

Glenmore Landing - Shadow Study Questions:

In reviewing this plan with fresh eyes, I have updated my community member feedback for City Council's serious and urgent consideration, please.

I was expecting to speak on:

- **Window strike and light pollution mitigation efforts**
- **The number of dogs whose very presence will drive back wildlife in the area and the small but significant numbers, that will be allowed off leash to harass wildlife and swim in drinking water**
- **There is a serious issue regarding the potential harms by the vibration and construction noise on garter snakes, and other wildlife that now live in the area and may be put at risk of entire loss of livable habitat or pushed into areas of much greater physical risk.**

However, something else caught my eye. Shadow Studies are very much limited. This appears to be a significant oversight in the considering the details surrounding this plan. Unlike many new projects which include smaller buildings and be further away from existing homes, natural areas and a heavily used pathway system. This one lays in a highly complex area. It requires maximum attention to detail for certain due diligence by all invested parties.

Mississauga Standard for Shadow Studies (Updated July 2024)

- has stricter requirements for Shadow Studies to include **December**: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.mississauga.ca/wp-content/uploads/2024/07/10121547/Standards-for-shadow-studies.pdf

And they state: ***New shadows shall not result in less than 2 hours of direct sunlight. Where less than 2 hours of sunlight already exists within the "No Impact Zone", no new shade may be added.***

Referencing the "Proposed Glenmore Landing Land Use and Design Framework" document, Calgary has required the following (summarized for time):

(See: Page 15 – 3.0 Implementation – Policy - 1 - <https://pub-calgary.escribemeetings.com/filestream.ashx?DocumentId=309432>)

*At the discretion of the Approving Authority, a **detailed sun shadow analysis** must be provided for each development permit application. This analysis will show intervals of one hour, between the hours of 10:00 am and 4:00 pm (MDT) **between March 21 to September 21** and indicate shadows cast by the proposed development and any other development that has either been constructed or approved in the Framework area. The sun shadow analysis should **demonstrate** that the proposed building(s) **will not significantly impact the adjacent natural area to the north and South Glenmore Park to the west.***

Referencing the submitted "Proposed Glenmore Landing Land Use and Design Framework" document, the Developer appears to have been deemed to have met these criteria:

(See: Page 5 <https://pub-calgary.escribemeetings.com/filestream.ashx?DocumentId=309430>)

The table below indicates how the anticipated heights of buildings has been amended during the consideration of the application to create a more appropriate transition in built

form and scale to the surrounding communities and the adjacent special purpose districts. Comprehensive shadow studies were submitted to Administration and have been internally verified. **The conclusion is that the reduced building heights will not cast significant shadows during the hours of 10:00 a.m. and 4:00 p.m. between March 21 and September 21 onto surrounding residential communities, and that any shadows cast onto adjacent special purpose districts have been minimized to an acceptable level.**

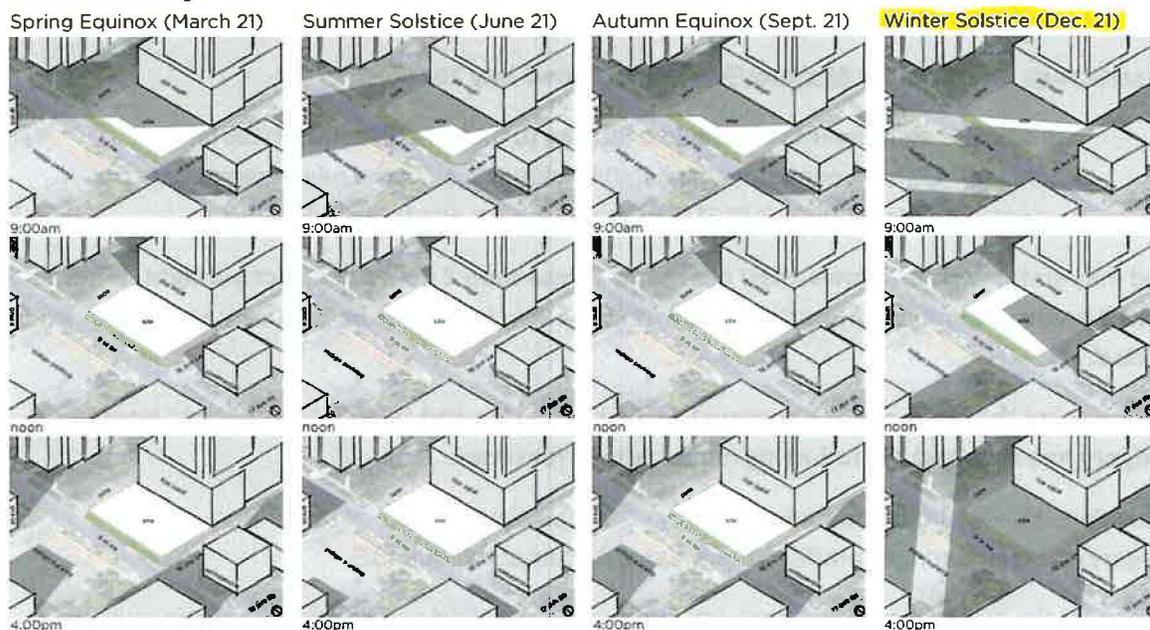
I submit that with the presence of risk of inadvertently causing harm to people and to the environment, this conclusion has been made on an insufficient Shadow Study.

