



McKINLEY
ENVIRONMENTAL
SOLUTIONS

Integrated Environmental Impact Statement,
Tree Conservation Report
& Wildlife Mitigation and Monitoring Plan
Zibi Development Phase 1 & 2



January 2018
Prepared for Windmill Development Group

McKINLEY ENVIRONMENTAL SOLUTIONS
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Zibi Master Plan – Ontario Lands

Figure 1: Site Overview

A003 – Zibi Ontario – Master Plan Phase 1A – Chaudière West

A1 00 – Zibi Ontario Block 207 (Phase 2 Site Plan)

Appendix A – OMNRF Information and Records Request Response



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EXECUTIVE SUMMARY

McKinley Environmental Solutions (MES) was retained by Windmill Development Group to prepare an Integrated Environmental Impact Statement (EIS), Tree Conservation Report (TCR) & Wildlife Mitigation and Monitoring Plan (WMMP) to support the Zibi Phase 1 & 2 development. The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. The project includes lands within both Quebec and Ontario. The Ontario portion of the Zibi project is subject to an existing Master Plan Approval (MPA), which allows the development to occur over multiple phases. The MPA requires an adaptive approach to the evaluation and management of natural heritage features, due to the long term and multi-phase nature of the development. Each individual phase of the project is required to meet several conditions established by the MPA. This report is intended to evaluate and meet the MPA conditions related to Phase 1 & 2 of the Zibi Development, including the requirement for an Individual Development Phase EIS and TCR (Condition 25) and the requirement for an updated Wildlife Mitigation and Monitoring Plan (WMMP) (Condition 19).

Phase 1 & 2 of the Zibi Development are located on the eastern portion of Chaudière Island West (west of Booth Street). The Phase 1 area is approximately 1.09 ha in size and the Phase 2 area is approximately 0.13 ha in size (the Site). The Site was historically developed as an industrial complex, which was operated as a paper mill until 2007. Currently the Site is entirely occupied by derelict industrial buildings and paved areas/compacted gravel. There are no natural vegetative communities and no trees within the Phase 1 & 2 development area. The Site is zoned Mixed Use Downtown Zone (MD5), which permits a mixture of residential and commercial usage. The municipal address for the Phase 1 & 2 development area is 4 Booth Street.

Booth Street forms the eastern boundary of the Site, beyond which is Chaudière Island East. The Buchanan Channel is found south of the Site, beyond which is Albert Island. The area north of the Site includes Energy Ottawa lands. The area west of the Site includes additional former industrial lands, which will be redeveloped as part of later phases of the Zibi project. The Chaudière Falls and an associated hydro-electric dam are present northwest of the Site.

Zibi Phase 1 & 2 will include partial demolition of the former paper mill complex. Three (3) segments of the former paper mill will be retained and incorporated into the new buildings that are to be constructed as part of the redevelopment plan. At the time of report preparation, demolition of portions of the former paper mill complex was underway. Following completion of demolition, Phase 1 will include construction of a six (6) floor (6 storey) residential building with retail space, and

a four (4) floor (3 storey) mixed commercial/retail building. In total, Phase 1 will include approximately seventy one (71) residential units (6,250 m²), 2,225 m² of retail space, 1,298 m² of office space, and a 100 m² restaurant space. Phase 1 will also include development of Headstreet Square, ninety seven (97) temporary surface parking spaces, and ninety eight (98) underground parking spaces with one (1) level of underground parking. Eighty four (84) bicycle parking spaces will also be provided. Phase 2 will include redevelopment of Block 207 to include a new six (6) floor (6 storey) commercial building with a gross floor area of 3,877 m². The new six (6) storey building will incorporate portions of the south and east walls of the existing building within Block 207. Phase 2 will also include construction of the pedestrian alley located to the west of Block 207. The Site will receive municipal water and sewer services. Stormwater quality control will be provided by a new end-of-pipe oil and grit separator.

An updated pre-demolition survey of the Site has been completed, and no Species at Risk concerns were noted. The Buchanan Channel, which connects to the Ottawa River, is the only significant natural heritage feature that is present adjacent to the Phase 1 & 2 development area. Repairs to the retaining wall along the southern edge of Phase 1 were completed in 2015, and no additional in-water works are anticipated to be required as part of the Phase 1 & 2 development. Therefore, there are no concerns related to fish habitat loss and/or fish salvage requirements for the Zibi Phase 1 & 2 development.

As discussed in greater detail below, no requirements related to In-water Works (MPA Condition 23) and/or Species at Risk (MPA Condition 26) have been identified for Phase 1 & 2 of the Zibi Development. There is also no tree clearing required as part of Zibi Phase 1 & 2. This report is intended to satisfy Condition 19, Condition 25 and Condition 28 of the MPA, and approval of this report is anticipated to fulfill all outstanding natural heritage related conditions of the MPA for Phase 1 & 2 of the Zibi Development.

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the Zibi Phase 1 & 2 development is not anticipated to have a significant negative effect on the natural features and functions.

1.0 INTRODUCTION

1.1 Reading the Tree Conservation Report (TCR)

This report is presented as an Integrated Environmental Impact Statement (EIS), Tree Conservation Report (TCR) and Wildlife Mitigation and Monitoring Plan (WMMP). In order to meet the submission requirements specified by the conditions of the Zibi Master Plan Approval (MPA) (discussed below in Section 1.3), information pertaining to historic tree coverage within the Phase 1 & 2 Development Area (the Site) is included in this report. However, it should be noted that all tree removal within Phase 1 & 2 has been completed. TCR sections are therefore presented primarily for reference purposes. Readers who are principally interested in the TCR may choose to read only those portions of the report where the section headings are marked **(TCR)**. This includes Sections 1.3, 1.4, 1.5, 2.0.1, 3.2, 3.3.2, and 4.1. Readers who are interested in the EIS should read the entire report, as information included in the TCR sections is not reiterated.

1.2 Scoping the Environmental Impact Statement

This EIS was undertaken following the City of Ottawa's Environmental Impact Statement Guidelines. Following the City guidelines, the Environmental Impact Statement (EIS) includes the following:

- Documentation of existing natural features on and around the Site;
- Identification of potential environmental impacts of the project;
- Recommendations for ways to avoid and reduce any negative impacts; and
- Proposal of ways to enhance natural features and functions.

This EIS was prepared with guidance from the *Natural Heritage Reference Manual* (OMNRF 2005). The major objective of this EIS is to demonstrate that the proposed project will not negatively affect the significant features and functions of the study area, and that impacts will be minimized through mitigation measures.

1.3 Background – Master Plan Conditions (TCR)

The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. The project includes lands within both Quebec and Ontario. The Ontario portion of the Zibi project is subject to an existing Master Plan Approval (MPA), which allows the development to occur over multiple phases. The MPA establishes several conditions related to natural heritage features. The following conditions have previously been fulfilled:

- **Condition 22 – Construction and Post Construction Environmental Monitoring Plan:** Included as part of the Wildlife Mitigation and Monitoring Plan (NEA 2017a).
- **Condition 24 – Environmental Impact Statement and Tree Conservation Report Approval:** Report submitted by Niblett Environmental Associates in September 2016 (NEA 2016).
- **Condition 27 – Integrated Environmental Review Statement:** Report submitted by Niblett Environmental Associates in August 2017 (NEA 2017b).

In addition, the MPA requires an adaptive approach to the evaluation and management of natural heritage features, due to the long term and multi-phase nature of the development. Each individual phase of the project is required to meet several conditions established by the MPA. This report is intended to satisfy the MPA conditions related to Phase 1 & 2 of the Zibi Development. The phased development conditions established by the MPA include the following:

- **Condition 19 – Wildlife Mitigation and Monitoring Plan (WMMP):** The WMMP was previously submitted by NEA (2017a). An update to the WMMP is included below in Section 5.0.
- **Condition 23 – In-Water Works:** Specific conditions exist for development phases that involve in-water works. As noted below in Section 1.5, no in-water works are proposed for Phase 1 & 2.
- **Condition 25 – Individual Development Phase Environmental Impact Statement and Tree Conservation Report:** This report evaluates Phase 1 & 2 of the Zibi Development.
- **Condition 26 – Species at Risk and Endangered Species Act:** The potential presence of Species at Risk (SAR) within the Phase 1 & 2 area is discussed in Section 3.7. As noted in Section 3.7, no SAR concerns have been identified for Phase 1 & 2, and therefore no Endangered Species Act (ESA) regulatory and/or approval requirements have been identified.
- **Condition 28 – Adaptive Management for Phased Projects:** Each individual development phase will require an updated phase specific Environmental Impact Statement and Tree Conservation Report (Condition 25). The phase specific EIS and TCR will be provided in future

prior to the commencement of development of each individual phase. This will allow adaptive management of the project.

