Muncaster
Environmental
Planning Inc.

May 29, 2023

Mr. Cris Karson
Karson Holdings Inc.
3232 Carp Road
Carp, ON
K0A 1L0

Dear Mr. Karson:

RE: Karson Holdings Inc.
3711, 3715, 3719 and 3725 Carp Road
Updated Environmental Impact Statement

I have completed an update to our 2010 Environmental Impact Statement (EIS) for a proposed mixed-use development at 3711, 3715, 3719 and 3725 Carp Road in the southwest portion of the Village of Carp. This EIS is prepared in support of an application for Draft Plan of Subdivision approval for the redevelopment of the site.

Background and Project Description

The Carp River flows adjacent to the south portion of the site and then curves to the north to flow north along the west portion of the site. Agricultural lands dominate to the west of the Carp River, with an active rail line and commercial developments on the south side of Donald B. Munro Drive to the north of the site. Carp Road, with residences on both sides of the road, is to the east of the site. The site is currently only used for surface parking with all buildings now removed. Larger woody vegetation on the site is restricted to the portion of the Carp River corridor closest to the river, with just a couple of small regenerating stems remaining closer to Carp Road.

A total of 96 units are proposed for the site, represented by 78 residential units and 18 commercial units (Figure 3). The units will be in seven buildings, with a combination of residential and commercial units in the buildings fronting onto Carp Road. In keeping with the Village of Carp Community Design Plan, the buildings will be built adjacent to and closer to Carp Road and the required parking lot will be constructed between the rear of the buildings and the Carp River. The 146 parking surface parking spaces will be setback from the Carp River as a result the Carp River's meander belt width, erosion hazard limit and the depth of the flood plain. The erosion hazard limit was delineated by PARISH Geomorphic (2009). The toe erosion allowance was calculated as 13.5 metres, measured perpendicular from the bankfull edge of channel. The stable slope allowance and the erosion access allowance are each 6 metres (PARISH Geomorphic, 2009), with the potential to utilize the proposed parking lot for the erosion access allowance. The total erosion hazard limit and the individual components are

mapped on Figure 5 of PARISH Geomorphic (2009) with the overall limit more than 15 metres from the top of bank but, for a small portion, less than the 30 metres from the normal high water mark.

The proposed site development will continue to be serviced by water and sanitary connecting to existing municipal watermain and sanitary sewer located in Carp Road. The storm outlet will continue to be the Carp River and will outlet in accordance with Mississippi Valley Conservation criteria.

The site is within the Village of Carp, with the portion of the site closer to Carp Road identified as Village Core on Schedule B-9 of the City of Ottawa Official Plan. The site is zoned VM (Village Mixed Use), with a Flood Plain hazard overlay along the Carp River corridor. There are no Provincially Significant Wetlands, Areas of Natural and Scientific Interest or Natural Environment Areas in proximity to the site, with the closest designated areas associated with the Carp Hills approximately one kilometre to the northeast of the site. Schedule C11-A of the Official Plan shows no components of the Natural Heritage System on the site, with a Natural Heritage System Linkage Area to the west of the site, on the west side of the Carp River. Schedule C-15 of the Official Plan identifies unstable slopes along the Carp River and a tributary entering the Carp River from the west of the site and a floodplain on the site. The site is shown within a Wellhead Protection Area on Schedule C-15, with a vulnerability score of 8. An EIS is required due to the proximity of the Carp River, including the presence of Category 1 and 2 lands identified in the Carp River Watershed/Subwatershed Study (Robinson, 2004), and the potential for Species at Risk.

Methodology

The EIS was prepared in accordance with the City of Ottawa EIS Guidelines, with guidance from the Natural Heritage Reference Manual (OMNR, 2000).

The major objective of this EIS is to determine the anticipated impacts associated with the proposed development on the Carp River corridor, including the methodology to mitigate any negative impact on the features and functions of the corridor. To attain these objectives, the draft concept plan was reviewed and mitigation measures developed based on field observations of the features and functions of the natural environment.

The following items were identified for particular attention in this EIS, recognizing that many of these issues are interrelated:

- what are the aquatic habitat features of the Carp River and other natural environment features along the Carp River corridor in proximity to the site, and the associated sensitivities of the habitat?
- is there any aquatic habitat potential on or adjacent to the site outside of the Carp River?
- given the results of the above analysis, what are the recommended setbacks and other mitigation measures to ensure no unacceptable impacts on the aquatic habitat?
- does the site support any wildlife or other natural heritage features on or adjacent to the site, including Species at Risk, that should be considered in redevelopment of the site?,

and

- is the proposed development plan consistent with the recommendations of the Carp River Watershed/Subwatershed Study (Robinson, 2004)?

