

Permissions and Compliance Section
Ministry of Environment, Conservation and Parks
10-1 Campus Drive
Kemptville, Ontario
K0G 1J0

April 15, 2024

RE: Request for Advice on Success of Avoidance and Mitigation Measures to Prevent Contravention of the *Endangered Species Act*

INTRODUCTION

Project Description

The Town of Greater Napanee, hereafter referred to as the proponent, is proposing to expand their Napanee Water Pollution Control Plant (WPCP) located on adjacent to the Napanee River on Water Street W (Figure 1 and Figure 2). Ecological Site Assessment was completed by Bowfin Environmental Consulting (Bowfin) in 2009 and updated that work in 2021 (Bowfin, 2021). As Bowfin merged its services with CIMA+, the Town engaged CIMA+ to update Bowfin's report following a new design option.

Location

The site is adjacent to the Napanee River on Water Street West. It is located on parts of Lot 18 and 19, Concession 1, in the Geographic Township of Richmond, Ontario (UTM 18T 427046 m E: 5022884 m N, and Latitude 45.3556743, Longitude -75.9313614) (Figure 1 and Figure 2).

Background Review

During Bowfin/CIMA's review of SAR, it was noted that there were several potentially present in the general area (appended to this letter). Of those, the only species whose automatic General Habitat Description would apply is Blanding's Turtle. The nearest Blanding's turtle occurrence on that database was from a location that was around **1.8km** to the north and is connected by the Napanee River (Figure 4). There were no species with Habitat Regulation. Pertinent information collected is summarized in the memo below (Methods, Background and Site Investigations Results, Project Details, and Avoidance and Mitigation Measures).

Purpose

The purpose of this letter is to provide the Ministry of Environment, Conservation and Parks (MECP) information on the findings, the project and the avoidance and mitigation measures proposed to receive MECP's advice as to whether the potential for contravene the *Endangered Species Act* (ESA) has been avoided.



METHODOLOGY

Background Review

Information collected from external sources was used to help identify potential endangered, and threatened species habitat in the area. Information from government websites, other consultants' reports, and personal knowledge has also been included as appropriate. The desktop review included a larger area (~5 km), and the data was reviewed and analyzed for applicable site-specific information. Data sources included:

- + The Ministry of Natural Resources and Forestry's (MNR) Natural Heritage Information Center (NHIC) Make A Map
- + Ontario Breeding Bird Atlas squares (Atlas 2- 2001 - 2005)
- + Ontario Reptile and Amphibian Atlas (Ontario Nature, 2020)
- + Atlas of the Mammals of Ontario (Dobbyn, 1994)
- + Global Biodiversity Information Facility (GBIF)
- + eBird (2023)
- + iNaturalist (2023)
- + Fisheries and Oceans (DFO) Aquatic Species at Risk Mapping (DFO, 2022)
- + Aerial/Satellite Imagery (ERIS, 2021)

Field Studies

Based on the background review, an understanding of the project's potential impacts, and timing of contract award, the field work was scoped to an assessment of the potential for Blanding's turtle habitat, least bittern habitat, chimney swift habitat, and a butternut inventory.

Blanding's Turtle and Least Bittern Habitat

The wetland edge was delineated by a certified wetland evaluator and a 30m buffer was used to map the Category 2 Blanding's turtle habitat (Figure 5). Additionally, the work area was examined for signs of turtle nesting, in 2021 a map turtle was noted nesting in the mowed area on site. Marsh habitat was considered potentially suitable for the least bittern.

Chimney Swift Habitat

One June 21, 2021, a site visit to look at the potential for chimney swifts to use the trees on site for roosting/nesting. The purpose was to investigate the presence/absence of any large trees (>50cm dbh) on or around the site as well as to conduct a breeding bird survey for chimney swifts. Several large trees were present and re-examined in 2023.



Butternut Inventory

The recently updated Butternut Assessment Guidelines were followed (MECP, 2021). This protocol indicates the following:

- + Surveys completed by a Butternut Health Expert
- + Acceptable survey period is during the leaf-on season, which is considered to be between May 15-August 31
- + A tree's health assessed outside of this period is only accepted as valid if the assigned canker widths are at least 40% (i.e., Category 1). The assessment of Categories 2 or 3 is not accepted outside of the leaf-on period.
- + Each individual tree is to be assigned a number and identified (i.e., paint, preference for white) or flagged. Their UTM's, using a GPS unit set at NAD83, were to be recorded.
- + The classification of the health into Categories 1, 2 or 3 is to be completed as per the Butternut Data Collection Form.
- + Butternut Health Export Report Template is to be used when submitting data to the province.

For this survey, the inventory included the unpaved area on site and the 50 m surrounding area. Where the 50 m extended to neighbouring lands, inventory was assessed over the fence. Since the inventory took place outside of the survey period, it was noted that assessment may need to be repeated at a later date.

SITE RECONNAISSANCE RESULTS

In addition to the work completed during other phases of this project, a site visit was performed by Al Quinsey (B.Sc. Environmental Biology, 3 years of experience) on September 28, 2023, from 0945-1030. Weather conditions were suitable (no rain, 10°C, wind: light breeze (2)). The vegetation community description figure from Bowfin's report is included (Figure 3).

Blanding's Turtle Habitat

The wetland edge was delineated and all suitable habitat within 30m of the wetland is Category 2 Blanding's habitat (Figure 5) with the exception of a small section separated by a chain link fence as it is unreachable for turtles.

Least Bittern Habitat

The edge of high watermark was walked, all wetland habitat below it with robust emergent or woody vegetation was considered potential least bittern habitat (Figure 5). A majority of the potential habitat was extremely narrow along the edge of the river except for a 0.1ha patch of cattails.



Photo 1: Looking at the narrow strip of robust emergent vegetation along the Napanee River (September 28, 2023)



Photo 2: Looking the larger patch of robust emergent vegetation along the Napanee River (September 28, 2023)

Chimney Swift Survey Results

There were 9 large trees found: 2 largetooth aspen (55-65 dbh), 4 Manitoba maple (50-60 dbh), 1 silver maple (120 dbh), 1 golden weeping willow (60 dbh), and 1 hybrid crack willow (60 dbh). Bowfin completed two site visits in 2021. The first was in the afternoon of June 2, 2021, from 1500-1800 hours. That visit was completed by Michelle Lavictoire (B.Sc. Wildlife Resources and M.Sc. Natural Resources). The weather conditions were appropriate (low winds, no rain, the air temperature was 26°C). While, this was an afternoon visit, Chimney Swifts are a very active (aerial) species that can often be seen foraging at

various times of the day (when present). None were observed but the presence of the larger trees prompted the second visit on June 21, 2021. That visit was completed by Al Quinsey (B. Sc. Environmental Biology) at 1000 hours. The weather conditions and time of day were appropriate for breeding bird survey (low wind, no rain, and the air temperature was 19°C). Again, no Chimney Swifts were observed (heard or seen).