As discussed in greater detail below, no requirements related to In-water Works (Condition 23) and SAR (Condition 26) have been identified for Phase 1 & 2 of the Zibi Development. Condition 19, 25 and 28 are fulfilled by submission and approval of this report. Therefore, approval of this report is anticipated to fulfill all natural heritage related conditions of the MPA for Phase 1 & 2 of the Zibi Development.



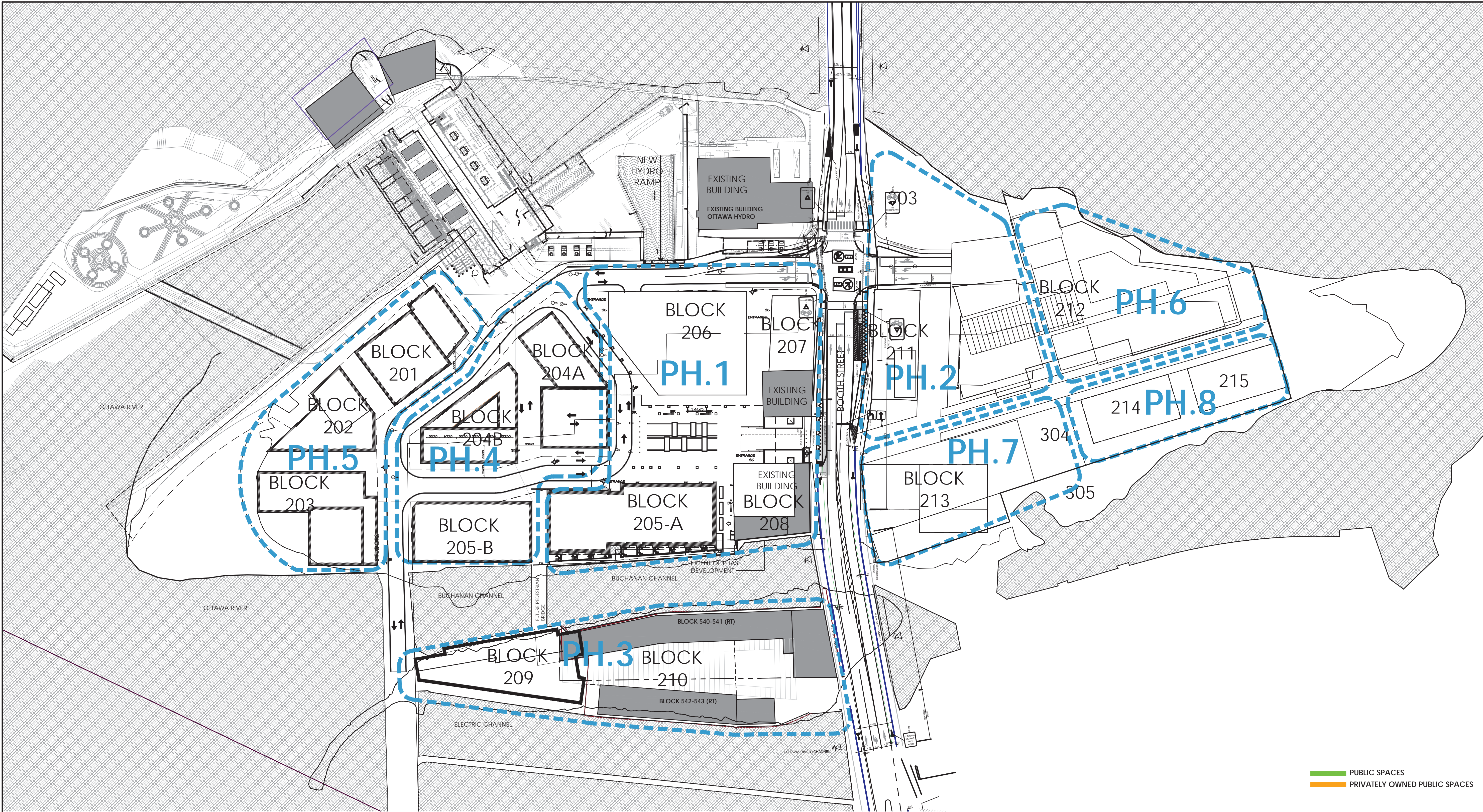
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Phase	Block	Class	Area	Floors
1	301	Site/Parkade	85,000	1 (b/g)
1	208	Office	18,000	3
1	208	Retail	9,000	3
1	205.5A	Residential	67,784	6
1	205.5A	Retail	12,408	1
1	207	Office	20,000	4
1	207	Retail	20,000	2
1	206	Residential	200,000	18
1	206	Retail	8,500	4
1	206	Community	7,000	2

Phase	Block	Class	Area	Floors
2	211	Residential	60,000	6
3	209	Office	47,000	2
3	209	Residential	38,000	6
3	210	Office	34,000	4
3	210	Retail	25,000	2
4	209	Office	47,000	2
4	209	Residential	38,000	6
4	210	Office	34,000	4
4	210	Retail	25,000	2

Phase	Block	Class	Area	Floors
5	201	Residential	130,000	15
5	201	Retail	4,000	2
5	202	Residential	71,000	8
5	202	Retail	2,800	2
5	203	Residential	152,000	15
5	203	Retail	3,500	2
6	212	Residential	97,000	14
6	212	Hotel	62,000	4
6	212	Special Event	56,000	6
7	213	Residential	138,500	10
7	213	Retail	4,000	2

ONTARIO LANDS SITE AREA (area within property boundry lines)	
CHAUDIERE WEST	255,335 SQ.FT. (23,730 m²)
CHAUDIERE EAST	231,680 SQ.FT. (21,532 m²)
ALBERT ISLAND WEST	68,146 SQ.FT. (6,331 m²)



LOCATION PLAN

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CLIENT APPROVAL

Signature: _____ Date: _____

Name: CLIENT NAME
Title: CLIENT TITLE
Company: CLIENT

2	16.06.06	ISSUED FOR COORDINATION
1	15.08.14	ISSUED FOR S.P.C. PHASE 1A

no.	date	revision
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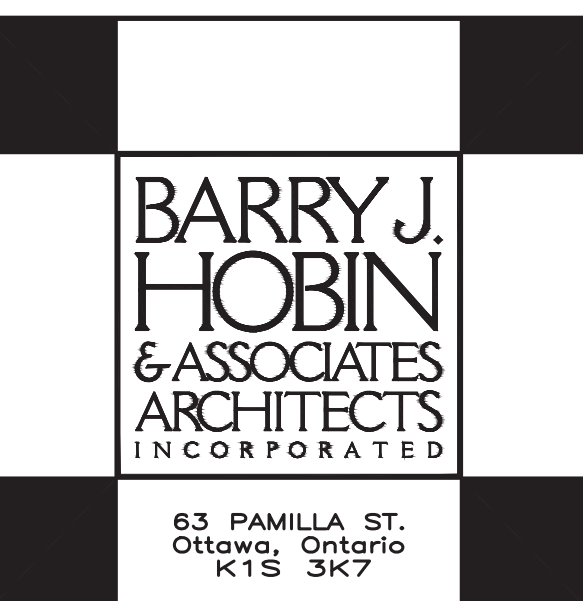
It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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project			ZIBI
drawing title			MASTER PLAN ONTARIO LANDS
drawn	date	scale	
PB	15.07.01	1:500	
			project
			1508
			drawing no.
			A001

1.4 Site Overview (TCR)

As noted above, this report is intended to evaluate natural heritage features related to Phase 1 & 2 of the Zibi Development (the Site) (Figure 1). For information related to the remainder of the Zibi Development area, refer to NEA (2016). Phase 1 & 2 of the Zibi Development are located on the eastern portion of Chaudière Island West (west of Booth Street). The Phase 1 area is approximately 1.09 ha in size and the Phase 2 area is approximately 0.13 ha in size (the Site). The Site was historically developed as an industrial complex, which was operated as a paper mill until 2007. Currently the Site is entirely occupied by derelict industrial buildings and paved areas/compacted gravel. There are no natural vegetative communities and no trees within the Phase 1 & 2 development area. The Site is zoned Mixed Use Downtown Zone (MD5) which permits a mixture of residential and commercial usage. The municipal address for the Phase 1 & 2 development area is 4 Booth Street.