The natural environment features of the site and adjacent lands were first reviewed on April 29th, 2010, under clear conditions and an air temperature of 13° C. An updated field survey of the site and adjacent lands was completed from 10:10 to 12:50 on October 4th, 2022, under sunny skies, a light air, and an air temperature of 10° C. The field surveys and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-three years of experience in completing natural environment assessments.

Existing Conditions

The site slopes gently towards the Carp River. No areas of erosion or surface water runoff were observed in the tablelands portion of the site. Clay soils dominate the site where fill has not been placed (Paterson, 2023).

Aquatic Habitat

Fish sampling in this reach of the Carp River has identified a diverse warm water fish community dominated by coarse and forage fish species, including cyprinids (minnows), darters, sticklebacks, pumpkinseed, rock bass, banded killifish and white sucker (Robinson, 2004; TSH, 2005). Historic sportsfish observations in the Carp River include walleye in the lower reaches near the Ottawa River, downstream, north, of this site (TSH, 2005). The fish community in this reach of the Carp River contains generalist species that are relatively tolerant of degraded habitats (Robinson, 2004). The Greenlands Plan in the Carp River Watershed/Subwatershed Study (Robinson, 2004) identifies the reaches of the Carp River between Kinburn and Richardson Side Road, including this site, as a diverse (Type 2) warm water fish community.

TSH (2005) reported a diverse assemblage of Mollusca including clams, mussels and snails in the Carp River system and tributaries. Snapping turtles, now a Species of Special Concern, are in the Carp River system in relatively high numbers (TSH, 2005). Snapping turtles indicate the presence of diverse habitats including sandy banks for egg laying. Painted turtles are also common. Benthos assemblages in the vicinity of the site indicate poor water quality conditions (Robinson, 2004).

Substrate in the Carp River is generally mucky with sand, silt and clay. The channel is exposed to solar radiation in many areas lacking cover and heats up in the summer. Data from the Robinson (2004) show that water temperatures in excess of 25° C are not unusual for the Carp River. TSH (2005) noted that the absence of mottled sculpin from the Carp River, relative to major tributaries such as Poole and Feedmill Creek, is consistent with the warm water status. The fish community type for the reach of the Carp River adjacent to the site is described by Robinson (2004) as tolerant warm water. A tributary entering the Carp River from the west to the west of the site was identified as cold water due to the presence of mottled sculpin. The channel of the Carp River in the reach adjacent to the site is described by Robinson (2004) as disturbed/altered, with a degraded stream side environment.

The width of the Carp River in the vicinity of the site is between 8 and 10 metres. Glides are the dominant morphological unit. More geomorphological observations are presented in PARISH Geomorphic (2009). During lower flows, side channels are created among islands of emerged aquatic vegetation. Extensive bank erosion was observed along the Carp River adjacent to the site. Some rock protection is in place on the east side of the Carp River in the north portion of the site (Photo 4). Good canopy cover is provided by woody vegetation on the east side of the river along the west edge of the site (Photo 3). Some branches of the Manitoba maples in the south portion of the site along the north side of the river extend over the river and provide cover (the directional references may seem confusing as the river curves to the north adjacent to the central-west portion of the site). In-stream structure includes submergent and emergent aquatic vegetation and scattered examples of large woody debris. Low-lying vegetation of broad-leaved cattail, marsh marigold and reed canary grass adjacent to the shoreline may be used by fish during higher flow periods, including spring spawning activity.

Riparian Corridor

The riparian corridor of the Carp River in the vicinity of the site is generally described by Robinson (2004) as non-vegetated, though as described here there is good canopy cover at the site. The extent of woody vegetation in the portions of the corridor closest to the shoreline, along the north and east sides of the river, has increased since 2010 and the entire corridor where vegetation is present is now referred to as a cultural woodland on Figure 1. To the west of the Carp River, the land use is dominated by agricultural activity, including cultivated fields and hayfields. An access lane/footbridge crosses the Carp River adjacent to the north portion of the site.

