Muncaster Environmental Planning Inc.

March 28, 2025

Stoked Developments Inc
14 Knoll Terrace
Nepean, ON K2J 2K6

Attention: Jason Kovar

RE: 2167 McGee Side Road
Review of Mapped Watercourse

On the afternoon of March 27th, I reviewed the area along the north edge of 2167 McGee Side Road (the 'site') where a watercourse is mapped on the geoOttawa layer. The mapped watercourse extends about 18 metres to the west of the site, but a sharp rise in elevation at the northwest edge of the site results in no connectivity (Photo 1). Photos 2 and 3 below are along the mapped watercourse alignment in the north edge of the site. To the east, the mapped watercourse is along the west side of John Cavanaugh Drive (Photos 4 and 5). There is a t-shaped culvert in the northwest corner of the John Cavanaugh Drive and McGee Side Road intersection, with the east end of the culvert extending to the east side of John Cavanaugh Drive on the north side of McGee Side Road. The east end of the culvert is damaged and there is no direct connection to the grassed swale (Photo 6) to the east along the mapped watercourse alignment on the north side of McGee Side Road. Approximately 100 metres east of John Cavanaugh Drive, the alignment of the mapped watercourse transitions to the south side of McGee Side Road, though no culvert under McGee Side Road is present in this area. The mapped watercourse remains within the south portion of the McGee Side Road allowance for about 960 metres to Oak Creek Road, meeting the Carp River approximately a kilometre east of Oak Creek Road. Until approaching the Carp River area, the mapped watercourse is straight and within road allowances save for the 90 metre portion west of John Cavanaugh Drive along the north edge of the site.

The photographs below begin at the northwest edge of the site at 2167 McGee Side Road, going to the east and south.

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Photo 1 – The west end of the mapped watercourse alignment in the northwest corner of the site, with a rise in elevation preventing any access to the west of the site. View looking west

Photo 2 – No defined channel in the alignment of the mapped watercourse in the north-central edge of the site. View looking west along the alignment of the mapped watercourse

Photo 3 – No defined channel in the alignment of the mapped watercourse in the northeast edge of the site. View looking east along the alignment of the mapped watercourse. Note rise in elevation approaching John Cavanaugh Drive

Photo 4 – No potential connection to a channel along the west side of John Cavanaugh Drive. View looking south to McGee Side Road along the alignment of the mapped watercourse where the mapped watercourse joins from the west but there is a clear rise in elevation

Photo 5 – View looking north along the alignment of the mapped watercourse on the west side of John Cavanaugh Drive, north of McGee Side Road

Photo 6 – Downstream end of culvert on the east side of John Cavanaugh Drive is damaged and there is no connection to the swale on the north side of McGee Side Road. View looking west

Assessment

Natural watercourses are defined in the City's Official Plan as *Naturally occurring drainage channels and includes rivers, streams and creeks.* Historical aerial photography from geoOttawa indicates that 2167 McGee Side Road and adjacent lands were in agricultural use in 1976, with no channel present along the north edge of the site or the west side of John Cavanaugh Drive, which was not yet built. A dug channel is shown in the location of the mapped watercourse along the north edge of the site in 1991. Since the watercourse was not present prior to development in the area and was dug as part of the commercial and industrial operations or as roadside swales, the mapped watercourse is not considered a natural watercourse.

Although on March 27th there were pockets of standing water up to 5cm deep along the alignment of the mapped watercourse, there is no defined low flow channel in the swales along the mapped alignment and no other potential aquatic habitat features such as coarse substrate, aquatic vegetation, undercut banks, channel sinuosity, potential fish access from the east, or evidence of higher flows were observed. No constraints for the site at 2167 McGee Side Road with respect to potential fish habitat were observed on or within at least 30 metres of the site. and the mapped watercourse alignment is not considered to support direct fish habitat. Due to the shallow swales with little elevation change east of the site, lack of evidence of sustained flows, and lack of a culvert under McGee Side Road, the area of the mapped watercourse alignment in the vicinity of the site also has no connection to potential downstream aquatic habitat.

Maintaining water quality and quantity leaving the site is addressed in a Site Servicing Study & Stormwater Management Report by D. B. Gray Engineering Inc. (revised October 15, 2024). The mapped watercourse alignment along the north portion of the site will be retained in its existing alignment. As shown on the Site Servicing Plan by D. B. Gray Engineering Inc. (revised October 15, 2024), there will be a minimum 5.5 metre setback from the mapped watercourse to the north edge of the septic system to the south. The north edge of the surface parking will be approximately 14 metres south of the mapped watercourse, with the north edge of the warehouse about 25 to the south of the mapped watercourse.

No negative impacts are anticipated on the water quantity or quality leaving the site, as assessed by Gray (2024). To achieve water quality control as part of the stormwater management design, an infiltration trench, designed to remove 80 percent total suspended solids, will be installed. As per water balance calculations in Gray (2024), the infiltration trench will help achieve a post development annual infiltration for the property of 241 mm/year; greater than the minimum 104 mm/year target. A reduction in runoff during the 100-year and 5-year events will reduce the potential for downstream erosion and associated sedimentation.

Conclusion

The mapped watercourse is not considered a natural watercourse as defined in the City's Official Plan and has no aquatic habitat potential. The dug channel may convey flow during higher flow periods but elevation rises in the northeast corner of the site make this unlikely and there is no downstream connection further east. The dug channel will be retained in its existing location, with a minimum 5.5 metre setback to a septic bed and greater setbacks to impervious services including surface parking and a warehouse. Given that the migration measures identified in the Site Servicing Study & Stormwater Management Report and Site Servicing Plan and summarized above are properly implemented, no impacts on the dug channel within the mapped watercourse alignment or downstream conditions are anticipated.

Please call if you have any questions or comments on this watercourse review.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

\ 2167 McGee Side Road Chanel Review