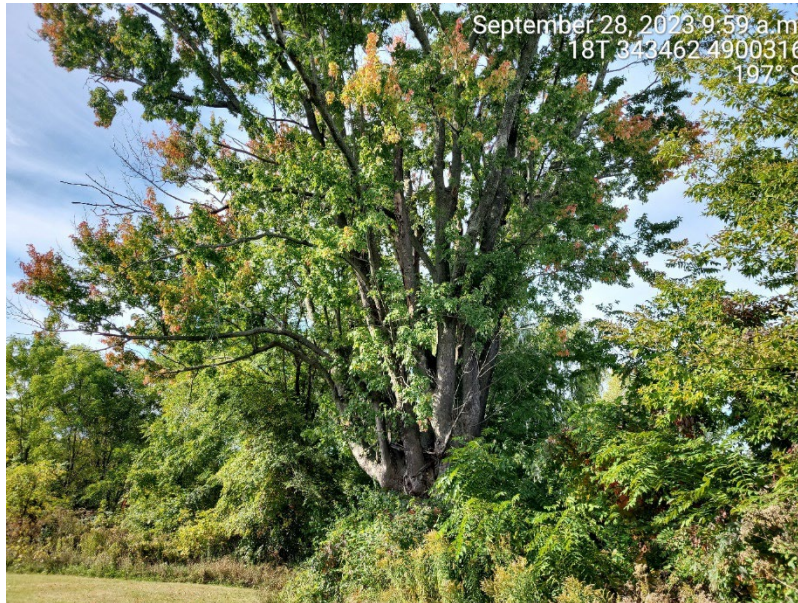


Photo 3: View of large silver maple with small cavity (September 28, 2023)

Butternut Survey Results

The butternut inventory was completed previously in 2009 and 2021 by Michelle Lavictoire B.Sc. Wildlife Resources, M.Sc. Natural Resources, and Butternut Health Assessor #117. That work was completed on days with appropriate weather conditions during the green leaf period. While no individuals were found, those surveys have expired (>2 years).

In 2023, an inventory was performed Al Quinsey (BSc. Environmental Biology, a Butternut Health Expert with 3 years of experience) on September 28, 2023, from 0945-1030. Weather conditions were suitable (no rain, 10°C, wind: light breeze (2)). No butternuts were observed in or within 50 m of the Site. This species is considered absent.



EVALUATION

Following the update from the background review and the site investigations, the SAR or their habitats that were brought forward for discussion remains the same:

- + American Eel
- + Blanding's Turtle
- + Least Bittern
- + Chimney Swift
- + Little Brown Myotis (bat)
- + Northern myotis (bat)
- + Eastern small-footed myotis (bat)
- + Tri-colored bat
- + Butternut
- + Black Ash

The applicable legislation for all of these species, for this project, is ESA. The following sections discuss the findings using both CIMA+ and Bowfin data and the current provincial guidelines.

American Eel

The American eel is listed as provincially endangered, but the species is not listed federally. They breed in the Sargasso Sea and mature in freshwater rivers in North America, including the Napanee River (Becker, 1983; MacGregor et al., 2013; Scott and Crossman, 1998). The freshwater eel population within Ontario has been declining since the 1980s (McGregor et al., 2013). The eels migrate to the rivers during the spring and then downstream during the fall, spending 5 to 20 years in freshwater (Becker, 1983; MacGregor et al., 2013; Scott and Crossman, 1998). Eels inhabiting the rivers are generalists requiring structure (i.e., rocks, logs, undercut banks, vegetation) for cover (COSEWIC, 2012). In the winter, they are known to hibernate in mud. During electrofishing surveys, Bowfin has observed eels along both rocky and areas with soft substrate during nighttime sampling. The aquatic habitat will be protected by the setback for turtles, but in rare cases American eels have been observed moving overland. For this project, with no in-water works, the avoidance and mitigation measures under SAR General heading are sufficient to prevent harm to these individuals.

Blanding's Turtle

The habitat guidelines for Blanding's turtle provide protection to the areas surrounding a nest, or perceived nest area as well as to overwintering areas. The level of protection varies with the distance from the nest/overwintering area and has been categorized by the provincial government into three categories. These along with their protection level are:

- Category 1 Nest and the area within 30 m or Overwintering sites and the area within 30 m
- Category 2 The wetland complex (i.e., all suitable wetlands or waterbodies within 500 m of each other) that extends up to 2 km from an occurrence, and the area within 30 m around those suitable wetlands or waterbodies



Category 3 Area between 30 m and 250 m around suitable wetlands/waterbodies identified in Category 2, within 2 km of an occurrence

The wetland edge was walked and found to be the same as in 2021, delineation in 2023 extended further to the west to assess the area impacted by the new site design. A northern map turtle was noted nesting on the edge of the manicured lawn and road in 2021 by Bowfin (Bowfin, 2021). The area had been disturbed by machinery and lacked sand/gravel substrate. Critical nesting habitat for Blanding's turtle is described as bare or sparsely vegetated ground, full or partial sunlight, with sand, gravel, rock or sandy loam substrate and well drained soils (ECCC 2016). The examples given for anthropomorphic habitat only include abandoned areas. As such, the manicured lawn is not a suitable habitat feature, as it is still in use by humans, and is near roadways (ECCC 2016).

Since the site is within 2 km of a Blanding's occurrence and there the lands within 30m of wetland habitat **(0.22ha) is considered Category 2 Blanding's turtle habitat**. Note that the 0.22 ha includes mowed lawn. This species is assumed present and avoidance and mitigation measures are included.

Least Bittern

The least bittern is a threatened species protected both provincially and federally. It is a secretive species that requires marsh habitats with dense vegetation (Sandilands, 2005; COSEWIC, 2009a). This species tends to prefer to nest within cattail marshes usually along the edge or near openings (Woodliffe, 2007). However, they have also been found to nest in bulrushes, grasses, horsetails and willow (Woodliffe, 2007). The COSEWIC report for this species indicates that they must have emergent marsh communities with open water areas and stable water levels (COSEWIC, 2009).