Woody vegetation within the riparian corridor along the periphery of the site includes mature crack willows and a dominance of younger Manitoba maple. The crack willows are coppice (multi-stem), with the larger individuals stems up to 70cm diameter at breast height (dbh) (Photo 6). The Manitoba maples are also generally coppice examples in the range of in the range of 30 - 35cm dbh (Photo 5). Many of the crack willow and Manitoba maple have major broken or dead limbs. Although Manitoba maple is generally not a desired tree species due to its poor form, susceptibility to damage and short life span, the trees along the Carp River shoreline provide important functions in the riparian corridor associated with aquatic and terrestrial cover, bank stability and a food source. White ash, up to 45cm dbh, are along the east side of the Carp River in the north portion of the site, along with Manitoba maple, white elm, red maple, and crack willow. Since 2010 the ash appear impacted by the emerald ash borer and the trees are now dead or have greatly reduced leaf-out (Photo 7). Green ash and white elm up to 30cm dbh are scattered through the vegetated portion of the riparian corridor. Most of these trees are dead or have reduced leaf-out. Conifer representation in the riparian corridor includes a few white spruce and red pine in the south portion of the site, with stems up to 28 amd 20cm dbh respectively.

Regenerating stems of Manitoba maple, white elm, and ash are common along the riparian corridor closest to the Carp River, with young white spruce, red maple, and black walnut also noted. Glossy buckthorn, common buckthorn, black currant, red raspberry, and tartarian honeysuckle shrubs are among the woody vegetation. A small representation of the highly

invasive Japanese smartweed shrub in the central portion of the riparian corridor should be removed. Ground flora in the cultural woodland includes reed canary grass, June meadow grass, common dandelion, common burdock, Canada thistle, field sow-thistle, chicory, yellow wood sorrel, common plantain, ground ivy, yellow avens, common milkweed, common mullein, evening primrose, common mugwort, calico aster, panicled aster, New England aster, Canada goldenrod, tall goldenrod, white bedstraw, and wild carrot.

There are no wetland communities adjacent to the Carp River shoreline. Debris is common within the riparian corridor.

In addition to the 2010 wildlife observations of red-winged blackbird, common grackle, mallard, song sparrow, European starling, blue jay, and historical beaver activity; grey squirrel, Canada goose, downy woodpecker, black-capped chickadee, American goldfinch, American crow, and common raven were observed in 2022.

No tributaries or other channels of potential fish habitat were observed on the site outside of the Carp River.

Other Terrestrial Habitat

The balance of the site outside of the riparian corridor is highly disturbed with a single layer of pea gravel over a compressed base (Photos 1 and 2). The residences along the west side of Carp Road, other structures save for one shed at edge of riparian corridor, and trees among the former residences have been removed. Some areas have been seeded with grass (Photo 2), with no vegetation on the majority. The only woody vegetation remaining in the central and west portions of the site is a small regenerating coppice green ash, with individual stems less than 5 cm dbh.

Note – all photos taken on October 4th, 2022.

Photo 1 – Core of the site looking north from south-central portion

Photo 2 – East portion of the site, adjacent to Carp Road. Some areas have been seeded with others used for parking. View looking north

Photo 3 –Carp River adjacent to the southeast portion of the site. View looking northwest

Photo 4 – Good cover provided by riparian vegetation on both sides of the Carp River adjacent to the north portion of the site. Note rock protection along east shoreline. View looking north

Photo 5 – Manitoba maples along the riparian corridor in the west portion of the site and east of the Carp River. View looking north

Photo 6 – Mature crack willow in the southeast portion of the site, north of the Carp River and west side Carp Road. View looking southwest

Photo 7 – White ash in very poor condition in the northwest corner of the site, to the east of the Carp River. View looking north.

Significant Woodlands

As the site is in the rural portion of the City of Ottawa, the significance of woodlands is evaluated using the criteria in the Natural Heritage Reference Manual (OMNR, 2010). The on-site forest and contiguous forest to the west along the south side of a Carp River tributary is too small at just over one hectare, to be considered significant. No interior forest habitat is present as the maximum width of the forest is approximately 25 metres. No other attributes of the forest were observed for which the forest would be considered significant woodlands.

Species at Risk

No Species at Risk, including butternut, were observed on or adjacent to the site. No rare, endangered or otherwise at-risk species of Mollusca are known in the Carp River or its tributaries (TSH, 2005). The Ontario Ministry of Natural Resources biodiversity explorer website was reviewed again on October 3rd, 2022. 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 (18VR12-81). Several Species at Risk were provided for this square, including bobolink, eastern meadowlark, chimney swift, Blanding's turtle, least bittern, and butternut, along with snapping turtle and midland painted turtle, both species of special concern (the latter only at the federal level). Blanding's turtle, snapping turtle and northern map turtle, another species of special concern, were recorded for the overall 10 km square 18VR12 in the Ontario Reptile and Amphibian Atlas.

