Muncaster Environmental Planning Inc.

July 14, 2023

Mr. Pete Van Grootheest
Senior Project Manager
BBS Construction (Ontario) Ltd.
1805 Woodward Drive
Ottawa, Ontario
K2C OP9

Dear Mr. Van Grootheest:

RE: 1540 Star Top Road, Gloucester
Environmental Impact Study

This Environmental Impact Study (EIS) addresses the existing vegetation, potential Species at Risk utilization and the South Cyrville Municipal Drain and associated recommendations at 1540 Star Top Road in the east-central portion of the Urban Area of the City of Ottawa, northwest of the Highway 417 and Innes Road interchange. The site is on the west side of Star Top Road, approximately 220 metres north of Innes Road. The three hectare site has approximately 73 metres of frontage on Star Top Road.

For the purposes of this report Star Top Road, is assumed to be in a north-south orientation.

Background and Project Description

The site is within a light industrial area, including warehouses, commercial operations, automobile dealerships, and office buildings. The site is highly disturbed from a natural environment perspective and is dominated by gravel and asphalt areas used for surface storage and small one storey office and former maintenance buildings. The maintenance buildings were part of a former concrete plant and the offices of Transport Training Centres of Canada Inc. are currently in the east portion of the site. The South Cyrville Municipal Drain is immediately to the north of the site (Figure 1).

It is proposed to construct a two storey building in the west portion of the site, with a footprint of approximately 90,000 sq ft (Figure 2). This building will be on mostly existing surface storage, with two small structures to be removed. There are two existing buildings in the east portion of the site. The smaller one closer to Star Top Road will be removed, with the one to the west, approximately 6,700 sq ft., to be retained. One-hundred and eight surface parking spaces will be provided, with the balance of the site to be used for access and an outdoor fenced storage yard.

The site is within the urban area of the City of Ottawa and is zoned light industrial (*IL*). The are no Urban Natural Areas, Natural Heritage Features Overlays, or other components of the Natural Heritage System, as shown on Schedule C-11C of the City of Ottawa Official Plan, on or adjacent to the site, with the South Cyrville Municipal Drain identified as a watercourse. The closest mapped wetland is an unevaluated wetland about 1.2 km to the northwest of the site, west of St. Laurent Blvd. No portions of the Urban Greenspace system are on or adjacent to the site, as identified on Schedules C-12 or B-3. Unstable slopes are along the South Cyrville Municipal Drain to the east of Star Top Road, as shown on Schedule C-15. No Areas of Natural and Scientific Interest or Provincially Significant Wetlands are in this portion of the City's urban area.

Methodology

This EIS was prepared in accordance with the City of Ottawa EIS Guidelines, with guidance from the Natural Heritage Reference Manual (OMNR, 2010). The major objective of this EIS is to determine the feature and functions of the on-site and adjacent natural environment conditions, with an emphasis on the features of the South Cyrville Municipal Drain and associated setback recommendations, and potential Species at Risk utilization.

Aerial photography (1965 - 2021) was used to review the natural environment features in the general vicinity of the site. A field review of the site and adjacent lands was conducted on July 11th, 2023 from 08:45 to 10:40. The weather conditions on July 11th included partly cloudy skies, light air, and an air temperature of 26° C. The field survey and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-five years of experience in completing natural environment assessments.

Existing Conditions

The site is dominated by fill material with a generally level topography (Photo 6). Paterson (2023) identified crushed stone, topsoil, brown silty sand, trace clay and occasional gravel in the fill. Bedrock consisting of black shale was noted by Paterson (2023) at depths ranging between approximately 1.9 to 2.9 metres below grade. Similarly, Paterson (2023) observed groundwater depths between approximately 1.9 and 2.9 metres below the existing ground surface, with groundwater flow generally in a northern direction.

South Cyrville Municipal Drain

The South Cyrville Municipal Drain is immediately to the north of the site. In 1946 the Township of Gloucester approved drainage improvements for the Choquette Award, which had been constructed approximately forty years earlier and the channel became known as the South Cyrville Municipal Drain (Stantec, 2012). The channel was constructed with a bottom width of three feet and 1:1 side slopes. Due to a snow disposal facility located between Michael Street and Comstock Road the municipality in 1993 identified a need for deepening the South Cyrville Municipal Drain to provide adequate outlet for future storm sewers in Michael and Triole Streets. In 1998 the owners of 1410 Triole received permission to cover the channel (Stantec, 2012) and by 2010 the channel was enclosed to the west ending approximately 550 metres west of the site. In addition, to the east of the site by 2000 the channel was entombed for

about 350 metres from Star Top Road to the east of the northbound Highway 417 lanes. The channel is then open for 130 metres before a confluence with Green's Creek. Thus, the channel is open for a distance of approximately 750 metres, including the site and to the west. An on-line stormwater management pond, constructed in the 1990s west of Comstock Road, is included in this distance.