Please note the difference between Shadows at these two Calgary studies:

Calgary Beltline (source project unavailable) (see far two right columns – compare September 21 to December 21 – the height of the subject building is unknown but the December shadows are significant)

See: <https://www.calgary.ca/content/dam/www/engage/documents/beltline-park/shadow-study.pdf>

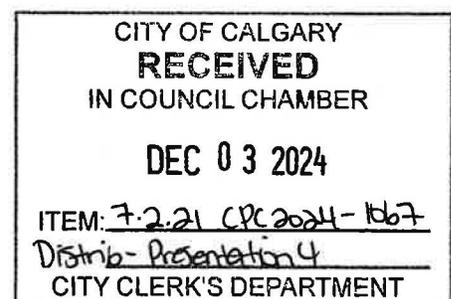
Shadow Study



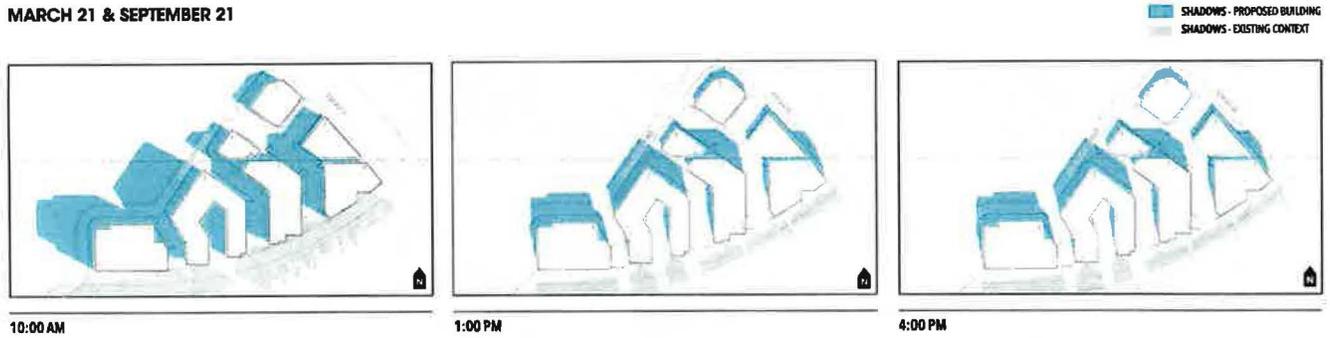
Copperfield and New Brighton – new 6 story building (received by City December 3, 2020)

This is for a 6 story building. Compare to the current 11 to 30 story buildings proposed today. Compare the March / September finding to the December shadows. It is irresponsible of us to not include a December Shadow Study for this project.