Other than suitable turtle habitat directly in the Carp River, these species are not anticipated to utilize the site or adjacent lands. Least bittern is found in much larger representations of undisturbed marsh habitat. Chimney swifts use open brick chimneys and historically tree cavities for nesting. No potential structures are present on the site for chimney swift or barn swallow nesting. Bobolink and eastern meadowlark utilize larger grasslands such as hayfields for nesting. This habitat is not present on the site and the lands west of the Carp River were cultivated fields in 2022. Historically some of these lands appear to be hayfields and if so would represent suitable habitat for the grassland Species at Risk. Habitat to the west of the site will not be impacted. No butternuts were observed on or within 50 metres of the proposed site alterations.

Species at Risk reported in the Breeding Bird Atlas for the 10 km square 18VR12 are bobolink, eastern meadowlark, barn swallow, bank swallow, eastern whip-poor-will and chimney swift. In addition to the species discussed above barn swallow nests on structures with open rafters such as barns, larger agricultural sheds and bridges, while bank swallow is a colonial nester; burrowing in eroding silt or sand banks and sand pit walls. No suitable nesting structures for these birds were observed on or adjacent to the site. Eastern whip-poor-will requires large wooded areas with open patches, and/or open woodlands or alvar habitats. The on-site tree cover is too small and the understory too thick for whip-poor-will use.

No aquatic Species at Risk are reported for this portion of the Carp River watershed in the database maintained by the Department of Fisheries and Oceans (http://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html).

The potential Species at Risk historically reported for the overall City of Ottawa and their habitat requirements were also reviewed, including butternut, American ginseng, eastern prairie fringed-orchid, butternut, wood turtle, spiny softshell, Blanding's turtle, Henslow's sparrow, loggerhead shrike, eastern meadowlark, barn swallow, bobolink, eastern whip-poor-will, bald eagle, golden eagle, least bittern, little brown bat, eastern small-footed myotis, northern long-eared bat, olive hickorynut, eastern cougar, lake sturgeon, cerulean warbler, and American eel. No trees with suitable cavities to be used as potential summer maternal bat colonies were observed on the site.

Given the disturbed nature of the site and adjacent lands outside of the Carp River corridor, other than the potential turtle habitat directly in the Carp River, no specific habitat characteristics related to the other Species at Risk are considered present. Within the Carp River corridor there are no wetlands along the west edge of the site adjacent to the normal high water mark of the river.

The Category 2 and 3 Blanding's turtle habitat has been mapped for the site on Figure 2. All of the Category 2 habitat (red shading on Figure 2) within and adjacent to the ravine corridor will be retained with the exception of a very small amount, approximately 23 m^2, for surface parking. This small intrusion will be more than offset by extensions beyond 30 metres of other portions of the retained Carp River corridor. Portions of the Category 2 habitat that extend beyond the floodplain will be permeable landscape areas and provide better environmental conditions than the current single layer of pea gravel over a compressed base. The compressed base is very solid and does not represent potential nesting habitat for turtles. Mitigation measures are presented

below to protect any turtle utilization of the site. Although the development portion of the site represents Category 3 Blanding's turtle habitat (grey shading on Figure 2) per the General Habitat Description, no suitable wetland habitat for turtles was observed on the site and no adjacent wetland habitat is present to which Blanding's may utilize the site to reach suitable habitat. No suitable turtle nesting habitat was observed on the site. A loss of approximately 1.34 hectares of Category 3 habitat is projected, though the migrating function of Category 3 habitat is not anticipated for the site. Given the very small amount of impacted Category 2 habitat and the improvement over much larger areas of Category 2 habitat and the lack of functional Category 3 habitat, this assessment concludes that an Overall Benefit Authorization under the Endangered Species Act would not be required for Blanding's turtle.

Significant Wildlife Habitat

The potential for significant wildlife habitat is assessed using the guidance in OMNR (2010) and MNRF (2015). Potential components which may lead to a designation of significant wildlife habitat include seasonal concentration areas of animals, rare vegetation communities or specialized habitat for wildlife, habitat for species of conservation concern, and animal movement corridors.

As there is no forest interior habitat on site, eastern wood pewee and wood thrush, both Species of Special Concern, are not anticipated to be on the site. The on-site habitat is too disturbed to be used by Species of Conservation Concern indicators (MNRF, 2015) such as brown thrasher, clay-coloured sparrow, field sparrow, eastern towhee, upland sandpiper, or grasshopper sparrow. No evidence of animal movement corridors, such as those for deer or amphibians, were noted.