The wetted width of the South Cyrville Municipal Drain is between 2.5 and 3.5 metres. The water on July 11th was turbid (Photo 1). The canopy cover from an adjacent upland poplar deciduous forest is good in many areas. Small woody debris provides some instream habitat structure but there was no evidence of boulders, other coarse material, notable areas of aquatic vegetation, or undercut banks. There channel is straight with connecting sharp turns to the west of the site and as described above is open for approximately 750 metres.

A retaining wall of large boulders is along the top of slope of both sides of the channel corridor (Photo 2). There is a setback of 7.5 metres from the retaining wall to the north edge of the site. Trembling aspens up to 30 cm diameter at breast height (dbh) are dominant in the setback, along with smaller green ash and Manitoba maple (Photos 3 and 4). The understory in the setback area is thick in most areas, with glossy buckthorn dominant in areas and staghorn sumac, red-osier dogwood, and tartarian honeysuckle common, along with regenerating stems of poplar, ash, and Manitoba maple. A chain-link fence is around the north and south edges of the channel setback and two surface connections crossing the channel between 1282 Algoma Road and the site (Photo 4). A gate in the fencing between the two crossing along the north site boundary provides access to the corridor, including for the plantings recommended below.

A ditch on the west side of the site was mostly dry during the field review, with small pockets of standing water (Photo 5). Significant rain had occurred within the previous 30 hours. The drain does not have an open connection to the South Cyrville Municipal Drain to the north.

Woody Vegetation On-Site

Scattered regenerating deciduous trees are along portions of the site boundaries and these areas are referred to as intermittent deciduous hedgerows on Figure 1. Trembling aspens are dominant, with eastern cottonwood well represented and green ash, white elm, and linden also present (Photo 7). Regenerating poplar, birch, ash, linden, and white poplar stems are among the intermittent hedgerow trees, along with staghorn sumac, Bebb's willow, red-osier dogwood, tartarian honeysuckle, and glossy buckthorn shrubs. The largest trees in the intermittent hedgerows are cottonwood and trembling aspen up to 32cm dbh. Many of the white elms are dead and leaf-out is greatly reduced on many of the poplars. The larger eastern cottonwoods along the west ditch appear dead as well. Wild grape coverage is common on the lower portions of some of the trees.

The scattered ground flora along the site peripheries is reflective of disturbed conditions including white-sweet clover, Canada thistle, bird's-foot tick trefoil, wild carrot, wild grape, thick creeper, black medic, green foxtail, tufted vetch, crown vetch, and evening primrose. European bur-reed, reed canary grass, broad-leaved cattail, narrow-leaved goldenrod, and colt's foot are common along the west property line.

A twin-stem bur oak, with individual stems up to 30cm dbh and a 48cm dbh white spruce are adjacent to the existing office building west of Star Top Road (Photo 8).

Wildlife observed during the July 11th survey included American crow, ring-billed gull, grey catbird, house sparrow, European starling, American robin, northern cardinal, and American goldfinch. No stick nests or other evidence of raptor utilization or trees with suitable wildlife cavities were observed.

Photo 1 - South Cyrville Municipal Drain immediately to the north of the site. View looking east from the northwest entrance to the site

Photo 2 – South side of the Municipal Drain corridor to the north of the site, with large boulder retaining wall. View looking east, with site beginning 7.5 metres from wall

Photo 3 – The corridor between the Municipal Drain and the site is generally well treed with young poplars. View looking north from the centre of the north property line

Photo 4 – The Municipal Drain corridor is protected with a chain-link fence along the north property line. This area has fewer trees and plantings are recommended to increase the diversity of the buffer function. View looking north

Photo 5 – Dry ditch along the west boundary of the site. View looking north

Photo 6 – West portion of the site looking north from south edge

Photo 7 – Cottonwood along southeast boundary of the site. View looking west

Photo 8 – White spruce in the east portion of the site, west of Star Top Road was the largest tree observed on or adjacent to the site. View looking west

Species at Risk

On July 10th, 2023 the Ontario Ministry of the Natural Resources and Forestry's Make a Map: Natural Heritage Areas website was reviewed. This site allows for a search of Threatened and Endangered species covered by the 2008 *Endangered Species Act*, as well as other species of interest. A search was conducted on the 1 km square including the site and adjacent areas (18VR52 – 19). No Species at Risk observations were identified for this square, with two flora species of special concern: blistered jellyskin and cupped fringed lichen noted. These species are generally found in less disturbed older forests, which are not present on or adjacent to the site.