Booth Street forms the eastern boundary of the Site, beyond which is Chaudière Island East. The Buchanan Channel is found south of the Site, beyond which is Albert Island. The area north of the Site includes Energy Ottawa lands. The area west of the Site includes additional former industrial lands, which will be redeveloped as part of later phases of the Zibi project. The Chaudière Falls and an associated hydro-electric dam are present northwest of the Site. The Buchanan Channel, which connects to the Ottawa River, is the only significant natural heritage feature that is present adjacent to the Phase 1 & 2 development area.

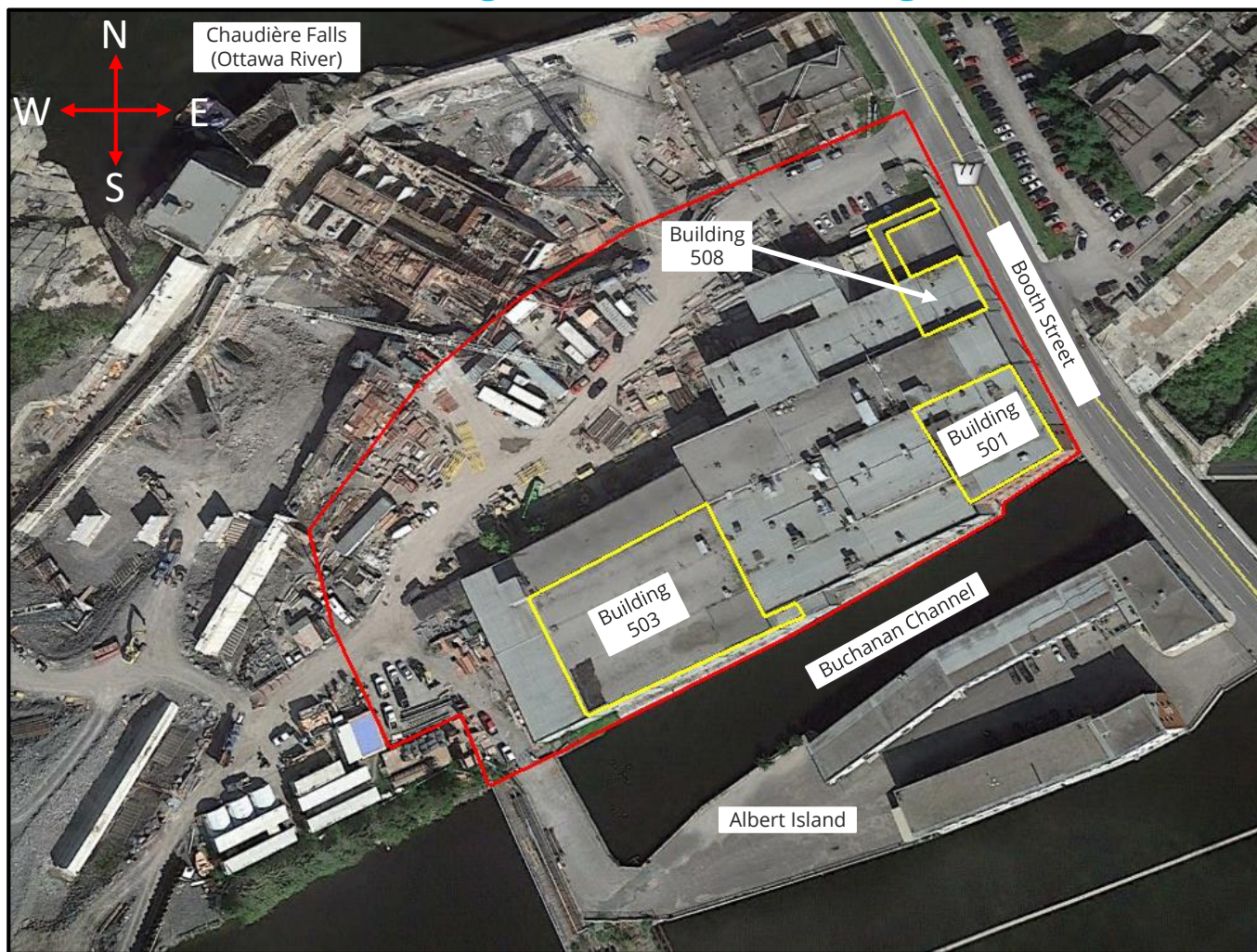




FIGURE 1: SITE OVERVIEW

Zibi Phase 1 & 2 Development

Integrated Environmental Impact Statement, Tree Conservation Report &
Wildlife Mitigation and Monitoring Plan



— Phase 1 & 2 Study Area — Retained Building Segments

Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

1.5 Description of Undertaking – Phase 1 & 2 Development (TCR)

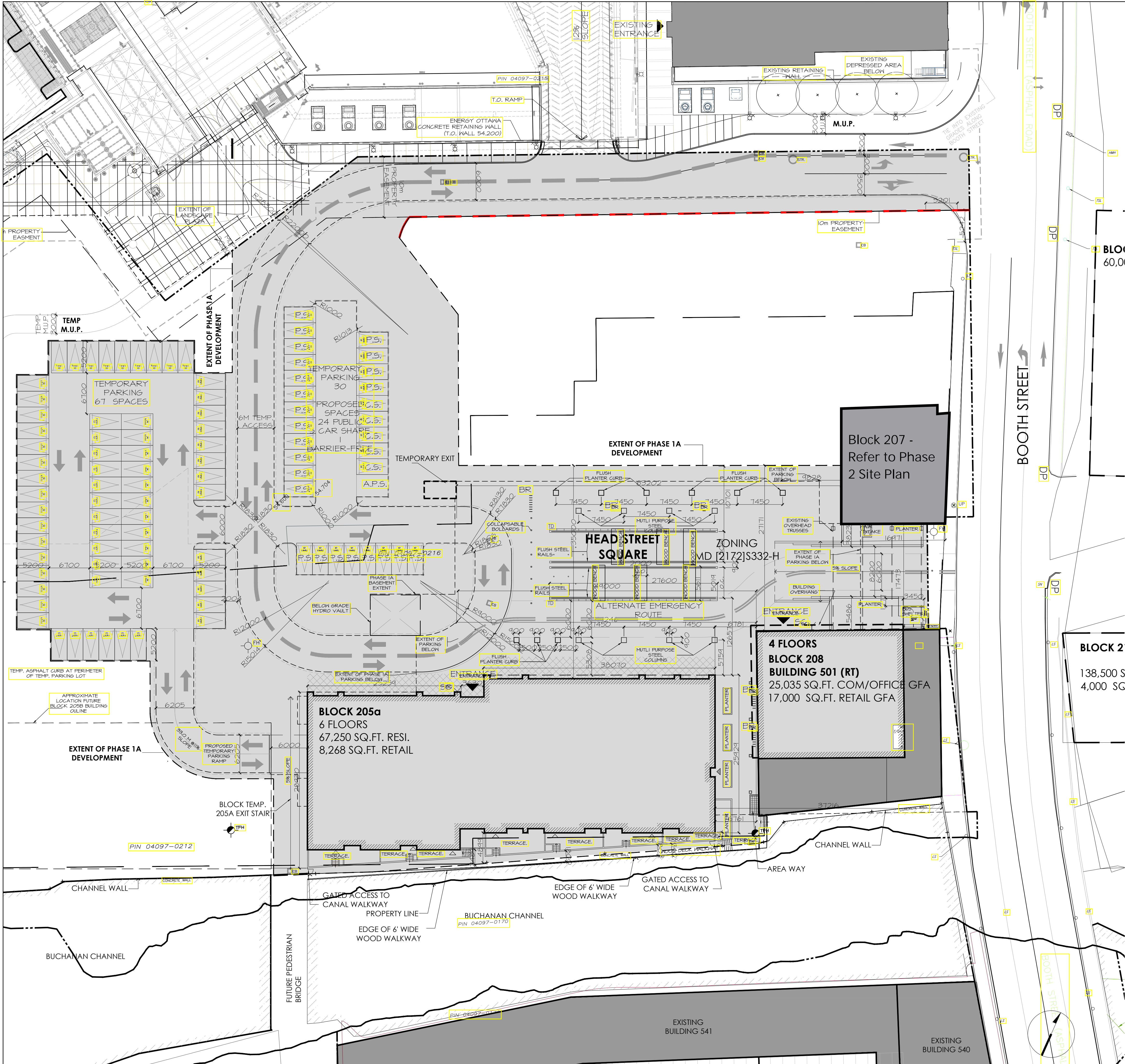
Drawing A003 (Master Plan Phase 1A) shows the Site Plan for Phase 1 of the Zibi development (included below). Drawing A1 00 (Zibi Ontario Block 207) shows the Site Plan for Phase 2 of the Zibi development (included below). Phase 1 & 2 will include partial demolition of the former paper mill complex. As shown in Figure 1, three (3) segments of the former paper mill complex will be retained and incorporated into the new buildings that are to be constructed as part of the redevelopment plan (these segments are shown as Building 501, 503 and 508). At the time of report preparation, demolition of portions of the former paper mill were underway. Following completion of demolition, Phase 1 will include redevelopment of Block 205a to include a six (6) floor (6 storey) residential building with retail space. Phase 1 will also include redevelopment of Block 208 to construct a four (4) floor (3 storey) mixed commercial/retail building. In total, Phase 1 will include seventy one (71) residential units (6,250 m²), 2,225 m² of retail space, 1,298 m² of office space, and a 100 m² restaurant space. Phase 1 will also include development of Headstreet Square, ninety seven (97) temporary surface parking spaces, and ninety eight (98) underground parking spaces with one (1) level of underground parking. Eighty four (84) bicycle parking spaces will also be provided. Phase 2 will include redevelopment of Block 207 to include a new six (6) floor (6 storey) commercial building with a gross floor area of 3,877 m². The new six (6) storey building will incorporate portions of the south and east walls of the existing building within Block 207. Phase 2 will also include construction of the pedestrian alley located to the west of Block 207.