Other field observations would not trigger a significant wildlife habitat designation with respect to the ELC communities present. 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. No rare vegetation communities or rare or specialized habitats as described in MNRF (2015) were observed. No wetlands with the potential to support amphibians were observed on or adjacent the site. No seeps or springs, potential bat hibernacula or maternity colonies, or suitable turtle nesting or wintering areas were noted. Stone piles and areas of broken and fissured rock for potential use by snakes, including potential reptile hibernaculum, were not observed nor was evidence of winter raptor utilization. No trees with potential wildlife cavities were observed. Regardless all trees along the riparian corridor will be retained.

The lack of nearby natural areas in combination with residences and commercial operations along the Carp Road and Donald B Munro Drive corridors, and agricultural fields to the west greatly reduce the potential for significant wildlife linkage functions for the site and adjacent general area. A modest amount of linkage function likely occurs along the Carp River corridor and this is not anticipated to be impacted as a result of the proposed development provided the important mitigation measures identified below are properly implemented.

Impact Analysis and Recommendations

As mentioned above there are no Provincially Significant Wetlands, Areas of Natural and Scientific Interest or Natural Environment Areas in proximity to the site, with the closest designated areas associated with the Carp Hills approximately one kilometre to the northeast of the site. No significant Earth Science Areas of Natural and Scientific Interest or landform features are mapped in proximity to the site. The slopes associated with the Carp River corridor are too gentle to represent significant valleylands. No rare vegetation, Centres of Ecological Significance, Areas of Natural and Scientific Interest, significant wetlands, natural areas, rare vegetation, interior habitat, or woodlands greater than 50 years old were reported within or adjacent to the site by Robinson (2004). No recharge areas are identified by Robinson (2004) in proximity to the site.

A flood plain is shown along the Carp River corridor on Schedule C-15 of the City of Ottawa Official Plan. The property is also partially subject to a Flood Plain Hazard overlay in the City of Ottawa Zoning By-law 2008-250 Consolidation. The extent of this overlay matches cut/fill addressed in a memo from the Mississippi Valley Conservation Authority dated February 17th, 2021. Furthermore, a Site Specific Zoning exception (Rural Exception 666) provides that: "…parking spaces, aisles and driveways are permitted within the flood plain hazard overlay provided such development is undertaken in accordance with Policy 12 of Section 4.8.1 of the Official Plan for the City of Ottawa". The Official Plan referred to has been replaced by a new Official Plan dated 2021. This policy is now in the Carp Secondary Plan.

The linkage function of the site is very limited outside of the Carp River corridor due to the surrounding developed portions of Carp, extensive agricultural lands, and road corridors such as Carp Road and Donald B. Munro Drive.

Other than the fish habitat of the Carp River and potential turtle habitat, there are no natural heritage features, as identified in the Provincial Policy Statement and defined by OMNR (2000), on or adjacent to the site.

The aquatic habitat of the Carp River and woody vegetation within the riparian corridor are the natural heritage features of note on and adjacent to the site. Thus, the priority for this site from an environmental planning perspective is to maintain and enhance the features and functions of the Carp River corridor.

The proposed redevelopment shown on Figure 3 is setback from the Carp River through a combination of the Carp River's meander belt width, erosion hazard limit and the depth of the floodplain. The greater of these limits is more than 15 metres from the top of slope and 30 metres from the normal high water mark, except for one short section of surface parking less than 20 metres in width where the setback from the edge of the parking to the normal high water mark will be in the range of 27 metres.

Much of this setback is currently lacking in woody vegetation and fill has been placed in the outer portions of the setback. Redevelopment consisting of parking spaces and drive aisles will occur within a portion of the floodplain, up to a maximum flood depth of 0.3 metres. No

additional fill will be added or removed. As this setback is allowed to naturalize over time it is anticipated that in conjunction with proper stormwater management and other mitigation measures during site construction and operation of the residence and commercial units the setback will provide excellent protection for the aquatic habitat of the Carp River. In addition, the natural environment attributes of the corridor will be strengthened as the setback is naturalized, adding to the linkage function along the Carp River system and providing an environmental improvement for the corridor. All of the existing woody vegetation along the Carp River will be retained.

It is not anticipated that the proposed flood plain overlay will impact the buffer functions for the Carp River and the corridor. Robinson (2008) required a 15 metre setback on each side of watercourses with Type 2 communities. To ensure there are no impacts and to provide a net environmental gain native tree and shrub plantings are recommended along the current open areas of the retained riparian corridor.

The riparian corridor along the Carp River is identified as a priority one terrestrial area in the Carp River Watershed/Subwatershed Study (Robinson, 2004). Category 1 areas are fundamental building blocks which provide core natural areas and contribute the most to the biodiversity and integrity of the area. The Category 1 area will be protected. As indicated above the riparian corridor lacks many functions found elsewhere in the Carp River system. It is not identified as a groundwater recharge area and much of the corridor is heavily disturbed and lacking woody vegetation.