No such habitat was present on site, but a narrow marsh ran along the edge of the Napanee River nearby. No evidence of the Least Bittern was observed in 2021 during the general bird surveys. Furthermore, while Least Bitterns have been found to nest in small wetlands, the self-sustaining populations are limited to wetlands that are 100 ha or larger (Sandilands 2005). A search of the OBBA database shows that no least bittern were observed in this area during Atlas 2 (2001-2005) or so far in Atlas 3 (2021-2025) and only 13% of the squares in the region (#21 Kingston) have breeding evidence (Birds Canada 2024). The record that flagged this species for consideration is 4.5 km to the south on the Napanee River. This species is considered unlikely to be present.

Chimney Swift

Large trees, 50 cm or larger were identified near the work area. These can provide habitat for Chimney Swift. This species can often be found in developed areas and prefers to utilize structures such as large (>50 cm diameter) trees or man-made structures such as chimneys for its nesting habitat (COSEWIC, 2007). The use of large trees is now considered a rare event. When it does occur, the documented occurrences have all be in trees that were <1 km from a waterbody (large enough to be shown on 1:50,000 topographical maps) (COSEWIC, 2007). Large trees were noted (summarized in Table 1 and locations are depicted on Figure 2). This site meets those criteria. The desktop review of iNaturalist and of the NHIC data (from Make-a-Map Natural Areas) did not identify Chimney Swifts in or near (within 2 km of the expansion area). This reduces the potential for the species to be present. As mentioned above, Bowfin completed two site visits in 2021. The first was in the afternoon of June 2, 2021, from 1500-1800 hours. That visit was completed by Michelle Lavictoire (B.Sc. Wildlife Resources and M.Sc.



Natural Resources). The weather conditions were appropriate (low winds, no rain, the air temperature was 26°C). While, this was an afternoon visit, Chimney Swifts are a very active (aerial) species that can often be seen foraging at various times of the day (when present). None were observed but the presence of the larger trees prompted the second visit on June 21, 2021. That visit was completed by Al Quinsey (B. Sc. Environmental Biology) at 1000 hours. The weather conditions and time of day were appropriate for breeding bird survey (low wind, no rain, and the air temperature was 19°C). Again, no Chimney Swifts were observed (heard or seen).

Table 1: Summary of Larger (>50 cm diameter) Trees

Tree Identification Number	Common Name	DBH (cm)	Comments
2	Manitoba Maple	60	Healthy
4	Manitoba Maple	50	Healthy
5	Manitoba Maple	50	Healthy
6	Hybrid Crack Willow	60, 60, 60, 45, 45, 45, 40	Multi-Stemmed, Healthy
7	Manitoba Maple	60	Mostly Hollow/Cavities
8	Golden Weeping Willow	190	Healthy
9	Silver Maple	120	Healthy
10	Largetooth Aspen	55, 50, 60	Multi-Stemmed, Healthy
11	Largetooth Aspen	65	Healthy

Bats

The potential SAR bats within the general area are: Little Brown Myotis, Northern Myotis, Eastern Small-Footed Myotis and Tri-Colored Bat. There are three types of habitats required by bats: hibernation, maternity sites and day-roost sites. The latter is not considered critical habitat. These four bat species prefer to hibernate in caves or mines. They can hibernate in buildings but that is rare for these species (COSEWIC, 2013a). No caves or mines were present and the buildings will not be impacted.

The Northern Myotis tends to prefer larger expanses of older forests (late successional or primary forests) and chose maternity sites in snags that are in the mid-stage of decay. They prefer habitat with intact interior habitat and is shown to be negatively correlated with edge habitat (Menzel et al., 2002; Broders et al., 2006; Yates et al., 2006; OMNRF, 2015). This habitat is absent.

The recovery strategy for the Eastern Small-footed Myotis indicates that the preferred maternity habitat of this species consists of open rock habitats and that it rarely uses old buildings as roosting/maternity sites (Humphrey, 2017). There was no suitable rocky habitat present. Based on this information, this species' maternity sites are considered absent.

In Ontario, only maternity roosts in buildings have been documented for the tri-coloured bat. However outside of Ontario maternity roosts have been found amongst dead leaf clusters in the shape of an



umbrella, grey squirrel dreys, dense clusters of live foliage, arboreal lichens, and buildings (Humphry 2019). Based on this information this species has potential to use the site as maternity habitat. MECP timing windows will prevent direct harm to this species.

The Little Brown Myotis is one of the few bat species that can use anthropogenic structures as maternity sites. Potential suitable structures can include buildings, bridges, barns, and bat boxes. The Little Brown Myotis can also use tall, large cavity trees that are in the early to mid-stages of decay as maternity roosts, as well as loose/raised tree bark, and/or crevices in cliffs (ECCC, 2018). This bat species occurs in higher densities in mature deciduous and/or mixed forests due to increased opportunities for large snags. However, unlike the Northern Myotis, the Little Brown Myotis does not exclusively require mature forest stands to find appropriate maternity roosts (COSEWIC, 2013). This species maternity habitat may be present but MECP now has avoidance guidelines that can be applied to sites to prevent potential for contravening the ESA for this species. This is listed further below and also applies to the potential for day-roosts.

Butternut Survey Results

Butternut is listed as an endangered species federally signifying that it is at risk of becoming Extinct or Extirpated in Ontario and in Canada. Butternut is a shade intolerant species that is often found along edge habitats on rich, moist, well-drained loams or well-drained gravels (COESWIC, 2003). The butternut is threatened by a canker for which there is no known control (COESWIC, 2003). While there are a large number of butternuts in the area, only those that were on the site and north of Finney Creek were assessed. The remainder are shown on the figure as not classified as they will not be impacted by this development or are on the adjacent landowners' property (Figure 2).

Butternuts are assessed based on the amount of canker (the disease which is killing the species), their size and health, as per the MNR BHA protocol. This method classes the individual trees as one of three categories:

- Category 1 are those that are heavily infected to the point that they are not expected to survive.
- Category 2 may have some canker but are still considered healthy.
- Category 3 are the same as Category 2, but these are larger individuals situated near heavily cankered trees and province believes that some may be showing immunity to the disease.

The site was surveyed and none were found, the survey is valid for 2 years (in this case until September 28, 2025).

Black Ash

Black ash is listed as an endangered species provincially, it is not yet listed federally but is under consideration for listing as threatened. Black ash is a facultative wetland species found primarily in swamps, fens, floodplain forests, and shorelines, with occasional occurrences in upland habitat (Catling et al. 2022). Individuals within a defined geographic area which are both in good health and over 8 cm in



diameter at breast height are to be protected along with the surrounding 30 m habitat. The site is primarily upland and the setback for Blanding's turtle will protect the wetland, none were observed during the vegetation surveys.