The Buchanan Channel is located south of the Phase 1 & 2 development area. The shoreline of the Buchanan Channel is comprised entirely of concrete retaining walls, with no natural shoreline present. Repairs to the retaining wall along the southern edge of the Site were completed in 2015, and no additional repair work is currently proposed. Two (2) water intake openings are present within the retaining wall along the southern edge of the Site. The water intake openings will be sealed as part of the current development. This will be completed by employing scuba divers to affix a steel plate to block the intakes. Once the intakes are blocked, the pipes will be filled with concrete from within the basement of the existing building. This arrangement will allow the water intake pipes to be decommissioned, while avoiding any need for in-water work. No dewatering and/or fish relocation is anticipated to be required during Phase 1 & 2.

The Site will receive municipal water and sewer services. DSEL (2017) note that the majority of stormwater runoff from the Site is currently directed to the Ottawa River, with no existing stormwater management quality or quantity control. DSEL (2017) have consulted with the Rideau

Valley Conservation Authority (RVCA) and the City of Ottawa, and have determined that stormwater quantity controls are not required. DSEL (2017) note that development of the Site is not anticipated to increase the flood risk and flood levels of the Ottawa River. Stormwater management controls are required to achieve an 'enhanced' level of quality control. The stormwater management system will consist of a private storm sewer, outletting to the north edge of Chaudière Island, east of Booth Street. An end of pipe oil/grit separator unit will be included to achieve water quality targets. DSEL (2017) note that roof runoff is considered clean, and therefore the building roofs will have roof leaders discharge directly to the Ottawa River.





LOCATION PLAN



LEGEND

- PROPERTY LINE
- EXTENT OF PHASE 1A DEVELOPMENT
- EXTENT OF PHASE 1A BELOW GRADE
- EXISTING BUILDING TO BE RETAINED
- PROPOSED BUILDING FOOTPRINTS
- TEMPORARY EXIT - PHASE 1
- EXTENT OF 6m WIDE FIRE ROUTE
- ALTERNATE EMERGENCY ROUTE
- OPEN WATER
- COMMON AMENITY SPACE - CONDO
- TEMPORARY ASPHALT CURB
- ROLL CURB
- PROPOSED FIRE HYDRANT LOCATION
- TEMPORARY FIRE HYDRANT LOCATION
- PROPOSED SAMESE CONNECTION LOCATION
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
- TRENCH DRAIN
- EXISTING LIGHT POLE
- CAR SHARE PARKING SPACE
- ACCESSIBLE PUBLIC PARKING SPACE
- PUBLIC PARKING SPACE
- PUBLIC BIKE PARKING
- EXISTING BUILDING TO BE DEMOLISHED

PHASE 1A ZONING TABLE

CURRENT ZONING	MD5 [2172] S332	
TOTAL PHASE 1A SITE AREA	10,938 m ²	
TEMPORARY OVERFLOW PARKING AREA - PHASE 1A	1,747 m ²	
PHASE 1A No. OF DWELLING UNITS	71 DWELLING UNITS	
PHASE 1A RESIDENTIAL - 205A	6,250 m ²	
PHASE 1A RETAIL AREA - 205A	768 m ²	
PHASE 1A RETAIL AREA - 208	1,457 m ²	
PHASE 1A OFFICE AREA - 208	1,298 m ²	
PHASE 1A Restaurant - 208	100 m ²	
PHASE 1 GROSS FLOOR AREA	9,873 m ²	
SETBACKS	ALL SIDES : NO MINIMUMS	REFER TO SITE PLAN
BUILDING HEIGHTS	73m, maximum 4 buildings over nine (9) storeys within Area A on Schedule 332	Block 205A: 6 Storeys - 18.5m Block 208: 3 Storeys - 15m Block 301: underground parking garage
REQUIRED PROVIDED		
AMENITY AREA 6m ² PER UNIT 50% TO BE COMMUNAL (213m ²) 426m ² Required	TOTAL: 426m ² COMMON: 213m ²	TOTAL: 1056m ² private balconies/terraces: 834m ² Total communal: 222.7m ² Indoor (fitness room): 20.7m ² Outdoor (part of head street spaces): 202 m ²
PARKING RESIDENTIAL + VISITOR: MINIMUM: NONE MAXIMUM: 1.5/DWELLING UNIT RETAIL: MINIMUM: NONE MAXIMUM: 1.0/100M2 OF GFA OFFICE: MINIMUM 0.75/100M2 OF GFA MAXIMUM: 1.0/100M2 OF GFA RESTAURANT: MINIMUM: NONE MAXIMUM: NONE	MIN REQUIRED: RESIDENTIAL + VISITOR: NONE RETAIL: NONE OFFICE: 10 SPACES RESTAURANT: NONE MAXIMUM PERMITTED: RESIDENTIAL + VISITOR: 107 SPACES RETAIL: 32 SPACES OFFICE: 13 SPACES RESTAURANT: NO MAXIMUM	RESIDENTIAL + VISITOR: 67 SPACES RETAIL: 22 SPACES OFFICE: 13 SPACES RESTAURANT: 195 SPACES LOCATION: BLOCK 301 (P1): 42 SPACES BLOCK 205A (P1): 36 SPACES SURFACE (TEMPORARY): 97 SPACES ** NOTE: BLOCK 301, LEVEL P2 (B6 ADDITIONAL PARKING SPACES) WILL BE CONSTRUCTED IN PHASE 1A, BUT WILL NOT BE ACCESSIBLE UNTIL PHASE 1B VIA THE FUTURE BLOCK 206.
BICYCLE PARKING RESIDENTIAL: 1/DWELLING UNIT RETAIL/OFFICE: 1/250M2 OF GFA RESTAURANT: 1/1,500M2 OF GFA 50% CAN BE VERTICAL	TOTAL REQUIREMENT: 81 SPACES RESIDENTIAL: 71 SPACES RETAIL: 4 SPACES OFFICE: 6 SPACES	TOTAL PROPOSED: 84 SPACES RESIDENTIAL INTERIOR: 40 SPACES RESIDENTIAL EXTERIOR: 11 SPACES (15%) PUBLIC EXTERIOR: 33 SPACES

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NOTE: ALL ENERGY OTTAWA RELATED LANDSCAPE INFORMATION OUTSIDE OUR PROPERTY LIMITS ARE BASED ON CSW LANDSCAPE ARCHITECTS LIMITED ISSUED FOR CONSTRUCTION SET DATED 17.05.17

NOTE: ALL EXISTING SITE INFORMATION AS PER SITE SURVEY PLAN DATED XX.XX.XX AND PREPARED BY STANTEC GEOMATICS LTD.

APPROVED ☐ REFUSED ☐

THIS DAY OF 20

DOUGLAS JAMES, M.C.P., R.P.P., MANAGER, DEVELOPMENT REVIEW CENTRAL PLANNING, INFRASTRUCTURE AND ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

10	17.09.08	S.P.C. PHASE 1A RESUB. 1
9	17.08.18	ISSUED FOR COORDINATION
2	16.04.05	ISSUED FOR S.P.C. PHASE 1A
1	15.08.14	ISSUED FOR S.P.C. PHASE 1A
no.	date	revision

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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project

ZIBI ONTARIO

drawing title

ZIBI ONTARIO - MASTER PLAN
CHADIERE WEST
PHASE 1A

drawn	date	scale
PB	17-02-02	1:300
		project
		1508
		drawing no.
		A003
		revision no.