See: <https://pub-calgary.escribemeetings.com/filestream.ashx?DocumentId=149104>



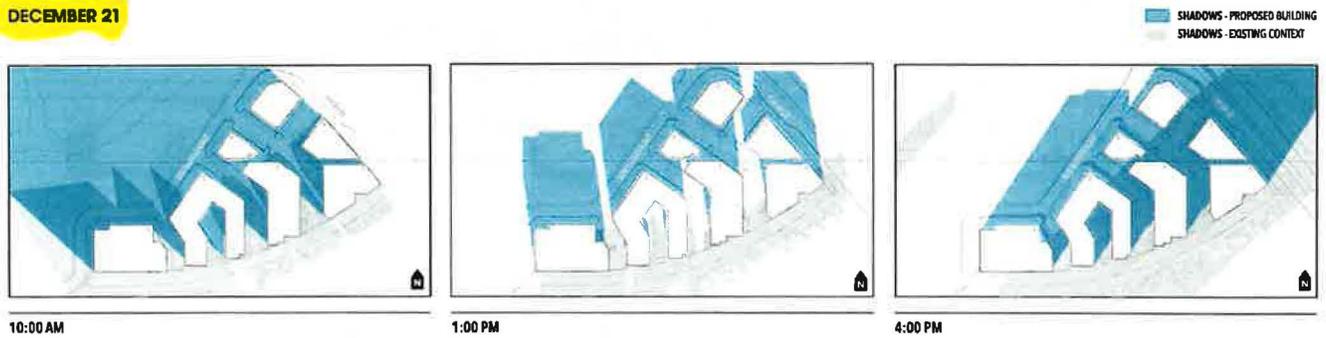
MARCH 21 & SEPTEMBER 21



NOTES: Buildings 5, 6, & 7 are part of a separate Development Permit application (DP2019-5904) already submitted by project team for the lands located north of the dashed landfill setback line. The shadows cast by these buildings have been included for reference.

Sun shadow studies and diagrams are created using industry standard modeling practices to help illustrate how the sun moves across a study area, and estimate the potential shadows that could be cast by a proposed development upon the existing surrounding context. The results of sun shadow studies are conceptual in nature and represent an interpretation of the proposed architectural design, surrounding built form and natural features. Study areas without significant topography (<1% grade change across the site) assume a flat at grade model surface. Simulated dates and times are based on established City of Calgary requirements and account for Daylight Savings.

DECEMBER 21



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Compare now to the Shadow Study at Glenmore Landing:

See: Outline Plan / Design Framework Report by Rio-Can (June 2024):

<https://www.calgary.ca/content/dam/www/pda/pd/documents/glenmore-landing/glenmore-landing-design-framework.pdf>

Design Framework found: <https://www.calgary.ca/planning/projects/glenmore-landing.html>

- Contains no reference to December outcomes
- Even in September, this shows significant (possibly permanent?) new shadow at the forested area on the Northern border which is counter to the requirement set out by the City of Calgary and would not meet the requirements set out by Mississauga's requirements as should be our expectation as well.

See below: Page 33 (1st phase) – September 21 only (North side is as per current):

SHADOW STUDIES / PHASE 1 (SET AREA)



GLENMORE LANDING

See below - Phase 1, 2, 3 (Set Area) – Glenmore Landing appears to be preserved as a community hub, ample housing has been added, and the shadows appear to be compliant with Calgary requirements. December shadow study should still be completed, as the height of the buildings may still be too great to be compliant year-round (liability for slips and falls on icy walkways, impact on wildlife and surrounding current residences). Note: September only (no diagram of a winter impact)

SHADOW STUDIES / PHASE 1, 2, 3 (SET AREA)