PROJECT DETAILS

The development of avoidance and mitigation measures to protect the natural environment requires an understanding of the work activities anticipated with the construction and any changes to operations. This section uses a worst-case scenario, as such, provided that the level of impact does not exceed that discussed herein, then minor changes in the design do not, normally, require a review. The following activities are anticipated:

- + Clearing of vegetation
 - a. Limited to portions of the deciduous windrow, cultural woodland and cultural meadow situated within the proposed expansion area (Figure 3)
 - b. No changes to the existing outlet. No clearing of vegetation required on the shore, or in PSW.
 - c. Limited removal of 3-4 large trees (>50 cm diameter)

- + Excavation, grading, and backfilling
 - a. Limited to the area shown on the figures appended to this letter.
 - b. There will be no directional drilling.
 - c. There will be no blasting.
 - d. The outfall is buried.

- + Operation:
 - No change to the water quality discharging to the Napanee River.
 - Increase in the water quantity to the Napanee River.

The timing of construction is unknown but is anticipated to take 1 year.

The expansion area is over 15 m from any fish habitat and will not cause any direct impact to fish habitat during construction. No work will occur within 15 m from the high-water mark. This protects both the American Eel habitat (no works below the high water mark of Napanee River) and the wetland. However, it does result in some infringements to potential Blanding's turtle Category 2 (and 3) habitats:

- + The provincial guidelines for Blanding's Turtle habitat Category 2 habitat will be encroached upon and fenced off. While this will have the benefit of helping to minimize turtle access towards the road, it does represent a loss of habitat. This assessment assumes that the encroachments will be limited to 0.22ha as shown on the appended figures.



AVOIDANCE AND MITIGATION MEASURES

General Measures

- + Endangered and Threatened species are protected and cannot be harmed, harassed, or killed and in some cases their habitats are also protected. These individuals will only be handled by qualified person and only if the individual is in imminent threat of harm. An authorization under the ESA 2007 would be required to handle individuals that are not in imminent threat of harm.
- + If a SAR enters the work area during the construction period, any work that may harm the individual is to stop immediately and the supervisor will be contacted. No work will continue until the individual has left the area. These sightings will be reported to MECP and NHIC.
- + Should an individual be harmed or killed then work will stop and MECP will be contacted immediately.
- + Vegetation removal will take place outside of the active season turtle, bird, and bat active seasons (Apr 1 to October 31) to avoid impacting active bird nests and SAR bats using trees as maternity habitat.
- + Educated contractors that species at risk are protected and the most likely species to be present in this area would be
 - o American Eel, Blanding's Turtle, Chimney Swifts, Bats, Butternuts or Black Ash.
 - o No Butternuts or Black Ash were found.
 - o American Eels can sometimes travel on land.

Turtles

- + Education of workers and operators that there is a potential for turtles, including SAR and that all turtles are protected in Ontario (*Endangered Species Act* and/or *Fish and Wildlife Conservation Act*). They will be informed on what to do if one is present.
- + Minimize the work activities.
- + Implement a strict speed limit of <15 km/h.
- + Contractor is to perform daily sweeps during the active season (approximately April 1 to October 31, subject to weather conditions). Not required if under freeze-up conditions.
- + Temporary exclusion fencing is required during the active season and is to be installed at the start of the contract. Sediment fencing can be used for temporary exclusion during construction. These will be properly countersunk and maintained to ensure that any turtles cannot get into the Site. Reptile and Amphibian Exclusion Fencing: Best Practices (OMNRF, 2013) should be followed for exclusion fence design and installation and will include the j-hook turn-arounds. Note that the province maintains information on exclusion fencing on-line at <https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing#:~:text=Concrete%2C%20metal%20or%20vinyl%20exclusion,concrete%20wall%20for%20complete%20exclusion.>
- + If an individual is found:
 - o It is not to be harmed or harassed.
 - o Work that puts the individual in danger will cease (i.e., moving machinery), and the individual will be watched from far to document where and when it leaves the site for a



- minimum of 2 hours. If it does not leave, then it may need to be relocated. Contact a biologist experienced with this species to relocate the individual.
- Contractor is to perform daily sweeps during the active season (approximately April 1 to October 31, subject to weather conditions). Note required if under freeze-up conditions.
- + If a turtle nest is suspected, then flag a 10 m buffer to protect the nest. Contact project biologist for immediate assistance, and/or, MECP (for Endangered or Threatened species) and MNRF (all other species, including those listed as special concern).
- + Erosion and sediment control measures to be put in place to prevent impacts to water quality downstream of the work area (see fish section).
- + Minimize sensory impacts to turtles by working during the day, and ensuring that equipment and vehicles have the appropriate mufflers and implement a no idling policy. If working at night ensure that only the lighting needed to perform the work safely is installed and this lighting is focused on the work area (minimize lighting of sky or of natural features).

Potential Impacts to Blanding's Turtle following Avoidance and Mitigation Measures					
Activity	Area	Nature	Duration	Magnitude	Findings
Construction of expansion within Category 2 Habitat	Local	Negative Direct to Indirect	Permanent	Negligible to Minor	Effectively minimized MECP will be consulted

Fish Habitat

Planning

- + Site instruction will be provided to contractor to highlight that the Napanee River is fish habitat, including American Eel, and is not to be negatively impacted.
- + Clearly delineate the edge of the work area and ensure that no temporary or permanent activities encroach closer to the river. This can be accomplished with the sediment fence needed to protect the PSW/turtle exclusion fence.
- + Minimize clearing of vegetation within 30 m from the normal high-water mark.
- + Any rip rap placed within 30 m of the Napanee River will be clean and free of fines (fines meaning particles that could be washed into the river by rains or high water).
- + Postpone any works that are within 30 m of the Napanee River or wetland, that may disturb the soil or cause turbid runoff during rain events.
- + Erosion and sediment control measures will be installed prior to the clearing of vegetation within 30 m of a watercourse.
- + As per above, consider leaving portion of the berm vegetated with native species and not mowed.

Erosion and Sediment Control

- + Erosion and sediment control measures are to ensure that there is no sedimentation or transportation of fines through/into either the PSW vegetation or into Napanee River.
- + An erosion and sediment control plan will be developed by contractor and implemented prior to any work within 30 m of the watercourse.