Adjacent lands to the boundary of Category 1 areas, in this case the riparian corridor of the Carp River, are identified as Category 2 areas by Robinson (2004). Category 2 areas often provide important secondary benefits in terms of wildlife habitat, linkages to the Category 1 areas, and act as seed sources or nuclei from which re-vegetation efforts can build upon (Robinson, 2004). However, the lands within the adjacent Category 2 lands are former storage areas and do not provide any functions or features to add to the overall natural heritage system or protection of the Carp River corridor. In the south-central portion of the site where the setback to the surface parking will extend further from the normal high water mark, additional native plantings can provide another net environmental gain. This is consistent with the Subwatershed Study's objectives of creation of new ecological features such as vegetative buffers and enhancing urban wildlife through vegetation plantings along riparian corridors. Robinson (2004) noted that if land use changes are proposed, some level of development may be permitted to alter the size and physical form of a Category 2 area provided that an EIS demonstrates the ecological functions are protected and maintained. As indicated there are no existing ecological functions within the Category 2 area.

As required in the management objectives of Robinson (2004) the proposed setback will protect the Carp River corridor including spawning areas within the aquatic habitat, conveyance of flows, provide space to allow natural morphological processes to continue unrestricted and maintain the natural flood plain characteristics. The extent of woody vegetation in the riparian corridor will be enhanced to provide more wildlife habitat and sediment control and assist in maintaining water quality.

The setback from the Carp River will protect the remaining on-site trees. In terms of planting sensitivities, tree and shrub species that have a high water demand are not recommended for the site due to the clay soils. These species include willows, poplars, and elm. The Landscape Plan for the site will include native species of local stock where possible including a mix of coniferous and deciduous species such as sugar maple, red maple, basswood, red oak, tamarack, and white spruce trees, along with nannyberry, other native *Viburnums,* elderberry and dogwood shrubs. Where possible the woody vegetation should be planted in clusters to improve the wildlife benefit. Native plantings will occur in current open areas along the Carp River corridor.

The setback will provide ample distance for any local surface water runoff to infiltrate, absorb and/or be filtered prior to reaching the water's edge.

It is anticipated that in combination with the existing tree cover to be retained, as the setback naturalizes, the aquatic habitat and other functions of the Carp River corridor will be protected from potential indirect impacts associated with the operation of the commercial, office and retail buildings such as noise, light and dust.

As per Mississippi Valley Conservation requirements, the site stormwater will be treated on-site to provide an enhanced level quality control of 80 percent total suspended sediment removal. This is proposed to be achieved by directing the stormwater flows from the access roads and parking areas to an oil and grit separator, sized to treat the stormwater prior to outletting to the Carp River. In addition, a natural buffer strip would be provided between the developed area and the Carp River.

As per the Village of Carp Environmental Management Plan (November 2004) and as this area drains directly to the Carp River, quantity control to reduce peak flows to pre-development levels is not required. The site, however, is currently developed, therefore the quantity of flows under post- development conditions will be similar to the existing flows, with a similar surface water contribution to the aquatic habitat post-development.

Many helpful wildlife-oriented mitigation measures are detailed in the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015). Contractors are to review in detail and understand the City's Protocol for Wildlife Protection during Construction prior to commencement of construction. Listed below are specific mitigation measures associated with the Protocol for Wildlife Protection during Construction (City of Ottawa, 2015).

Although no additional tree removal will occur, there are potential impacts associated with the construction of the mixed-use development including increased erosion and release of sediments and other potential contaminants from truck traffic and construction activity, harm to wildlife remaining in the work area during construction, and impacts associated with an increase in noise, dust and light. The following mitigation measures are designed to address these potential impacts.