Six Species at Risk, eastern whip-poor-will, chimney swift, least bittern, bank swallow, eastern meadowlark, and bobolink, are identified in the Ontario Breeding Bird Atlas for the overall 10 km square (18VR52) including the study area and this general portion of Gloucester. Eastern whip-poor-will requires large wooded areas with open patches and/or open woodlands or alvar habitats, habitats not present on or adjacent to the additional lands. Least bittern nest in large meadow marsh wetlands with some open water, habitat also not present on or adjacent to the additional lands. Eastern meadowlark and bobolink utilize larger grassland areas. These habitats are not present on or adjacent to the site. Chimney swift nest in open brick chimneys without a metal liner, while barn swallow, now a species of special concern, nests on structures with open rafters such as barns, larger agricultural sheds, and bridges. No suitable structures are present on or adjacent to the site, with no chimneys on the existing on-site buildings. Bank swallow is a colonial nester; burrowing in eroding silt or sand banks and sand pit walls, habitat not present on or adjacent to the site.

The potential Species at Risk in the City of Ottawa were also reviewed, with an emphasis on the endangered and threatened species reported in the City, including butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, Henslow's sparrow, loggerhead shrike, bald eagle, golden eagle, least bittern, bank swallow, eastern whip-poor-will, chimney swift, little brown myotis, northern long-eared bat, olive hickorynut, eastern cougar and American eel. The habitat requirements of these potential species along with those listed as special concern were reviewed. No suitable cavity trees for potential bat utilization were observed on or adjacent to the site and other than butternut, Species at Risk utilization is not anticipated for the site.

Significant Woodlands and Valleylands

A forested area is considered significant woodlands in the urban area of the City of Ottawa if the forest is 0.8 hectares in size or larger and is 60 years of age and older at the time of evaluation. There are no forests on the site. The upland poplar deciduous forest to the north along the South Cyrville Municipal Drain corridor is not present on aerial photography before 2009 and thus does not meet the criteria for significant woodlands in the urban area.

Significant valleylands are defined as valleylands with slopes greater than 15% and a length of more than 50 metres, with water present for some period of the year, excluding human-made features such as pits and quarries. The site is gently sloped to the north and there are no extended slopes on or adjacent to the site approaching 15 % other than associated with the large rock retaining wall. Due to the artificial nature of the retaining walls, this feature is not considered significant valleylands.

Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNRF (2015). No flora, fauna, or ecological conditions identified in the background review or field survey that would trigger a Significant Wildlife Habitat designation with respect to the ELC communities present were observed on the site. For example, the cultural habitats do not support waterfowl stopover or staging areas, colonial nesting bird breeding habitat, or other examples of seasonal concentration areas, rare vegetation communities as noted in MNRF (2015), or rare or specialized habitats including seeps or springs. No wetlands are present and the lack of pools and adjacent wetlands would appear to limit amphibian and turtle habitat potential in the South Cyrville Municipal Drain.

No forest interior habitat is present and thus potential nesting of species of special concern such as wood thrush and eastern wood-pewee is not expected. No evidence of raptor wintering areas was noted, and old growth forests are not present. No rare vegetation communities, stone fences, or exposed bedrock with fissure were observed.

The site is isolated from an environmental perspective due to the dominance of light industrial activity in the area and associated lack of greenspace. The Highway 417 corridor is to the east of the site, with the multi-lane Innes Road corridor to the south.

Impact Analysis and Recommendations

No natural heritage features, as identified in the PPS and OMNR (2010) are present on the site with potential aquatic habitat in the South Cyrville Municipal Drain immediately to the north of the site. The aquatic habitat potential is greatly limited by the short stretch of the Drain which is not entombed, the straight and trapezoid cross-section of the dug Drain, lack of a variety of in-stream structure, and turbid waters. The portion of the channel immediately north of the site is the only reach with a well vegetated riparian corridor and this cover provides food inputs for the channel and local wildlife habitat. No Species at Risk were observed on or adjacent to the site.

The existing vegetation in the riparian corridor of the South Cyrville Municipal Drain will not be disturbed and is well protected with a sturdy chain-link fence. As there will be no changes in the existing surface parking use immediately to the south of the corridor, no impacts are anticipated from the development on the adjacent vegetation cover to the north. Provided standard sediment and erosion control, stormwater management practices, and noise, dust and light are successfully implemented during the construction and operation of the development, no impacts are predicted on the features and functions of the South Cyrville Municipal Drain and any associated habitat that may be present.

Although much less than a typical setback, a setback of 7.5 metres from the retaining wall top of slope to the south edge of the riparian corridor is considered suitable due to the highly disturbed nature of the channel, including limited exposed reaches, straight alignment that was excavated and associated artificial cross-section. The 7.5 metres setback is greater than that provided for other open sections of the Drain to the west of the site. The drain is enclosed to the east of Star Top Road.