- Note the two swales could result in the transportation of turbid water from the construction site. Erosion and sediment control plan is to consider these two features, and any others that could facilitate the transportation of fines/turbid water offsite.
- Provide regular maintenance to the erosion and sediment control measures during construction. Contractor shall be responsible for ensuring that the erosion and sediment control measures are maintained and will monitor the water clarity downstream of the work site throughout the day and during rain events. Water quality is to meet the *Canadian Water Quality Guidelines for the Protection of Aquatic Life*. Monitoring for visible plumes outside of the work area is to be undertaken.
- At a minimum, the erosion and sediment control plan will include the installation of sediment fencing along the top of banks where vegetation clearing and/or soil disturbance will occur within 30 m of any channel prior to the removal of vegetation. Note that this fence may also be used as the turtle exclusion fence (see other sections).
- Additional materials (i.e. rip rap, filter cloth and silt fencing) will be readily available in case they are needed promptly for erosion and/or sediment control.
- + Any stockpiles of soil or fill material will be stored as far as possible from the channel and protected by silt fencing (minimum 30 m).
- + The sediment fencing will not be removed until the bank is stabilized (i.e. >80% revegetated or covered with an erosion control blanket).
- + All equipment working within 30 m of the water will be well maintained, clean and free of leaks.
- + Where banks/riparian area (area within 30 m of channel) have been stabilized by seeding and/or planting, monitor the revegetation to ensure that the vegetation becomes fully established.
- + Where possible, limit clearing of vegetation to trimming and leave the stump and lower 60 cm of the tree trunk in place (for shoreline stabilization).
- + It is recommended that owner completes additional monitoring of the erosion and sediment control measures and of the water quality during any works in or within 30 m of Napanee River.

Contaminant and Spill Management

- + Machinery entering the work area should be free of mud to minimize the introduction of invasive plant species.
 - Guidelines on stopping the spread of invasive species is available from Ontario Invasive Plants *Clean-Equipment-Protocol_June2016_D3_WEB-1.pdf* (ontarioinvasiveplants.ca).
 - The machinery should be inspected inside and out for soil and plant material that could be lodged or stuck to the surfaces (i.e. underside of vehicles, radiators, foot wells...).
- + All equipment working in or near the water should be well maintained, clean and free of leaks. Maintenance on construction equipment such as refueling, oil changes or lubrication would only be permitted in designated area located at a minimum of 30m from the shoreline in an area where sediment erosion control measures and all precautions have been made to prevent oil, grease, antifreeze or other materials from inadvertently entering the ground or the surface water flow.
- + Emergency spill kits will be located on site. The crew will be fully trained on the use of clean-up materials to minimize impacts of any accidental spills. The area would be monitored for leakage and in the unlikely event of a minor spillage the project manager would halt the activity and corrective measures would be implemented. Any spills would be immediately reported to the MECP Spills Action Centre (1 800 268-6060).



- + No construction debris will be allowed to enter the watercourse.
- + Following the completion of construction, all construction materials will be removed from site.

Birds: No SAR Birds were identified.

- + Educate construction workers that SAR bird species (Chimney Swift) could be present and that these and their habitats are protected under the provincial *Endangered Species Act* and must be protected from harm, harassment and injury.
- + Prior to removal of large (>50cm in dbh) trees, confirm absence of Chimney Swift (must be completed in the nesting season late May until first week in July).
- + In addition, clearing of vegetation is recommended to take place between September 1 and March 30 .
 - o If clearing takes place during the active season (March 31 to August 31, inclusive) then a nest clearance survey (all species) will be completed by a qualified biologist or technical with experience, no earlier than 2-days prior to the clearing.
- + If a SAR bird is observed, then all work that may harm the individual must stop and the worker should notify their supervisor. Try to take a photograph or record the call, but do not chase the bird to do so. The supervisor is to inform the client who would then communicate with MECP.
- + If an individual has been harmed, the supervisor should contact MECP (and if applicable the project biologist) immediately.
- + Minimize sensory impacts to birds by working during the day and ensuring that equipment and vehicles have the appropriate mufflers and implement a no idling policy. If working at night ensure that only the lighting needed to perform the work safely is installed and this lighting is focused on the work area (minimize lighting of sky or of natural features).

FOLLOWING to Avoidance and Mitigation Measures – SAR Birds					
Activity	Area	Nature	Duration	Magnitude	Findings
Construction of expansion (removal of fee trees and meadow/mowed meadow habitat)	Local	Negative Direct to Indirect	Temporary to Permanent	Negligible	Effectively minimized through reduced area of impact and use of timing windows

Bats

- + Trees that are 10 cm in diameter at breast height will be removed between October 1 and March 31 (Bat active season is currently assumed to be April 1 to September 30).
 - o If this is not possible, conduct an exit survey prior to cutting them down. If the exit survey identifies bats, contact MECP or biologist for additional guidance.
- + Educate contractors by informing them that most bats in Ontario are protected.
- + Minimize sensory impacts to bats by ensuring that equipment and vehicles have the appropriate mufflers and implement a no idling policy. If working at night ensure that only the lighting needed to perform the work safely is installed and this lighting is focused on the work area (minimize lighting of sky or of natural features).



FOLLOWING to Avoidance and Mitigation Measures - Bats					
Activity	Area	Nature	Duration	Magnitude	Findings
Construction – removal of trees 10cm or larger in dbh	Local	Negative Direct	Permanent	Negligible	Effectively Minimized

Plants

Butternuts

A Butternut inventory was completed in 2009 and again in 2021 and 2023. While there is a large number of black walnuts on-site, there were no Butternuts.

Black Ash

No black ash were noted during the butternut surveys or 2021 vegetation work, but a targeted survey was not conducted. The development is not directly impacting the wetland, however some of it is within 30m (Figure 2)

Avoidance/Mitigation Measures for species at risk trees:

- Should Butternuts or Black Ash be identified or suspected, then these will need to be assessed and the appropriate actions taken.

Please do not hesitate to contact use should you have any questions

Sincerely,

Al Quinsey
Biologist

Michelle Lavictoire
Associate Partner/ Senior Biologist/Project Manager



STUDY LIMITATIONS AND CONSTRAINTS

CIMA+ completed diligent and reasonable research in the conduct of this evaluation, with respect to the recognized laws and standards of practice.

The facts presented in this report are strictly limited to the period of investigation. The conclusions presented in this report are based on the available information and documents, the observations made during the Site visit and the information obtained from communications with various contacts. The interpretation presented in this report is limited to this data.

CIMA+ is not responsible for erroneous conclusions due to voluntary abstention or the non-availability of pertinent information. Any opinion expressed in relation to legal or regulatory conformity is technical and should not be, in any case, considered as legal advice.