Summary of Mitigation Measures

1. The riparian corridor setback is to be protected with sturdy temporary fencing at least 1.2 metres in height installed along the setback edge. This location will be greater from the retained trees than their critical root zones. The fencing needs to be well dug in silt fencing to keep turtles and other sensitive wildlife out of the work area. The temporary fencing is to be extended along as much of the perimeter of the work area as possible;
2. Along the riparian corridor, the temporary fencing is to be clearly signed (every 10 metres) indicating that the fencing is "to protect the trees and their critical root zone and the signs are not to be moved/removed'. The temporary fencing, including the signage, is to be maintained until construction is finished. Signs or notices are not to be attached directly to the retained trees;
3. Although not anticipated, any overhanging branches that may be damaged by the construction are to be trimmed by a certified arborist prior to construction;
4. Exhaust fumes from all equipment during construction will not be directed towards the canopy of the retained trees along the riparian corridor;
5. All of the supports and bracing for the protective fencing should be placed outside of the protected area and should be installed in such a way as to minimize root damage;
6. The extent of exposed soils shall be kept to a minimum at all times. Topsoil placement and revegetation of exposed, non-developed areas shall be achieved as soon as possible;
7. During construction, sediment and erosion control measures will be implemented as required, including filtering of pumped groundwater, properly installed and maintained silt fencing, and seepage barriers deployed in any temporary drainage ditches, until the construction is completed. These control measures must be properly maintained to maximize their function during construction. For example, the silt fencing along the riparian corridor setback must be properly keyed in to filter runoff and keep turtles and other sensitive wildlife out of the work area, and be maintained as required, including repair of broken panels and removal of accumulated sediment. The temporary protective fencing will also keep machinery and any other construction activity well away from the existing woody vegetation along the banks of the Carp River. No grading or activities that may cause soil compaction such as heavy machinery traffic and stockpiling of material are permitted on the river side of the temporary protective fencing. All machinery maintenance or refuelling, storage of construction materials, and stockpiling of earth must occur on the work side of the temporary protective fencing. The treated discharge of any dewatering will be directed away from the Carp River;
8. The contractor is to be aware of potential Species at Risk in the vicinity of the site such as Blanding's turtle. Appendix 1 of City of Ottawa (2015) describes these species. The contact biologist for this project is Bernie Muncaster (613-748-3753). Any new Species at Risk sightings are to be immediately reported to the project manager and the Ministry of the Environment, Conservation and Parks and activities are to be stopped until further direction is received from the Ministry;
9. As recommended in City of Ottawa (2015), prior to beginning work each day thorough visual inspections of the work space and immediate surroundings are to be completed for wildlife. See Section 2.5 of the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015) for additional recommendations on construction site management. Any turtles and snakes in the work area are to be relocated to the Carp

River corridor. Animals should be moved only far enough to ensure their immediate safety. Only those trained in handling Species at Risk should relocate these species. See Appendix 1 and the links in Section 4 of City of Ottawa (2015) for suggestions on how to effectively relocate turtles and snakes;

10. Although no trees 10cm dbh or greater are anticipated to be removed if trees need to be removed, to protect breeding birds, no tree or shrub removal should occur between March 1st 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 was observed on or adjacent to the site, and no removal will occur for trees anticipated to have the potential for raptor nesting;
11. Sweeps of the work area will be completed prior to each work day and any Species at Risk occurrences will be submitted to the Natural Heritage Information Centre, MECP, and project biologist as soon as possible. Work that may impact the species will be halted until direction is obtained from the Ministry;
12. 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;
13. 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; and,
14. The temporary protective fencing is to be kept in place until all site construction has been completed. Effective sediment and erosion control measures are to be maintained until complete revegetation of disturbed areas is achieved.

Conclusion

The portion of the site proposed for a mixed-use development is highly disturbed from a natural environment perspective by former residences, storage yards, and office buildings. The Carp River corridor supports fish habitat and potential Species at Risk utilization and is the only natural heritage feature of note on or adjacent to the site. On the site (east) side of the Carp River all aquatic habitats are confined to the river.

This Environmental Impact Statement concludes that the combination of the Carp River's meander belt width, erosion hazard limit and the depth of the floodplain will be more than enough to protect the aquatic habitat and other functions of the corridor. As the setback naturalizes, the natural environment features of the corridor will be enhanced. Open portions of the setback will be planted with native tree and shrub plantings. The net result will be a new mixed-use development that fulfills the Village Core policies of the Community Design Plan for the Village of Carp but also establishes a greater buffer and green space adjacent to the Carp River.

No negative effects are anticipated on the ecological functions of the Carp River corridor providing the important mitigation measures outlined in this EIS are properly implemented and maintained. This EIS concludes that it is the professional opinion of the author that the construction and operation of the proposed village residential and commercial units will not have a negative impact, as defined in the Provincial Policy Statement, on the significant natural heritage features and functions of the general area, including the Carp River corridor and

associated aquatic habitat, provided the above recommended mitigation measures are properly implemented.

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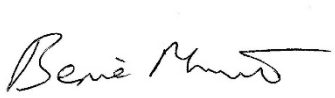
Please call if you have any questions on the above EIS and Tree Conservation Report.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.