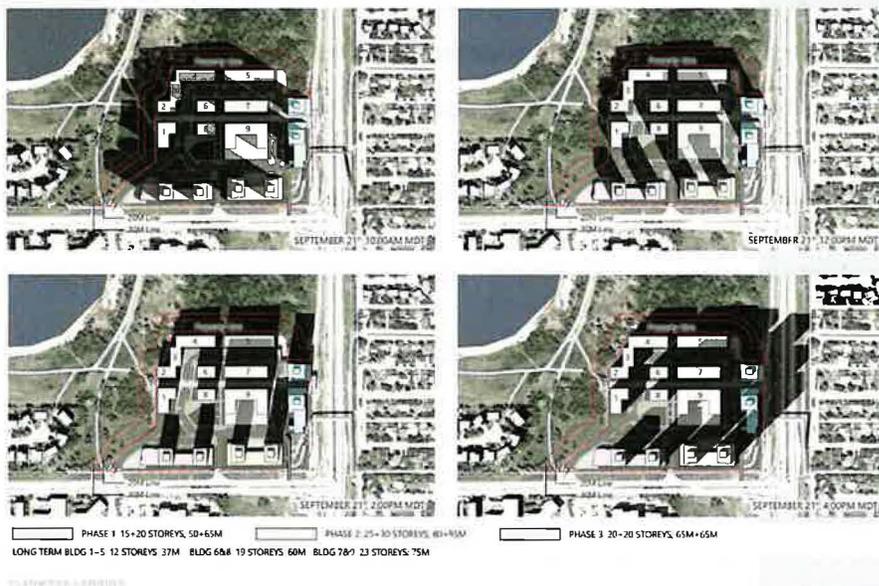


GLENMORE LANDING

Finally, see below for the 25-year plan, with the “Flex Area” Developed:

- Does NOT include a December shadow (compare to above for estimate of what this would look like, but more accentuated with these height of buildings).
- This does NOT preserve the Glenmore Landing Mall and its known amenities
- This DOES cast a shadow on the northern forested area, the woods to the West – appears to be a permanent shadow reaching several meters into the forested area and into property beyond the property line.
- This would not appear to be compliant with the stated requirements of the City of Calgary and appears it would not meet requirements for the updated shadow study standards, such as Mississauga.
- It DOES cast a shadow on the highly used pathways (which are sloped and already difficult to navigate in winter) to the West.
- A November, December, January shadow will be far longer, and I would imagine, would cause a slower spring melt, including in backyards along 14th Ave.

SHADOW STUDIES / 25 YEAR LONG TERM (FLEX AREA)



Considering:

- That context for additional due diligence is important and this circumstance reasonably should be considered for more robust and more transparent shadow studies
- This development is of an extreme change to any other development on the Glenmore Reservoir
- That the development includes buildings of up to 30 stories
- That the development will take up to 25 years to complete and true impact of December shadows may not be realized for more than 2 decades
- That the development is surrounded by wildlife habitat, highly used public pathway, a transit corridor and existing homes

- That Calgary receives very little sunlight through the winter months and all daylight is critical to healthy people and ecosystems
- That natural spring melt will be affected by any reduction of natural sunlight, thereby causing affects on surrounding habitat and safety of pathways
- There are multiple notations of public concern regarding shadows

That it is absolutely reasonable due diligence to require at a minimum:

- Complete shadow studies following the updated model presented by Mississauga
- That December be included (for all phases of development comparing to existing structures)
- That these shadow studies be publicly provided for consideration of all stakeholders including City of Calgary planning staff, all surrounding buildings and communities and all interested parties include nature conservation groups and individuals
- That the City disallow any new height of buildings that exceed the parameters of Mississauga
- Where shadow is considered acceptable under the parameters of Mississauga, that the City fully consider the impact on pathways, natural areas, roadways and homes in terms of access of sunlight and impact of slower melting in spring.

Based on this review of shadows and upon other observations made, I would request that Council please (including my representative, Councillor Kourtney Penner):

- Require a full shadow study including June and December be conducted and released to the public prior to any further movement forward
- That any new shadows to the North be disallowed from happening (and that Mississauga requirements be adopted for this case on all sides)
- That the “flex space” be cancelled, and the Phase 1, 2 and 3 space be reduced in height, as to:
 - o Prevent the shadow to spill over, in excess of what would be required by current standards (eg Mississauga)
 - o Prevent liability to the City for slow melt in Spring on surrounding roadways and paths and liability to surrounding homes who are trusting the current shadow study to be accurate, transparent and relevant to the nuances of this development.
 - o Reduce the number of buildings that will cause harm to wildlife through window strikes and light pollution
 - o Preserve the community centre of Glenmore Landing as it currently stands, and its businesses which do serve as income for many Calgarians and as a hub for community members for grocery shopping, gathering spaces and for fitness (eg Running Room).
- That CSA Guidelines A460-19 CSA Prescribed standards for Bird Friendly Design be strictly followed and committed to in writing for all aspects of design.
- Errors and Omissions accepting, thank you for your time and your consideration.

Kathleen Johnson

Community Member, Ward 11 (Kourtney Penner) and same Ward as Project.