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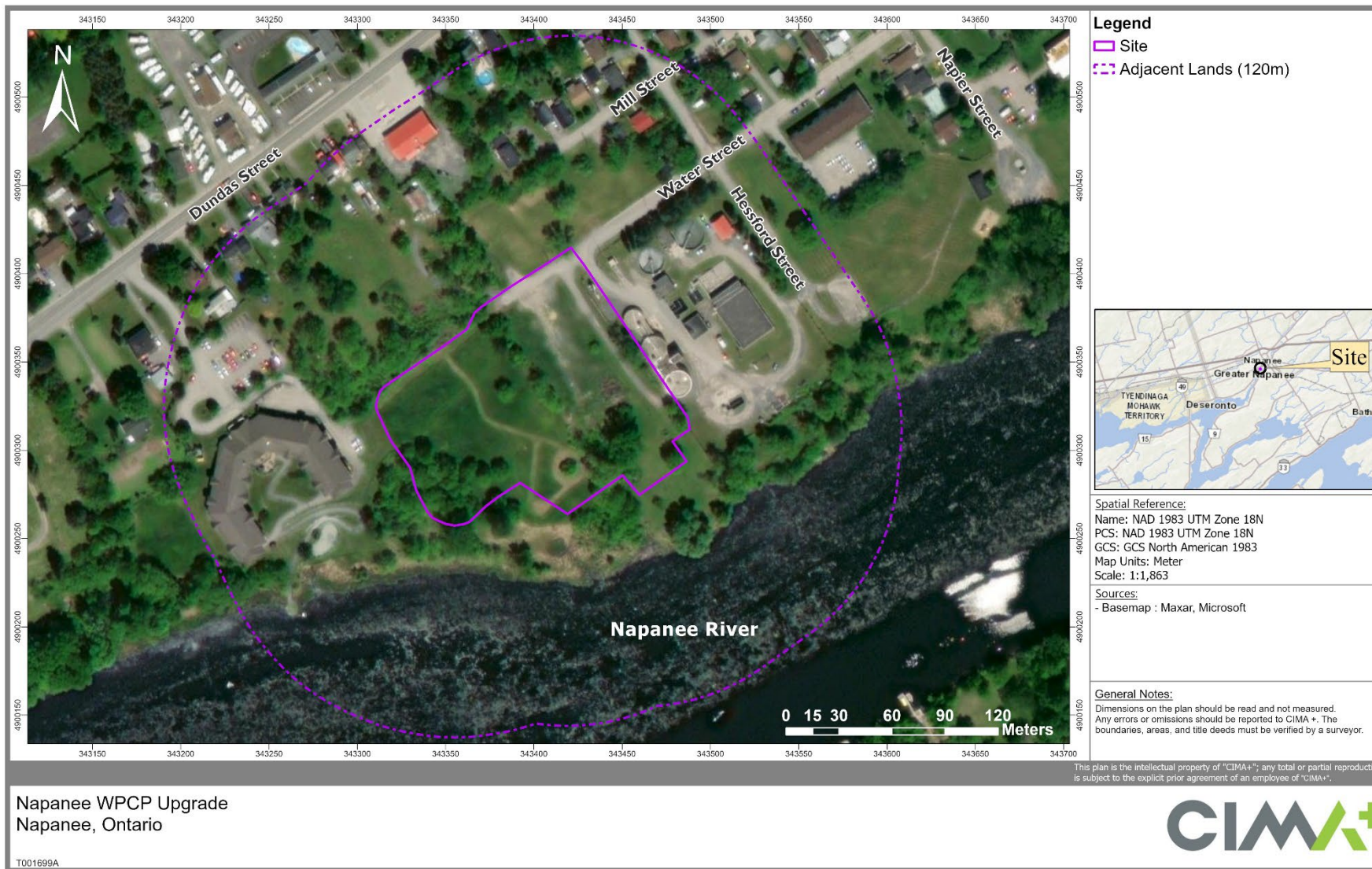