1.6 Agency Consultation

The City of Ottawa was contacted by the proponent, and the Rideau Valley Conservation Authority (RVCA) was previously contacted by DSEL (2017) regarding stormwater management requirements. The Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District provided NEA with an Information and Records Request Response in March 2014 (refer to NEA 2016). The OMNRF response identified the potential Species at Risk (SAR) concerns for the Site. As part of this report, the OMNRF Kemptville District also provided an updated Information and Records Request Response (Appendix A).

1.7 Regulatory Requirements

The Site occurs within 30 m of the Ottawa River, and therefore falls within the regulatory area of the RVCA. Although no alteration to the existing shoreline and/or removal of aquatic habitat is proposed, a permit from the RVCA may be required under Ontario Regulation 153/06, due to the fact that work is proposed within 30 m of the water's edge.

As noted below, there is no in-water work and no removal of fish habitat proposed as part of the Phase 1 & 2 development. Dewatering and/or fish relocation is not anticipated to be required. Therefore, a review and/or authorization under the *Fisheries Act* should not be required.

As discussed in Section 3.7, there are currently no known Species at Risk (SAR) concerns for the Site. Therefore, no regulatory requirements under the Ontario Endangered Species Act (ESA) have been identified.

Lastly, all tree removal within the Phase 1 & 2 development area is complete, and therefore a Tree Removal Permit from the City of Ottawa will not be required.



2.0 METHODOLOGY

2.0.1 Tree Inventory Methodology (TCR)

As noted above, there are currently no trees found within the Phase 1 & 2 development area. As such, no tree inventory methods were required. Trees found within the Site prior to the commencement of demolition were documented by NEA (2016) and are discussed below in Section 3.3.2.

2.0.2 EIS Methodology

A pre-demolition survey for Species at Risk (SAR) was completed in February 2017 by NEA, prior to the commencement of demolition (NEA 2017a). MES completed an updated pre-demolition survey and a site visit on November 3rd, 2017. Conditions during the November 3rd site visit included sunny skies and 11 °C. The EIS methodology included the following:

- Site visit to describe the condition of the buildings and to complete an updated description of vegetative communities and trees present;
- Updated pre-demolition survey of buildings in the Phase 1 & 2 area to verify the presence/absence of SAR including bats (Little Brown Myotis, Northern Long Eared Bat, Eastern Small Footed Bat, and Tricolored Bat), Barn Swallows, and Chimney Swift. The pre-demolition survey included visually inspection of all interior and exterior surfaces of the buildings for any signs of bird nesting/bat roosting, such as nests, droppings, dead bats/birds, etc. The majority of the former paper mill complex remains well lit, however, a flashlight was used to complete the survey where required;
- Review of changes to the SAR list and records of SAR occurrences in the Ottawa area to determine if any changes relevant to the project have occurred since completion of the EIS and TCR in 2016;
- Site visit to assess the potential for other natural habitat features to be present in the area, including wetlands, fish habitat, amphibian breeding habitat, Significant Wildlife Habitat features, and other significant habitat features;
- Review of Official Plan designations;
- Natural Heritage Information Center (NHIC) database review;
- Obtainment of an Information and Records Request Response from the OMNRF;
- Review of the background Geo-technical Report (Paterson Group 2016);
- Review of the Functional Servicing and Stormwater Management Report (DSEL 2017);
- Review of the Environmental Impact Statement and Tree Conservation Report (NEA 2016), the Wildlife Mitigation and Monitoring Plan (NEA 2017a) and the Integrated Environmental Review Statement (NEA 2017b);

- Updated assessment of the potential environmental impacts related to the Phase 1 & 2 development;
- Updated summary of mitigation and monitoring requirements specific to Phase 1 & 2, including requirements from the City of Ottawa Protocol for Wildlife During Construction (City of Ottawa 2015);
- Update of the Wildlife Mitigation and Monitoring Plan (WMMP) (Section 5.0); and
- Description of requirements related to in-water works (Condition 23) and SAR (Condition 26) specific to Phase 1 & 2.



3.0 EXISTING CONDITIONS

3.1 Geological Conditions

The Site is shown to occur at an elevation of approximately 52 m ASL (at Booth Street). Chaudière Island slopes gradually to the east, such that the eastern edge of the island occurs at an elevation of approximately 46 m, while the western side of the island occurs at an elevation of approximately 55 m ASL. The Site itself is relatively flat and is well drained, with no areas of surface water accumulation noted. Paterson Group (2016) note that the subsurface profile of the Site consists of either pavement, concrete slab, or gravel fill, overlying varying fill materials, consisting of brown silty sand with crushed stone, wood debris, and/or limestone bedrock. The majority of boreholes encountered a concrete slab poured directly over limestone bedrock (Paterson Group 2016). Groundwater levels were noted to fluctuate in conjunction with the Ottawa River water level, which is controlled by the nearby dam.

3.2 Site History (TCR)

Historic air photos show that the Site has been entirely developed and continuously utilized for industrial purposes as part of the operation of the paper mill complex since at least 1928 (City of Ottawa 2017). The former paper mill closed in 2007.

3.3 Terrestrial Habitats

As noted above, there are no natural vegetative communities present within the Site or in the immediately surrounding area. All tree removal within the Phase 1 & 2 development area is complete, however, trees that occurred within the Site prior to the commencement of demolition work are listed below in Section 3.3.2.

3.3.1 Existing Buildings

As noted above, the Site includes a former paper mill complex, which was closed in 2007. At the time of report preparation, portions of the paper mill complex were being demolished. The potential for wildlife and SAR to be found within the former paper mill complex is discussed below. As part of the demolition process, hazardous materials and designated substances are being remediated throughout the Phase 1 & 2 development area.



Photograph 1: Looking west from Booth Street at the Buchanan Channel and the south side of the former paper mill complex (November 3rd, 2017).



Photograph 2: Looking north along Booth Street at the east side of the former paper mill complex (November 3rd, 2017).



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Photograph 3: Looking east at the north side of the former paper mill complex, with the demolition process underway (November 3rd, 2017).



Photograph 4: Looking west at the north side of the former paper mill complex, with the demolition process underway (November 3rd, 2017).



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Photograph 5: Looking east at the south side of the former paper mill complex. The Buchanan Channel is shown on the right (November 3rd, 2017).



Photograph 6: The interior of the former paper mill complex (November 3rd, 2017).



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Photograph 7: The interior of the former paper mill complex (November 3rd, 2017).

3.3.2 Trees and Vegetative Communities (TCR)

NEA (2016) noted the presence of four (4) planted Norway Maples along the north side of the former paper mill complex (Trees #38, #39, #40, and #41). NEA (2016) noted that the trees could not be transplanted, due to the fact that they were growing in contaminated soil, and hence required disposal. The four (4) trees were removed during the early stages of the demolition project. At the current time, there are no trees found growing within the Phase 1 & 2 development area.



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3.4 Wetlands and Watercourses

There are no wetlands within the Site or in the immediately surrounding area. The Buchanan Channel occurs along the southern Site boundary. The Buchanan Channel connects to the Ottawa River, and therefore provides fish habitat. However, the channel itself is a highly artificial feature with little natural aquatic habitat value. The channel has a silt/mud bottom with no natural habitat structure and no aquatic vegetation. The shoreline of the Buchanan Channel is comprised entirely of concrete retaining walls, with no natural shoreline present.

Repairs to the retaining wall along the southern edge of the Site were completed in 2015, and no additional repair work is currently proposed. Two (2) water intake openings are present within the retaining wall along the southern edge of the Site. The water intake openings will be sealed as part of the current development. This will be completed by employing scuba divers to affix a steel plate to block the intakes. Once the intakes are blocked, the pipes will be filled with concrete from within the basement of the existing building. This arrangement will allow the water intake pipes to be decommissioned, while avoiding any need for in-water work.



Photograph 8: Looking east along the Buchanan Channel when the channel was dewatered to allow maintenance access in November 2015. Zibi Phase 1 is on the left, Albert Island is on the right.



Photograph 9: Water intake in the Buchanan Channel wall. The intake is shown when the channel was dewatered in November 2015 to allow maintenance access. The water intake is normally submerged beneath the water surface.



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3.5 Adjacent Lands and Significant Features

As noted above, Booth Street forms the eastern boundary of the Site, beyond which is Chaudière Island East. The Buchanan Channel is found south of the Site, beyond which is Albert Island. The area north of the Site includes Energy Ottawa lands. The area west of the Site includes additional former industrial lands, which will be redeveloped as part of later phases of the Zibi project. The Chaudière Falls and an associated hydro-electric dam are present northwest of the Site.

