located **in a flood plain**.
6. **Shoreland vegetation** along the Tay River shall be left in a naturalized state with the exception of a recreational trail the alignment of which is undertaken by a qualified design professional.

7. The adoption of a By-law under Section 97.1 of the *Municipal Act* which **prohibits any landowner from the alteration** of the natural environment on or adjacent to their property including prohibition of any rear yard fences abutting a conservation or naturally treed area, prohibition of any waste disposal, prohibition of the use of pesticides or herbicides; prohibition on the cutting, pruning or alteration of the vegetation in an abutting conservation area save and except the removal of invasive plants subject to the approval of the municipality. (Prohibition of fencing is intended to protect connectivity corridors for wildlife habitat.) The said by-law should permit green roof installations and naturalized front and rear yard gardens.
8. **Trail and ecosite signage** to inform the public of the type and significance of ecosystem conservation. Subdivision design should ensure that access to recreational trails should not exceed a 5-minute walk or 250 m whichever is the lesser.
9. Permitting **alternative on-site energy sources** including solar roofing panels, micro-wind turbines, geo-thermal installations and cold climate air-force heat pumps.
10. Requiring **net-zero building construction** including the use of Photovoltaic panels (siding), solar hot water and low carbon construction materials.
11. Compliance with the **Town's climate action plan**.
12. **Development should be phased** with a monitoring program to determine impacts on conservation of the natural environment, carbon footprint and generation of GHGs.
13. Where the EIS peer review confirms **Significant Wildlife Habitat** and/or Species at Risk sites, the sites be recognised and protected.

The association also agrees with the comments provided by of other organisations and persons, relating to the environment, including:

- The possible allocation of a high percentage of Perth's additional sewage capacity to a single development (Richard Schooley)
- The potential impact of this development on both Perth and the Perth collective community (Richard Schooley)
- Reduction of dependence on non-renewable energy sources (natural gas) (Tay valley Township)

Finally, because our association's comments in this submission have focussed on the issues related to the above within our environmental mandate, they do not address all of the issues associated with the applications concerning this project. Our association concurs that the applications do not comply with the local and County Plan and are not consistent with the Provincial Policy Statement (2020) with respect to:

- Provision of 25% requirement affordable housing

- Current planning practice of making liveable communities within 15-minute walking distance of services. Car-dependency is energy inefficient. No provision is made in the plan of subdivision for localized institutional and commercial services for a projected population which may be in the order of 2,000
- The lack of internalized cycling infrastructure in the plan, with connectivity to the street system or multi-recreational trails
- The lack of an alternative site access to the Peter Street bridge, a significant public safety concern for both present town residents and future residents of the development.

cc.
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On behalf of the Board
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