Figure 1: Location of Study Area

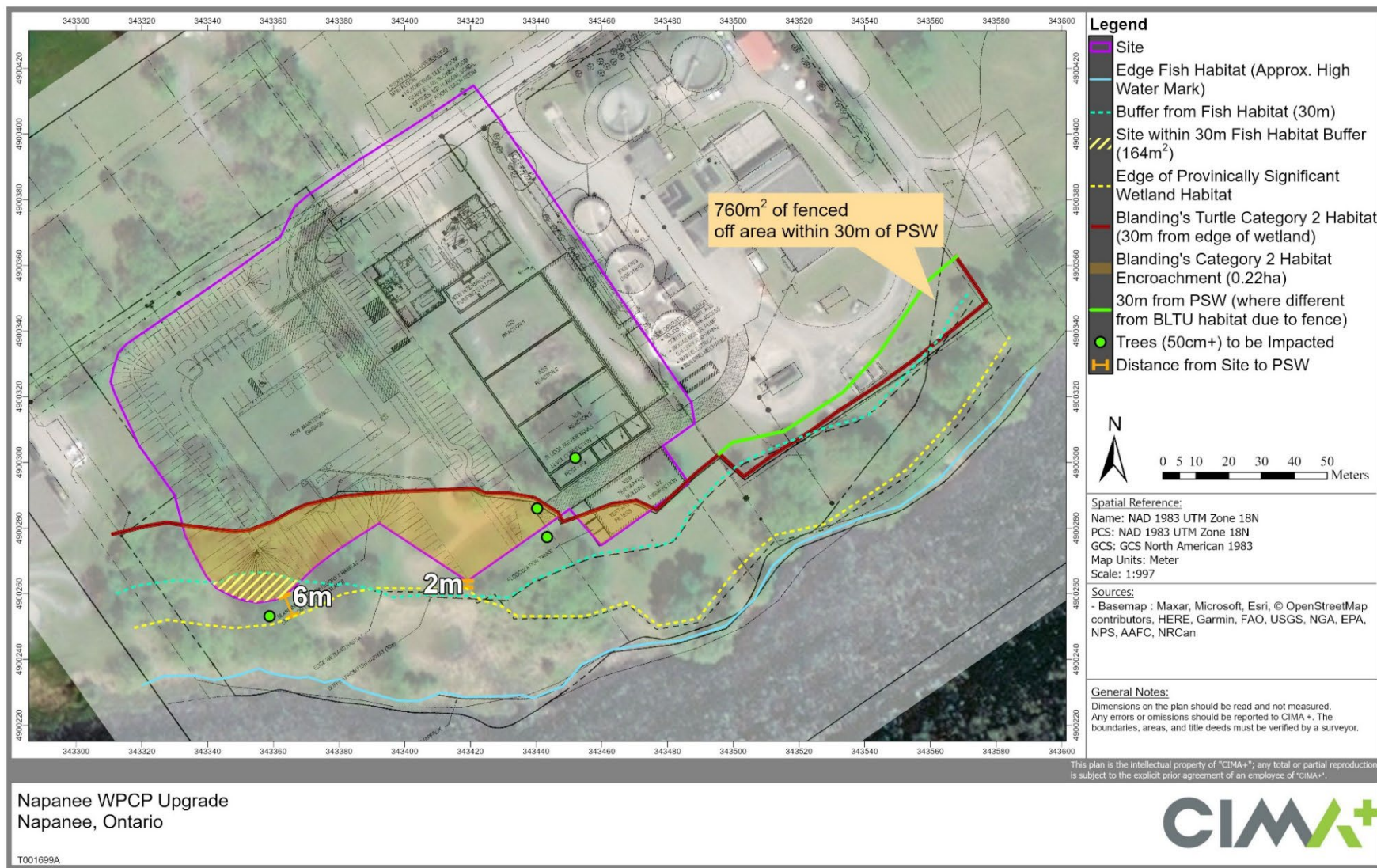


Figure 2: Location of Site in relation to Natural Features and their Setbacks

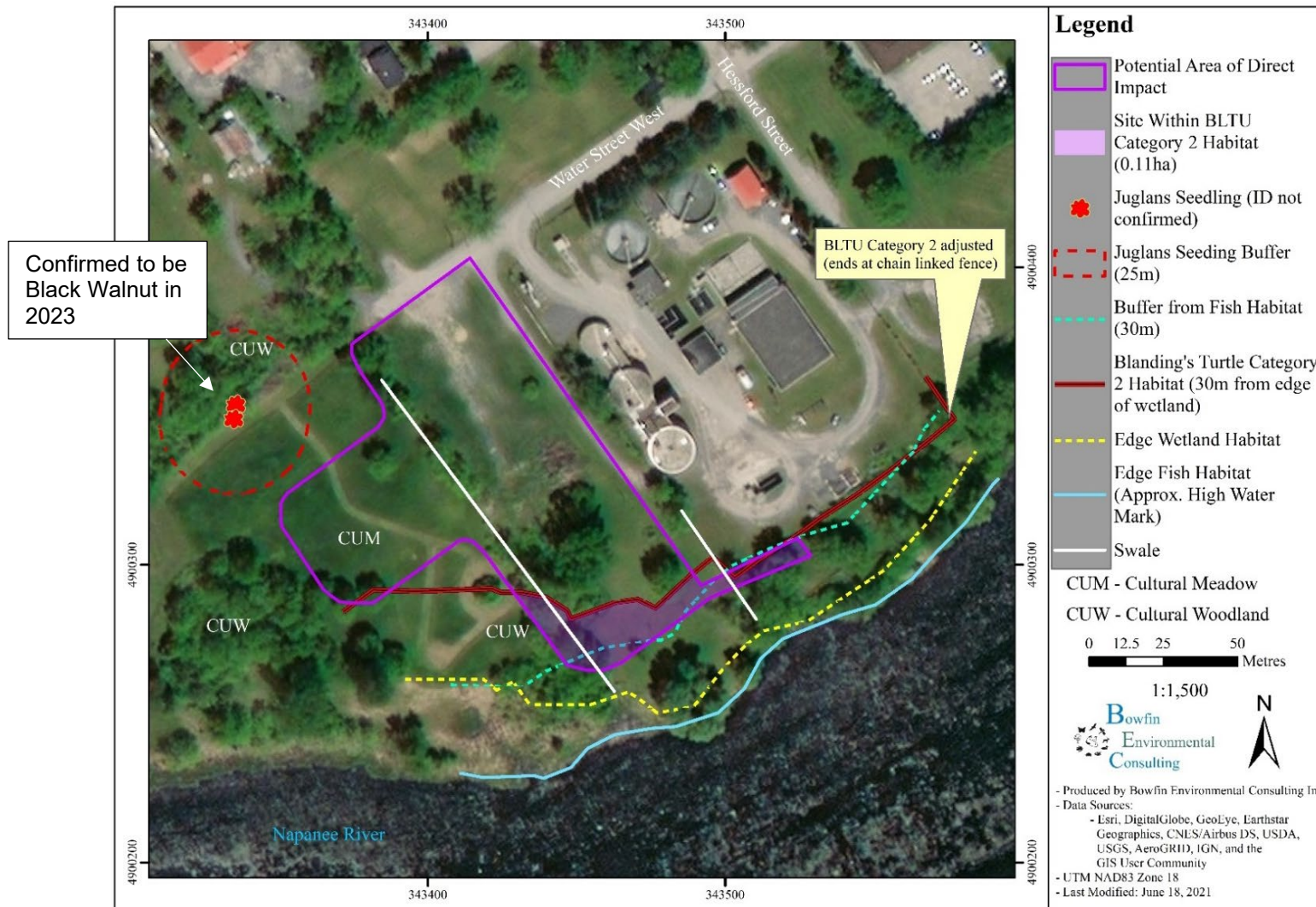


Figure 3: 2021 ELC communities (Bowfin 2021)