Therefore, there are no natural heritage features located immediately adjacent to the Site, other than the Buchanan Channel (discussed above). NEA (2016) note that vegetative communities are present on Chaudière Island East, within the larger Zibi MPA area. However, those vegetative areas are separated from the Phase 1 & 2 development by Booth Street, and are therefore not likely to be impacted by the Phase 1 & 2 development. NEA (2016) also note that the Victoria Island Area of Natural and Scientific Interest (ANSI) is located southeast of the Zibi MPA area. However, NEA (2016) note that the edge of the Victoria Island ANSI is approximately 130 m from the Zibi MPA area (and even further from the Phase 1 & 2 development). Due to the separation distance between the Victoria Island ANSI and the Zibi project, NEA (2016) concluded that no significant negative impacts on the Victoria Island ANSI are likely.

There are no other designated natural heritage features known to occur within the Site or in the immediately surrounding area.

3.6 Wildlife and Significant Wildlife Habitat

As noted above, at the time of the Site visit portions of the former paper mill complex were being demolished. The noise and disturbance associated with demolition activity has likely helped to dissuade wildlife from utilizing the Site. During the Site visit, no wildlife were noted. Signs of historic Rock Dove nesting were noted within the buildings, however, no birds were seen. It is likely that Rock Doves nested within the buildings historically, but that they left the area once demolition activity began. The footprints of a Common Raccoon were noted during the Site visit. The area surrounding the footprints was searched, but the animal was not found. Due to the fact that the footprints are located inside the former paper mill complex, and therefore are protected from the elements, it is not known how old the footprints are. As such, it cannot be determined whether the Common Raccoon was found within the area recently. Mitigation measures to address the potential presence of wildlife within the demolition area are outlined below in Section 5.0.

No Significant Wildlife Habitat (SWH) features are known to occur within the Site or the immediately surrounding area. No wetlands, amphibian breeding habitat, stick nests, migratory bird stopover points, heron rookeries, reptile hibernacula, caves, bedrock fissures, or any other features which may qualify as SWH were noted within the Site (OMNRF 2014). As discussed above in Section 3.4, the Buchanan Channel may provide low quality fish habitat.





Photograph 10: Common Raccoon tracks noted within the former paper mill complex (November 3rd, 2017).



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3.7 Species at Risk

The Natural History Information Center (NHIC) records for the nine (9) grids that include and surround the Site were reviewed. This included an area 3 km x 3 km in size and all published Species at Risk (SAR) records were noted. The OMNRF Kemptville District provided NEA with an Information and Records Request Response in March 2014 (refer to NEA 2016). The 2014 OMNRF response formed the basis of the original SAR assessment, completed by NEA in 2016. As part of this report, the OMNRF Kemptville District also provided an updated Information and Records Request Response (Appendix A). The following SAR were identified as potentially occurring within the vicinity:

- Barn Swallow – Threatened
- Chimney Swift – Threatened
- Little Brown Myotis – Endangered
- Northern Long Eared Bat – Endangered
- Eastern Small Footed Myotis – Endangered
- Tricolored Bat – Endangered
- Bank Swallow – Threatened
- American Eel – Endangered
- Lake Sturgeon – Threatened
- Peregrine Falcon – Special Concern
- Snapping Turtle – Special Concern
- Northern Map Turtle – Special Concern
- River Redhorse – Special Concern
- Silver Lamprey – Special Concern

NEA (2016) completed SAR surveys throughout the Zibi MPA area, and no significant SAR concerns were identified. NEA (2017a) also completed a pre-demolition SAR survey of the Phase 1 & 2 development area in February 2017, and no SAR concerns were noted. MES completed an updated pre-demolition survey of the Phase 1 & 2 development area on November 3rd, 2017, and again no SAR concerns were noted.

The following represents a summary of the potential presence of SAR within the Site:

- **Barn Swallow and Chimney Swift:** Barn Swallows nest in many anthropogenic structures including old barns, abandoned buildings, in culverts, and under bridges (SARO 2017). Chimney Swifts nest in open chimneys with rough interior surfaces made from brick and/or stone (SARO 2017). NEA (2016) observed Barn Swallows flying around the bridges connecting Albert Island to the south in June 2013 and the bridge connecting the Chaudière dam to the north in May and

June 2014. However, the location of nesting sites was not confirmed (NEA 2016). During the November 3rd, 2017 pre-demolition survey, no Barn Swallow nests were noted anywhere within the buildings that will be demolished as part of the Phase 1 & 2 development. NEA (2016) observed Chimney Swifts flying over the channel beside Victoria Island. However, no chimneys that provide potentially suitable nesting habitat for Chimney Swifts were noted within the Zibi MPA area (NEA 2016). The Chimney Swifts that were observed by NEA close to Victoria Island could have been nesting well outside of the Zibi MPA area, as Chimney Swifts are capable of travelling long distances each day during foraging (SARO 2017). During the November 3rd, 2017 pre-demolition survey, no chimneys that could provide potential suitable nesting sites for Chimney Swift were noted within the Phase 1 & 2 development area. Therefore, Barn Swallows and Chimney Swift are not anticipated to be a significant concern for the Phase 1 & 2 development.

- **Little Brown Myotis, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis:** In some cases, bats may be found roosting or overwintering in abandoned buildings (SARO 2017). NEA (2016) did not note any evidence of bats within the former paper mill complex. During the November 3rd, 2017 pre-demolition survey, no evidence of bat roosting was noted within the Phase 1 & 2 development area. Therefore, Little Brown Myotis, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis are not anticipated to be a significant concern for the Phase 1 & 2 development.
- **Bank Swallow:** Bank Swallows can be found nesting in sand and silt deposits with vertical or nearly vertical surfaces. Natural nesting sites include riverbanks and areas with exposed slopes. Bank Swallows also frequently nest in artificial stockpiles of sand and silt, including in mines, pits, and quarries (SARO 2017). No exposed silt and/or sand surfaces were noted within the Phase 1 & 2 development area, and therefore Bank Swallow are not anticipated to be a significant concern for the Phase 1 & 2 development.
- **American Eel and Lake Sturgeon:** NEA (2016) note that spawning habitat for Lake Sturgeon was identified approximately 650 m northeast of the Zibi MPA area. However, NEA (2016) did not identify any significant habitat features for American Eel and/or Lake Sturgeon within the Zibi MPA area. Although both species are generally found within the Ottawa River, the only portion of the river which is adjacent to the Phase 1 & 2 development area is the Buchanan Channel. As noted above, the Buchanan Channel is a highly degraded area that provides little fish habitat. As described below, there are no in-water works proposed as part of the Zibi Phase 1 & 2 development. Therefore, American Eel and Lake Sturgeon are not anticipated to be a significant concern for the Phase 1 & 2 development.
- **Peregrine Falcon:** Peregrine Falcons naturally nest on cliff edges, but are also found nesting within cities on the roofs of tall buildings (SARO 2017). The former paper mill complex is a two (2)

storey building, and hence it not likely to be tall enough to attract Peregrine Falcon nesting. It is therefore highly unlikely that Peregrine Falcons would be found nesting within the Site. Therefore, Peregrine Falcons are not anticipated to be a significant concern for the Phase 1 & 2 development.

- **Snapping Turtle, Northern Map Turtle, River Redhorse, Silver Lamprey:** Snapping Turtle, Northern Map Turtle, River Redhorse, and Silver Lamprey are all species of special concern that may be found in the Ottawa River. The habitat of species of special concern is not protected under the Ontario Endangered Species Act (ESA). However, measures must be taken to ensure individuals of species of special concern are not impacted by construction activities. Although all four species are generally found within the Ottawa River, the only portion of the river which is adjacent to the Phase 1 & 2 development area is the Buchanan Channel. As noted above, the Buchanan Channel is a highly degraded area that provides little aquatic habitat. As described below, there are no in-water works proposed as part of the Zibi Phase 1 & 2 development. The existing retaining wall provides a vertical barrier which would prevent Northern Map Turtle and Snapping Turtle from leaving the Buchanan Channel to enter the construction Site. Therefore, Snapping Turtle, Northern Map Turtle, River Redhorse, and Silver Lamprey are not anticipated to be a significant concern for the Phase 1 & 2 development.

In summary, no significant SAR concerns have been noted for the Zibi Phase 1 & 2 development. The ongoing demolition of the former paper mill complex, and future construction activity within the Site, is likely to dissuade wildlife and SAR from colonizing the Phase 1 & 2 development area in the future. Due to the ongoing noise and activity within the Site, it is unlikely that any new SAR concerns will be identified within the Phase 1 & 2 area in future. There are currently no regulatory/permit requirements under the Ontario Endangered Species Act (ESA) identified for the development of Zibi Phase 1 & 2.