Bernie Muncaster, M.Sc.
Principal

karsoncarpeis23

Legend

Site

On-Site Vegetation Communities

Vegetation Communities

1 Cultural meadow/disturbed

2 Cultural woodland

Approx. Scale 1:1,500

October 15, 2022

FILE: 10-01

Figure 1

Prepared for: Karson Holdings Inc.

Prepared by: Muncaster Environmental Planning Inc.

NATURAL ENVIRONMENT FEATURES

3711, 3715, 3719, and 3725 Carp Road
Carp, City of Ottawa

FIGURE 2 – BLANDING'S TURTLE HABITAT

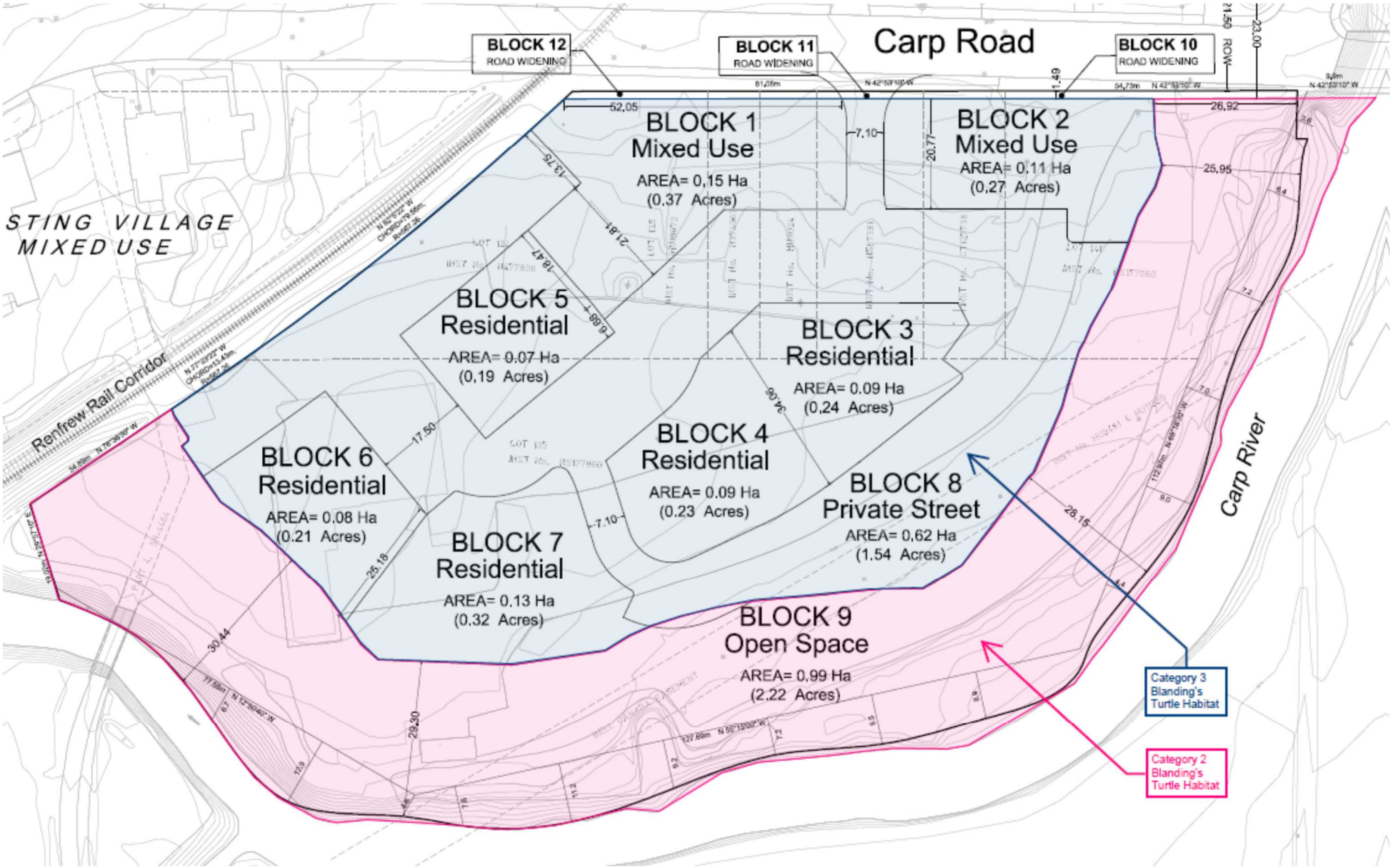


FIGURE 3 – CONCEPT PLAN of SUBDIVISION with CONSTRAINTS (from NOVATECH)