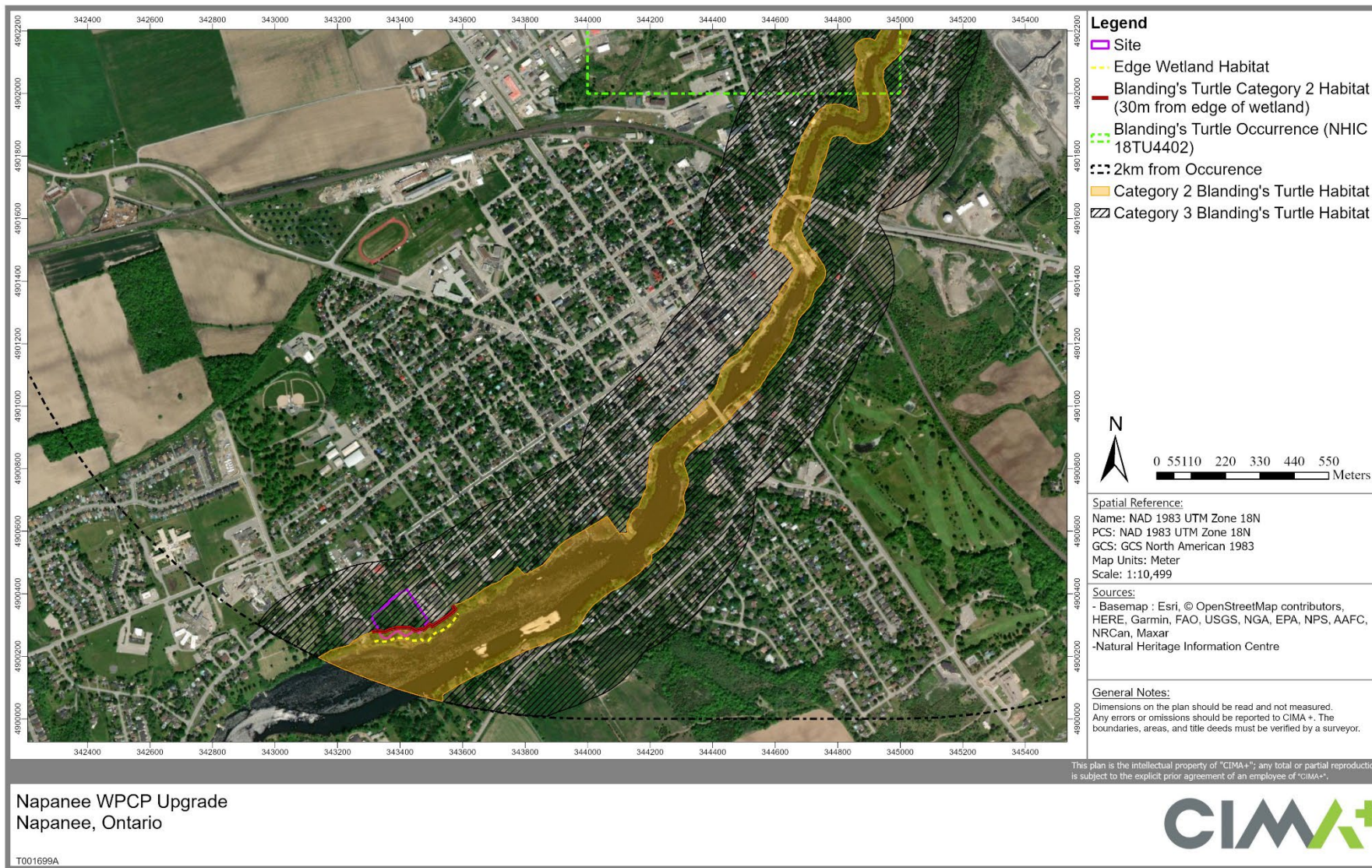


Figure 4: Blanding's Turtle Occurrence and Habitat

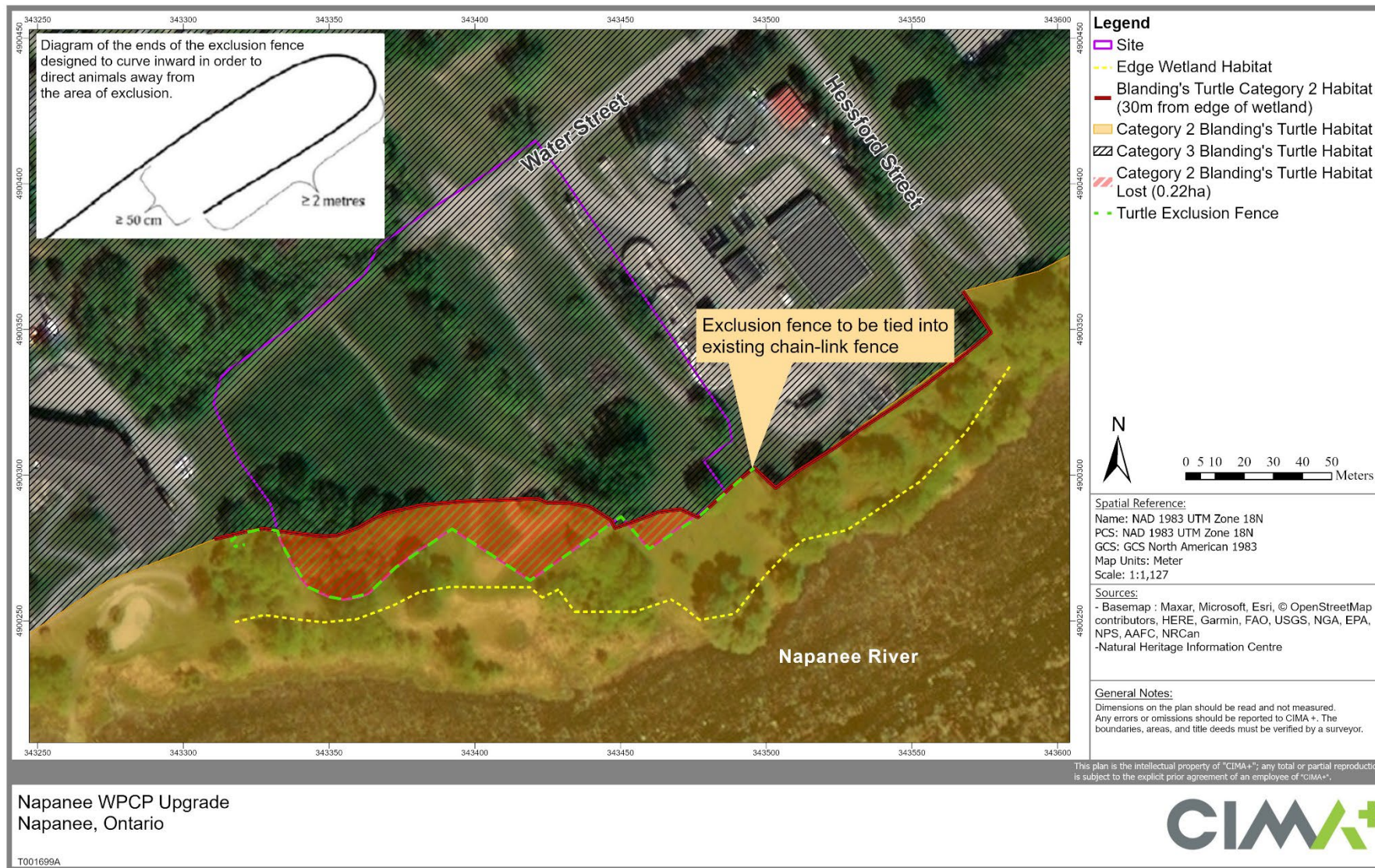


Figure 5: Blanding's Turtle Habitat on Site