3.8 Linkages

As discussed previously, the Site is surrounded by developed areas. The Site does not occur between any two (2) adjacent natural heritage features, and therefore the Site does not provide a wildlife movement corridor or linkage function.

4.0 DESCRIPTION OF ENVIRONMENTAL IMPACTS AND MITIGATION

The mitigation measures outlined below are specific to Zibi Phase 1 & 2 and the natural heritage features, vegetative communities, and wildlife concerns that occur within that portion of the Zibi MPA area. Mitigation measures for future phases of the Zibi project should be identified as part of the future phase-specific EIS and TCR reports.

4.1 Terrestrial Habitat and Tree Removal (TCR)

As noted above, there are no natural vegetative habitats within the Site. NEA (2016) noted the presence of four (4) planted Norway Maples along the north side of the former paper mill complex (Trees #38, #39, #40, and #41). NEA (2016) noted that the trees could not be transplanted, due to the fact that they were growing in contaminated soil, and hence required disposal. The four (4) trees were removed during the early stages of the demolition project. At the current time, there are no trees found growing within the Phase 1 & 2 development area. Therefore, no additional tree or vegetation removal is required.

There are also no trees present immediately adjacent to the Phase 1 & 2 development area, and therefore mitigation measures to protect retained trees on adjacent properties are not required.

4.1.1 Replanting (TCR)

The Site Plan shows conceptual landscaping features that are to be included during Site development. The planting locations and specific planting requirements should be confirmed by a detailed Landscaping Plan. Where feasible, plantings should emphasize the use of native trees and shrubs. Planting of Ash trees should be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer.

4.2 In-Water Work

Repairs to the retaining wall along the southern edge of the Site were completed in 2015, and no additional repair work is currently proposed. Two (2) water intake openings are present within the retaining wall along the southern edge of the Site. The water intake openings will be sealed as part of the current development. This will be completed by employing scuba divers to affix a steel plate to block the intakes. Once the intakes are blocked, the pipes will be filled with concrete from within the basement of the existing building. This arrangement will allow the water intake pipes to be decommissioned, while avoiding any need for in-water work. As such, there are no in-water work requirements for the Zibi Phase 1 & 2 development. Fish relocation and dewatering are not anticipated to be required.

However, if plans change and in-water work is ultimately required, additional mitigation measures and/or regulatory requirements may apply. The mitigation and monitoring requirements for in-water work should be re-evaluated by a qualified professional, should any in-water work be required in the future.

4.3 Servicing and Stormwater Management

The Site will receive municipal water and sewer services. DSEL (2017) note that the majority of stormwater runoff from the Site is currently directed to the Ottawa River, with no existing stormwater management quality or quantity control. DSEL (2017) have consulted with the RVCA and the City of Ottawa, and have determined that stormwater quantity controls are not required. DSEL (2017) note that development of the Site is not anticipated to increase the flood risk and flood levels of the Ottawa River. Stormwater management controls are required to achieve an 'enhanced' level of quality control. The stormwater management system will consist of a private storm sewer, outletting to the north edge of Chaudière Island, east of Booth Street. An end of pipe oil/grit separator unit will be included to achieve water quality targets. DSEL (2017) note that roof runoff is considered clean, and therefore the building roofs will have roof leaders discharge directly to the Ottawa River.

4.4 Sediment and Erosion Controls

Detailed sediment and erosion control requirements have been identified by DSEL. Refer to Section 6.0 of DSEL (2017) for mitigation measures related to sediment and erosion.

4.5 Adjacent Lands and Significant Features

As discussed previously, the only significant natural heritage feature found in association with the Site is the Buchanan Channel. As noted above, no in-water works and/or fish habitat removal is proposed as part of Zibi Phase 1 & 2. The servicing, stormwater management, and sediment and erosion control measures described by DSEL (2017) will protect the water quality of the Buchanan Channel and by extension the Ottawa River.



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5.0 WILDLIFE MITIGATION AND MONITORING PLAN (WMMP)

A Wildlife Mitigation and Monitoring Plan (WMMP) was previously prepared as part of the Zibi MPA (NEA 2017a). Updated wildlife mitigation and monitoring requirements are summarized below. It should be noted that the mitigation and monitoring measures presented by NEA (2017a) were intended for the entire Zibi MPA area, whereas those included below are intended to be specific to Zibi Phase 1 and 2. NEA (2017a) included mitigation and monitoring measures related to vegetation removal and dewatering, however, it is significant to note that Zibi Phase 1 & 2 will not require vegetation removal or dewatering. As such, mitigation and monitoring requirements for vegetation removal and dewatering have not been included below. As discussed above, no evidence of SAR or other significant wildlife habitat features have been noted within the Zibi Phase 1 & 2 area. The mitigation and monitoring requirements for Zibi Phase 1 & 2 are hence abbreviated compared to those presented in NEA (2017a).

As discussed above, the most significant natural feature located in the vicinity of the Site is the Buchanan Channel. Although no in-water works are required as part of Zibi Phase 1 & 2, the Buchanan Channel could be impacted by run-off, sedimentation, or by deleterious substances. As noted above, mitigation requirements related to sediment and erosion control are specified in Section 6.0 of DSEL (2017). The mitigation and monitoring measures for Zibi Phase 1 and 2 include provisions from the City of Ottawa (2015) *Protocol for Wildlife Protection During Construction* and the recommendations included in NEA (2017a). Wildlife mitigation and monitoring requirements include the following:

- **Wildlife Deterrence:** It should be noted that at the time of report preparation, demolition of portions of the former paper mill complex within the Zibi Phase 1 & 2 development area was already underway. Demolition activities generate significant noise and disturbance, which is likely to dissuade most wildlife from entering the work area. As noted above, no evidence of wildlife occurring with the Phase 1 & 2 area was noted during the most recent Site visits. Given that there are no natural vegetated areas surrounding the Zibi Phase 1 & 2 Site, and given the high level of ongoing disturbance from demolition activities, it is relatively unlikely that wildlife will be attracted to enter the Site. As discussed above, the only significant natural heritage feature found in the vicinity of the Site is the Buchanan Channel, however, the existing retaining wall found along the south side of Zibi Phase 1 creates a vertical barrier that would prevent almost all aquatic animals (e.g. frogs, fish, turtles) from leaving the Buchanan Channel to enter the Site. The existence of a retaining wall largely mitigates the risk of aquatic wildlife entering the Site.

- **Sweeps:** Construction staff will be required to review the mitigation measures included in this EIS. A designated staff member will be required to conduct daily sweeps each morning prior to commencement of work to ensure wildlife have not entered the work area. The risk of birds and urban dwelling mammals (e.g. raccoons, squirrels, skunks, etc.) entering the Site is likely to be greatest during periods when demolition activity has been put on hold (e.g. following long weekends or statutory holidays). Construction staff should be extra vigilant while conducting sweeps after periods when the Site was idle.
- **Wildlife Encounters:** If wildlife are noted within the work area, construction staff must allow the animal to leave the area, prior to the commencement of demolition/construction activities. Where required, construction staff may need to open doors, and/or remove other barriers to allow wildlife to leave the area. If the animal will not leave the area on its own, the contractor must contact a qualified professional to complete wildlife relocation. Under no circumstances should a building segment be demolished while wildlife are trapped inside.
- **Equipment Maintenance/Refueling:** All equipment refueling and maintenance should be undertaken within a designated staging area. All equipment storage, maintenance, refueling, degreasing, and other activities must occur away from the water's edge and in a manner that prevents the release of deleterious substances to the Ottawa River.
- **General Provisions:** General provisions for Site management include the following:
 - Do not harm, feed, or unnecessarily harass wildlife;
 - Drive slowly and avoid hitting wildlife;
 - Keep the Site tidy and free of garbage and food wastes. Secure all garbage in appropriate sealed containers;
 - Ensure proper Site drainage so that standing water does not accumulate on Site. This will reduce the likelihood that wildlife may enter the Site; and
 - Any stockpiles should be properly secured with silt fencing to prevent wildlife from accessing areas of loose fill.
- **SAR Encounters:** If SAR are encountered in the work area, construction in the vicinity must be stopped immediately and measures must be taken to ensure the SAR is not harmed. The project biologist and the OMNRF must be contacted to discuss how to proceed prior to recommencement of work.
- **Timing Windows:** No additional vegetative clearing is anticipated to be required as part of the Phase 1 & 2 development. However, should vegetation clearing be required in the future, all tree removal must be undertaken outside of the core migratory bird breeding season of April 15th to August 15th each year in order to avoid impacting the nests of migratory birds.