Natural buffers provide important functions such as filtering excess nutrients running into the channel, infiltrating rainwater, shading and food inputs for the channel, maintaining bank stability (though in this case retaining walls are present), contributing to baseflow, and providing wildlife habitat. The buffer immediately to the north of this site can be improved with plantings of native trees and shrubs where currently there are fewer poplar trees. This will provide a diversity compared to the existing woody vegetation. Potential native species to plant include nannyberry, high-bush cranberry, ninebark, and elderberry shrubs along with sugar maple, basswood, balsam fir, and white spruce trees. Obtaining native species from local seed sources is strongly recommended to promote adaptability and longevity. In the range of five trees and ten shrubs are recommended for planting in the corridor to the north provided the consent of the landowner is obtained.

The following additional mitigation measures are to be properly implemented:

- Prior to any site alterations properly keyed in silt fencing is to be installed along the north side of the site, with the ends wrapped to the south for a minimum of five metres. The extent of exposed soils is to be kept to a minimum at all times. Re-vegetation of exposed, non-developed areas is to be achieved as soon as possible. The fencing is to be maintained during the construction period and removed when the site is stabilized;

- As recommended in City of Ottawa (2022), prior to beginning work each day, the work area is to be checked for wildlife by conducting a thorough visual inspection of the work space and immediate surroundings. See Section 2.5 of the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2022) for additional recommendations on construction site management. Any turtles or snakes observed in the vicinity of the work areas or that may otherwise be in danger are to be safely relocated to the north. Animals should be moved only far enough to ensure their immediate safety. See Appendix 1 and the links in Section 4 of City of Ottawa (2022) for suggestions on how to effectively relocate turtles and snakes;
- Many other helpful wildlife oriented mitigation measures are detailed in the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2022). The contractor is to review in detail and understand the City's Protocol for Wildlife Protection during Construction prior to commencement of construction. The contractor is to be aware of the potential Species at Risk in the vicinity of the site including butternut. Appendix 1 of City of Ottawa (2015) describes these species. Bernie Muncaster (613-748-3753) is the project biologist. Any Species at Risk sightings are to be immediately reported to the Ministry of the Environment, Conservation and Parks and project biologist, and work that may impact the species suspended immediately;
- To protect breeding birds, the tree or shrub removal should not occur between April 15th and August 15th, unless a breeding bird survey conducted by a qualified biologist within five days of the woody vegetation removal identifies no active nests in the trees or shrubs. No stick nests or other evidence of raptor utilization on the site was observed;
- Snow removal and disposal is an ongoing issue for many properties located adjacent to urban channels. The chain link fencing will prevent snow dumping into the South Cyrville Municipal Drain corridor;
- Municipal by-laws and provincial regulations for noise will be followed and utilities will be located as required in the vicinity of the site prior to construction; and,
- Waste will be managed in accordance with provincial regulations. The contractor will have a spill kit on-hand at all times in case of spills or other accidents.

Conclusion

The existing developed site is proposed for redevelopment. The only natural heritage feature of note is potential aquatic habitat in the South Cyrville Municipal Drain. The habitat potential is greatly limited as much of the channel is entombed to the west and east of the site and the exposed portion is a straight, dug channel. No endangered Species at Risk were observed.

The riparian corridor of the Municipal Drain will be protected as there is an existing sturdy chain-link fence. The features and functions of the buffer to the channel will be enhanced with plantings of native trees and shrubs to improve the diversity of the woody vegetation cover.

This EIS concludes that no impacts are anticipated on the potential fish habitat or other features of the South Cyrville Municipal Drain providing the important mitigation measures outlined in this EIS are properly implemented and maintained.

References

City of Ottawa. 2022. Protocol for Wildlife Protection during Construction. Revised September, 2022. 14 pp & Append.

Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. March 2010. 233 pp.

Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. January, 2015. 38 pp.

Paterson Group. 2023. Phase II – Environmental Site Assessment 1540 Star Top Road Ottawa, Ontario. Prepared for BBS Construction. Report: PE6080-2. June 8th, 2023. 29 pp & Append.

Stantec Consulting. 2012. Engineers Report for the Improvement of the South Cyrville Municipal Drain. Located at 1410 Triole Street, Ottawa, Ontario. February, 2012. 14 pp & Append.

Please call if you have any questions on this Environmental Impact Study.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

\1540 Star Top EIS

Legend

Site

Municipal Drain

Vegetation Communities

1. Cultural Meadow/ Disturbed Land
2. Intermittent Deciduous Hedgerow
3. Upland Deciduous Forest

Approx. Scale 1: 2,000

0 25 50 75 METRES

2021 air photo from geoOttawa

Figure 1

FILE: 23 - 07

July 12, 2023

Prepared for: **BBS Construction (Ontario) Ltd.**

Prepared by: Muncaster Environmental Planning Inc.

ENVIRONMENTAL IMPACT STATEMENT

1540 Star Top Road
Gloucester, City of Ottawa

FIGURE 2 – SITE PLAN (by Deimling Architecture & Interior Design)