6.0 CUMULATIVE EFFECTS

Cumulative effects were considered in the design of the mitigation measures outlined in Section 4.0 and 5.0. As noted above, the Site has been entirely developed and utilized for industrial purposes (a paper mill) since at least 1928. The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. By redeveloping abandoned industrial lands, the Zibi project will provide new residential, commercial, and retail space without removing any significant areas of natural habitat. Thereby, the project will not contribute to the cumulative loss of wetlands or forest habitat.

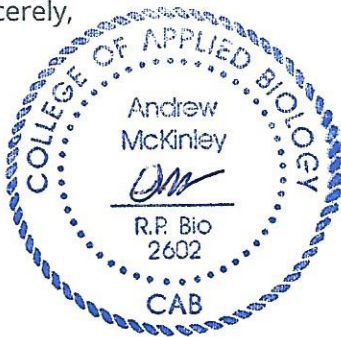
7.0 MONITORING

As noted above in Section 5.0, monitoring by construction/demolition staff will continue throughout the development of Phase 1 & 2. The ongoing demolition of the former paper mill complex, and future construction activity within the Site, is likely to dissuade wildlife and SAR from colonizing the Phase 1 & 2 development area in the future. Due to the ongoing noise and activity within the Site, it is unlikely that any new SAR concerns will be identified within the Phase 1 & 2 area in future. Therefore, no additional SAR related monitoring requirements are recommended for the Phase 1 & 2 development. Pre-demolition surveys should be completed for subsequent phases of the Zibi project, prior to the commencement of demolition.

8.0 CLOSURE

We trust that the above information is sufficient; should you have any questions or require further information, please do not hesitate to contact the undersigned, at your convenience.

Sincerely,



Dr. Andrew McKinley, EP, RP Bio.
Senior Biologist, McKinley Environmental Solutions

9.0 REFERENCES

City of Ottawa (2015) Protocol for Wildlife Protection During Construction.

City of Ottawa (2017) Geo-Ottawa Municipal Mapping Site. Retrieved November 1st, 2017 at
<<http://maps.ottawa.ca/geoottawa/>>

David Schaeffer Engineering Ltd. (DSEL) (2017) Functional Servicing and Stormwater Management Report for Windmill Development Group Ltd. Domtar Lands Redevelopment – Phase 1.

Niblett Environmental Associates (NEA) (2016) Environmental Impact Study and Tree Conservation Report. Windmill Development Group – Domtar Lands – Ottawa, Ontario.

Niblett Environmental Associates (NEA) (2017a) Windmill Development Group – Domtar Lands – Ottawa, Ontario. Wildlife Mitigation and Monitoring Plan.

Niblett Environmental Associates (NEA) (2017b) Windmill Development Group – Domtar Lands – Ottawa, Ontario. Integrated Environmental Review Statement.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2005) OMNRF Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2014) Significant Wildlife Habitat Mitigation Support Tool.

Paterson Group (2016) Geotechnical Investigation – Proposed Mixed Use Development – Phase 1 – Chaudière and Albert Islands.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2017) Natural Heritage Information Center <<http://nhic.mnr.gov.on.ca/>> (Accessed November 1st, 2017).

Species at Risk Ontario (SARO) (2017) Species at Risk Ontario. Retrieved November 1st, 2017 at
<<http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>>

APPENDIX A

OMNRF Information Request Response



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Fri. Nov 17, 2017

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Attention: Andrew McKinley

Subject: Information Request - Developments
Project Name: Zibi Project Phase 1 EIS
Site Address: 4 Booth Street, Ottawa, Ontario, K1R 6K8
Our File No. 2017_NEP-4297

Natural Heritage Values

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

The following Natural Heritage values were identified for the general subject area:

- ANSI, Earth Science, VICTORIA ISLAND (Provincial)
- Lake, Lac Deschênes (Non-Sensitive)
- River (Non-Sensitive)
- Spawning Area, Walleye Spawning Area (Low)

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge regarding agency requirements, authorizations and approval timelines; Ministry of the Environment

and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

In Addition, the following Fish species were identified: alewife, American brook lamprey, American eel, American shad, banded killifish, black bullhead, black crappie, blackchin shiner, blacknose shiner, bluegill, bluntnose minnow, brassy minnow, brook silverside, brook stickleback, brown bullhead, brown trout, burbot, Carps and Minnows, Catostomus sp., central mudminnow, channel catfish, channel darter, cisco, common carp, common shiner, creek chub, cutlip minnow, eastern blacknose dace, eastern silvery minnow, emerald shiner, Etheostoma sp., fallfish, fantail darter, fathead minnow, finescale dace, freshwater drum, golden shiner, greater redhorse, Iowa darter, johnny darter, lake sturgeon, largemouth bass, logperch, longear sunfish, longnose dace, longnose gar, longnose sucker, margined madtom, Micropterus sp., mimic shiner, mooneye, mottled sculpin, Moxostoma sp., muskellunge, ninespine stickleback, North American Catfishes, northern brook lamprey, northern pike, northern redbelly dace, pearl dace, pumpkinseed, quillback, rainbow smelt, river redhorse, rock bass, rosyface shiner, sand shiner, sauger, shorthead redhorse, silver lamprey, silver redhorse, slimy sculpin, smallmouth bass, spotfin shiner, spottail shiner, stonecat, tadpole madtom, tessellated darter, trout-perch, walleye, white crappie, white sucker, yellow bullhead, yellow perch.

Significant Wildlife Habitat

Section 2.1.5 d) of the PPS states: *Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* It is the responsibility of the approval authority to identify significant wildlife habitat or require its identification. The MNRF has several guiding documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

Water

If any in-water works are to occur, there are timing windows for which work in water should not take place (see below). Appropriate measures should be taken to minimize and mitigate impact on water quality and fish habitat, including:

- installation of sediment and erosion control measures;
- avoiding the removal, alteration, or covering of substrates used for fish spawning, feeding, over-wintering or nursery areas; and
- debris control measures to manage falling debris (e.g. spalling).

Timing windows (no in-water works) in MNRF Kemptville District*:

Warmwater and cool water	→ March 15 – June 30
St. Lawrence River & Ottawa River	→ March 15 – July 15
Coldwater	→ October 1 – May 31
Big Rideau Lake & Charleston Lake	→ October 1 – June 30

* Please note: Additional timing restrictions may apply as they relate to endangered and threatened species for works in both water and wetland areas.

Timing windows when in-water work is restricted – based on species presence:

	FISH SPECIES	TIMING WINDOW (No in-water works)
Spring:	Walleye	March 15 to May 31
	Northern Pike	March 15 to May 31
	Lake Sturgeon	May 1 to June 30
	Muskellunge	March 15 to May 31
	Largemouth/Smallmouth Bass	May 1 to July 15
	Rainbow Trout	March 15 to June 15
	Other /Unknown Spring Spawning Species	March 15 to July 15

	FISH SPECIES	TIMING WINDOW (No in-water works)
Fall:	Lake Trout	October 1 to May 31
	Brook Trout	October 1 to May 31
	Pacific Salmon	September 15 to May 31
	Lake Whitefish	October 15 to May 31
	Lake Herring	October 15 to May 31
	Other /Unknown Fall Spawning Species	October 1 to May 31

Additional approvals and permits may be required under the Fisheries Act. Please contact Fisheries and Oceans Canada to determine requirements and next steps. There may also be approvals required by the local Conservation Authority or Transport Canada. As the MNRF is responsible for the management of provincial fish populations, we request ongoing involvement in such discussions in order to ensure population conservation.

Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- American Eel (END)
- Chimney Swift (THR)
- Eastern Small-footed Myotis (END)
- Lake Sturgeon (THR)
- Northern Long-eared Bat (END)
- Tri-Colored Bat (END)
- Little Brown Bat (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under the ESA. For more on how species at risk and their habitat is protected, please see: <https://www.ontario.ca/page/how-species-risk-are-protected>.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at sar.kemptville@ontario.ca.

The Information Gathering Form may be found here:

<http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&ENV=WWE&NO=018-0180E>

For more information on the ESA authorization process, please see:

<https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization>

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Peregrine Falcon (SC)
- Snapping Turtle (SC)
- Northern Map Turtle (SC)
- River Redhorse (SC)
- Silver Lamprey (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: <https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization>.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or
- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Sat. Nov 17, 2018

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Jane Devlin
Management Biologist
jane.devlin@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet