Marysville Flats Property
PID 75457440

BASELINE DOCUMENTATION REPORT

Dated as of December 8, 2021

Conservation Easement Granted by

The City of Fredericton

to

Nashwaak Watershed Association Inc.

Prepared By:

GLOBAL
CONSERVATION SOLUTIONS

REFERENCE STATEMENT

This Baseline Documentation Report is the "Report" referred to in the Conservation Easement Agreement between the **City of Fredericton** and the **Nashwaak Watershed Association Inc.**, ("NWAI"). Capitalized words and phrases that are defined in the Conservation Easement Agreement and are also used in this Report have the same meaning in each document.

PURPOSE AND INTENT STATEMENT

The parties covenant and agree that the general purposes of this Agreement are:

(a) To protect, enhance and restore the natural ecosystems and wildlife habitat of the Property for the conservation of biodiversity and ecosystem services;

(b) To retain significant botanical, zoological, geological, morphological, historical, archaeological or palaeontological features of the Property;

(c) To conserve soil, air and water quality.

It is the intention of the parties that this Agreement will ensure the conservation, maintenance, restoration and enhancement of Floodplain Forest, Backwater Swales and Riverbank, each with natural structure and composition, and that this Agreement will prevent any use of the Property that will damage or destroy those natural features, alter natural processes, or prevent their restoration or enhancement.

There is public interest and benefit in the conservation, maintenance, restoration and enhancement of the natural values and features of the Property and the biodiversity thereon.

This Agreement is to be construed, interpreted, performed and applied so as to give effect to the purposes of this Agreement and to enforce the Restrictions and Easement.

BASELINE DOCUMENTATION REPORT (THE "REPORT")

The natural values, features, current uses and condition of the Property described and documented in this Report forms Appendix A of the Conservation Easement Agreement. In the event of inconsistencies between that summary and this Report, this Report shall prevail. For the purposes of this document, "current" uses and conditions are those at the date of signing of this Baseline Documentation Report and the Conservation Easement Agreement.

1.0 ACKNOWLEDGEMENT

The Grantor hereby acknowledges and agrees that the following is an accurate description of the Property, as of the reference date of this Baseline Documentation Report for the Conservation Easement Agreement.

2.0 CONDITIONS AND METHODOLOGY AT THE TIME OF DATA COLLECTION FOR THE REPORT

2.1 Field Surveyor and Report Writer

Name	Josh Noseworthy
Title	Founder & Chief Strategist
Affiliation	Global Conservation Solutions
Expertise	MScF, MPhil, RPF, CWB
Role	Field Surveyor, Report Writer and Map Author

2.2 Dates and Weather Conditions

Date	May 6, 2020
Time Period	1100 – 1330
Temperature (Average)	11°C
Weather (Average)	Sunny with cloudy periods
Other remarks	Approximately 30% of the property was inaccessible due to flooding at the time of the survey.

Date	May 21, 2020
Time Period	1000 – 1130
Temperature (Average)	16°C
Weather (Average)	Sunny
Other remarks	Water levels had dropped signficantly since the May 6th survey.

2.3 Equipment

GPS Unit:	Garmin GPSMap 60Cx
Camera:	iPhone SE
Other:	Belted Tape Measure
Datum:	D_North_American_1983_CSRS
Imagery:	ESRI World Imagery

2.4 Methodology

Vegetation communities and Improvements were digitized using a combination of manual interpretation of ESRI World Imagery, as well as field verification using a GPS unit. Digitization and spatial referencing of features was completed using ArcMap (v10.3.1) software produced by Environmental Systems Research Institute (ESRI). GPS data was imported into formats usable by ArcMap using DNR Garmin (v6.0.1.6) software produced by the Minnesota Department of Natural Resources. All data was digitized and collected using the NAD83 (North American Datum CSRS, 1983) datum and the New Brunswick Stereographic projection. Further methodologies used to document the Restrictions are detailed in Section 6.

3.0 SIGNIFICANCE OF THE PROPERTY AND CONSERVATION TARGETS

The Marysville Flats is an 11.7 hectare Property situated on a floodplain of the Nashwaak River. Due to the constant shifting of the river, the exact area of land within the cadastral boundary changes over time. Based on the most recent ESRI World Imagery, which depicts the Property during the seasonal low-water level, it is currently composed of 2.7 hectares of open water, and 9.0 hectares of anthropogenic grassland resulting from historic land clearing for agriculture. The anthropogenic grassland is in various stages of revegetation as a result of both natural succession and active ecological restoration (Figure 1).

The NWAI is actively working to conserve and restore Floodplain Forest and Backwater Swales on the abandoned agricultural land, as well as the eroding Riverbank using bioengineered techniques. The Property is highly vulnerable to erosion from annual ice scouring and flooding, which has resulted in a significant loss of land since the original floodplain forest was cleared, as well as sedimentation of the Nashwaak River. Conserving and restoring the Floodplain Forest, Backwater Swales and Riverbank will decrease the rate of erosion, facilitate carbon sequestration, and provide important habitat for a diversity of plant and animal species. For these reasons, the NWAI has committed to restoring these three conservation targets on the Property for the benefit of wildlife and local communities within the watershed.

3.1 Existing Land Uses on the Property

At the time of signing the Baseline Documentation Report, existing land uses include, (1) Ecological Restoration of the Floodplain Forest and Backwater Swales, (2) Ecological Restoration of the eroding Riverbank using bioengineering stabilization techniques**,** (3) non-motorized recreational activities, such as walking, dog-walking, fishing, and swimming.

4.0 DOMINANT VEGETATION COMMUNITIES

4.1 Dominant Vegetation Communities on the Property.

Dominant Vegetation Community	Associated Conservation Target	Area (Hectares)
Anthropogenic Grassland	Floodplain Forest / Backwater Swales / Riverbank	9.0
Open Water	Riverbank	2.7

Figure 1. Dominant Vegetation Communities on the Marysville Flats Property.

5.0 PROPERTY DESCRIPTION

5.1 Description of the Land Subject to Easement

The Conservation Easement of the Marysville Flats will be registered on the title to PID 75457440.

Insert registration particulars upon registration:

- Instrument Number: _____
- Date of Registration: _____

5.2 Description of the Property

The Property Boundary was delineated in ArcGIS 10.3.1 using the Service New Brunswick cadastre layer (dated 2020-03-02). The GIS-derived boundary and boundary corner points are represented in Figures 2 and 3.

Map Label	Coordinates		Accuracy
	Latitude	Longitude	
C01	45.975019	-66.590577	GIS Derived
C02	45.974897	-66.589714	GIS Derived
C03	45.973156	-66.58839	GIS Derived
C04	45.973012	-66.588606	GIS Derived
C05	45.97284	-66.588357	GIS Derived
C06	45.972937	-66.588227	GIS Derived
C07	45.97021	-66.586228	GIS Derived
C08	45.970195	-66.586276	GIS Derived
C09	45.966231	-66.585454	GIS Derived
C10	45.966236	-66.585761	GIS Derived
C11	45.966096	-66.585832	GIS Derived
C12	45.966091	-66.585624	GIS Derived
C13	45.964833	-66.587514	GIS Derived
C14	45.964893	-66.587581	GIS Derived

5.3 Property Location and Access

The Property is located in Fredericton, New Brunswick within the suburban neighbourhood of Marysville. Primary access to the property is approximately 100m south of the Marysville Heritage Centre parking lot, located at 11 McGloin Street (E3A-5T8). The Property is also accessible via the Gibson Trail that runs along the entire eastern boundary. The primary access trail (see Figure 4) connects to the Gibson Trail.

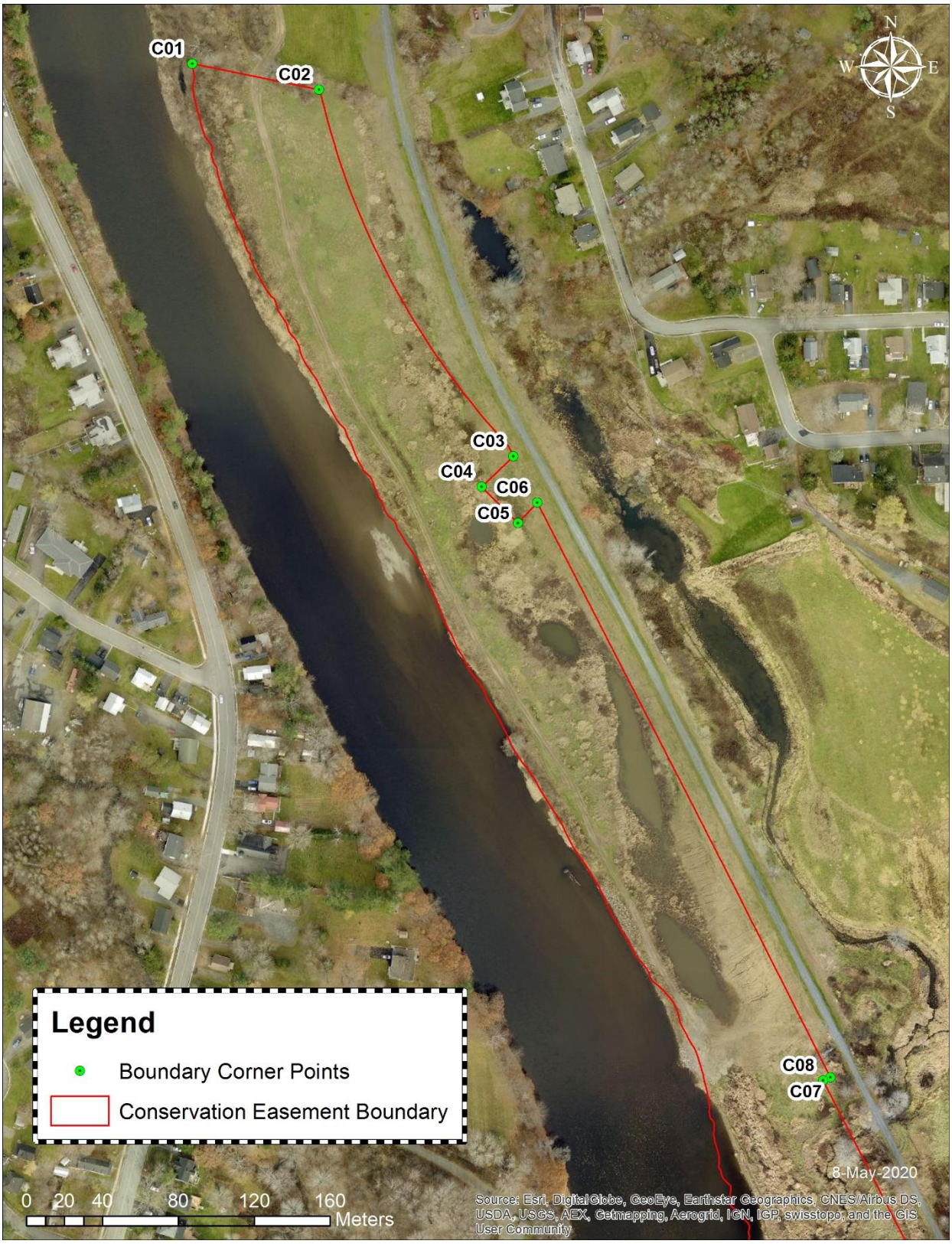

Figure 2. GIS-derived boundary and corner points for the Marysville Flats Property (N).

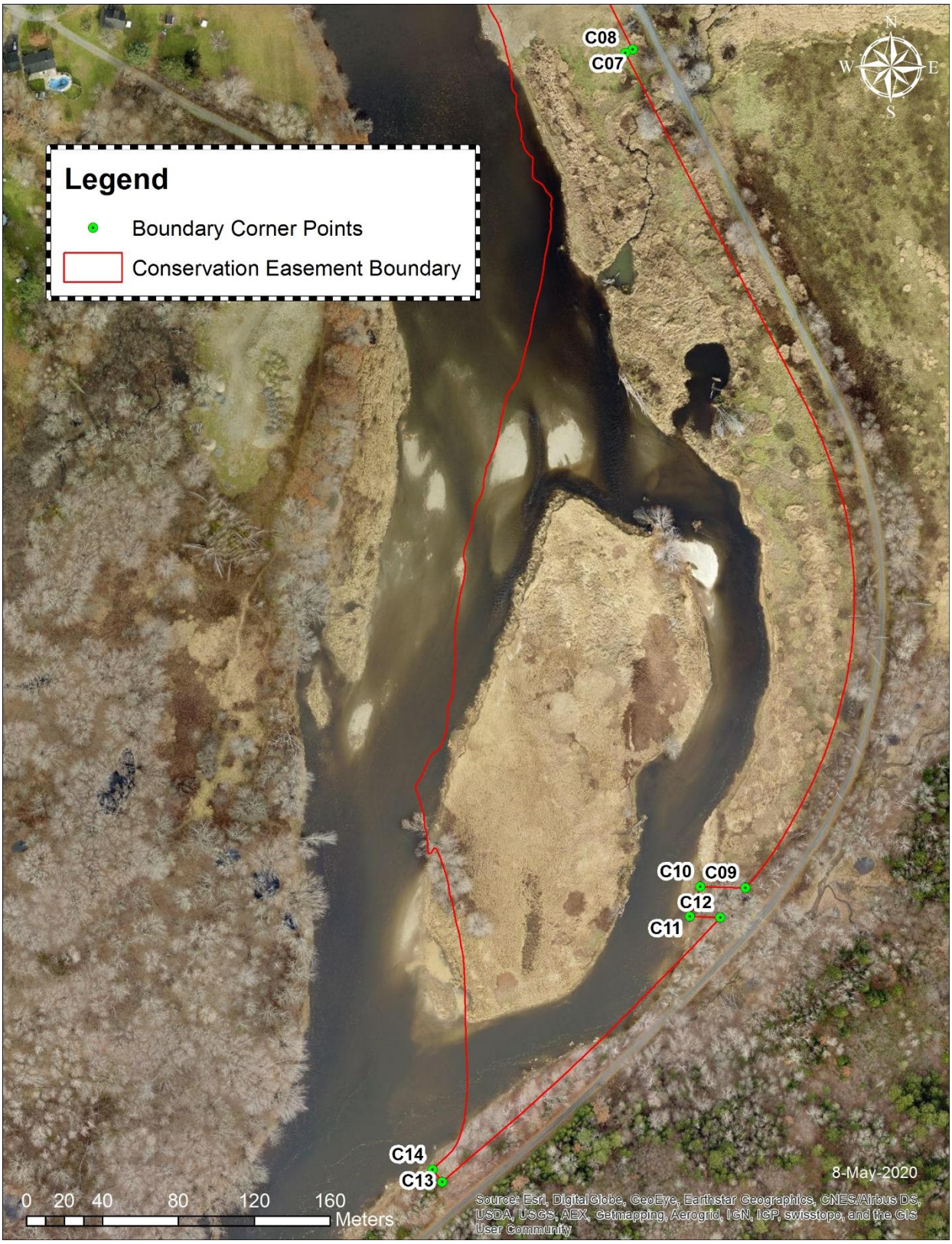

Figure 3. GIS-derived boundary and corner points for the Marysville Flats Property (S).

5.4 List of Property Improvements

The mapped Property Improvements are represented in Figure 4.

Measurement and Conditions							
Type	Function	Description	Size	Height	Principle Material	Condition Rating[2]	Spatial Coordinates
Property Improvement[1]							
Property Access Trail	Primary access trail to the property	Old farm access road now used as a walking trail and access for machinery used for Ecological Restoration purposes.	Width = 2.5m Length = 618m	N/A	Dirt track	Fair to Good	See Figure 4
Rock Armouring	Rock deposited on riverbank to stop erosion	Large boulders deposited during municipal storm water drainage construction	Approximately 45m of Riverbank	N/A	Rock	N/A	Lat: 45.970979 Lon: -66.587651
NWAI Bank Stabilization Project	Bioengineered bank stabilization	Bank re-sloping, installing geotextile, and planting riparian vegetation to halt erosion	Approximately 30m of Riverbank	N/A	Geotextile fabric	Good	Lat: 45.972831 Lon: -66.589066
Storm Drain*	Sanitary line providing municipal services	Line runs from McGloin Street, down through the subject property, and to a Lift Stration on the other side of Nashwaak River at Dodona Place (note: sanitary line and 10 m on either side excepted from Conservation Easement to allow for future required maintenance, removal, etc.)	Diameter = 375 mm	51cm	Steel and concrete	Good	Lat: 45.970338 Lon: -66.587118

[1] Improvement is defined as any human made, non-portable structure or object.

[2] Condition Rating: Excellent – new condition; Good – some wear but functioning as intended with no structural or cosmetic faults; Poor – barely functions as intended, structural and cosmetic faults; Dilapidated – no longer usable for the intended purpose.

[3] Refer to Appendix A for Property Improvement photos.

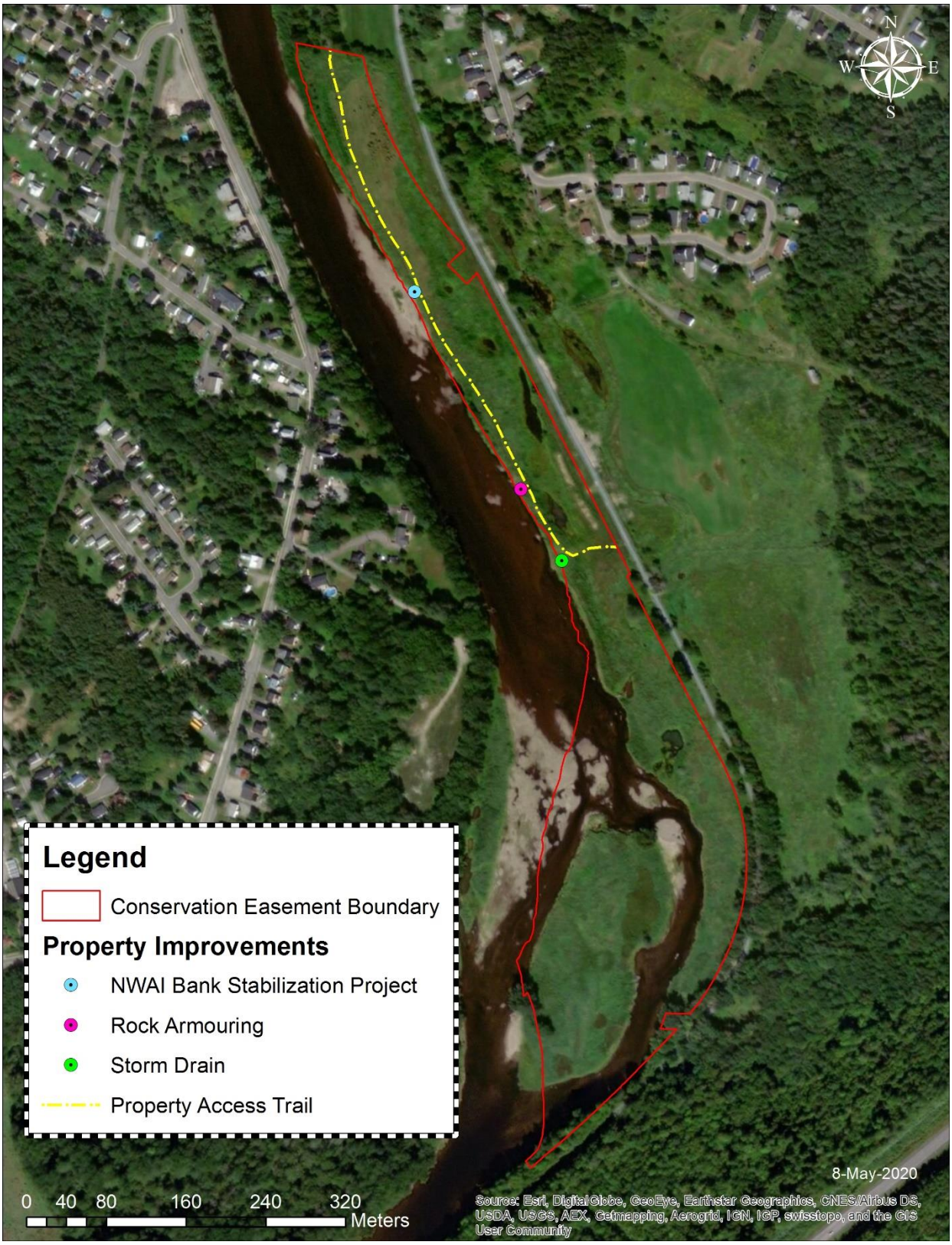

Figure 4. Improvements on the Marysville Flats Property

6.0 RESTRICTIONS

Restriction	Data Collection Method	Findings	Documentation
The construction or placement of Permanent and/or Non-Permanent Structures, including without limitation, sheds, mobile homes, docks, or fences.	A general walk-through of the Property was conducted in order to verify (ground-truth) features visible on satellite imagery. Permanent and non-permanent structures were geo-referenced, measured, and mapped.	A storm drain was installed by the City of Fredericton in 2015. No other structures were observed on the Property.	Refer to Section 5.5 for location of the storm drain; Refer to Appendix A for photo references.
The development or improvement of roads, parking areas, and/or trails other than for the ongoing maintenance of the existing Property Access Trail.	A general walk-through of the Property was conducted using satellite imagery as a guide. Evidence of roads and trails were geo-referenced, mapped and photographed.	There is a trail (referred to as the Property Access Trail) that begins at the northern boundary of the Property and runs southeast for approximately 572m before turning east for 46m to connect with the Gibson Trail. No additional roads, parking areas, and/or trails were observed on the Property.	Refer to Section 5.5 for location of the Property Access Trail; Refer to Appendix A for photo references.
The Intentional Introduction of Non-native Species of plants or animals, including without limitation the permanent or temporary release of livestock.	A general walk-through of the Property was conducted using satellite imagery as a guide. Intentional introductions of non-native species were geo-referenced, measured, and mapped.	No Intentional Introduction of Non-native Species was observed on the Property.	N/A
The dumping or disposing of soil, rubbish, ashes, garbage, waste or other unsightly or offensive materials of any type or description.	A general walk-through of the Property was conducted using satellite imagery as a guide. Evidence of dumping and disposal	No dumping or disposal of materials was observed on the Property. However, occasional litter from pedestrians, as well as flotsam deposited by floodwaters was	N/A

Restriction	Data Collection Method	Findings	Documentation
	were photographed, mapped and geo-referenced.	observed scattered throughout the Property.	
Use or application of pesticides, insecticides, herbicides, chemicals or other toxic materials of any type or description other than for purposes of Ecological Restoration.	A general walk-through of the Property was conducted. Evidence of pesticide application or other toxic materials was photographed, mapped and geo-referenced.	No application of pesticides, insecticides, herbicides, chemicals or other toxic materials was observed on the Property.	N/A
Excavation, extraction, removal or exploration for loam, clay, sand, gravel, marl or other minerals or substances.	A general walk-through of the Property was conducted using satellite imagery as a guide. Evidence of excavation, extraction, removal or exploration was photographed, mapped and geo-referenced.	No evidence of excavation, extraction, removal or exploration for loam, clay, sand, gravel, marl or other mineral or substances was observed on the Property.	N/A
The use or operation of motorized vehicles including snowmobiles and all-terrain vehicles, other than for purposes of ecological restoration or for the sake of the City of Fredericton's maintenance of the property	A general walk-through of the Property was conducted. Evidence of motorized vehicles other than for purposes of Ecological Restoration was photographed, mapped and geo-referenced.	The NWAI maintains an active mowing schedule on the Property as part of the Ecological Restoration of the Floodplain Forest. No other evidence of motorized vehicles was observed on the Property.	N/A

7.0 ACKNOWLEDGMENT OF CONDITION

We, the undersigned accept and acknowledge that this Baseline Documentation Report, including the attached appendices, is an accurate description of the Property as of the reference date of the Conservation Easement.

As to the Nashwaak Watershed Association Inc.:

_____ _____

Marieka Chaplin Date
Executive Director

I acknowledge receipt of a copy of this Baseline Documentation Report.

As to the Grantor:

_____ _____ _____

Name Date Witness

_____ _____ _____

Name Date Witness

APPENDIX A
PHOTO REFERENCE POINTS

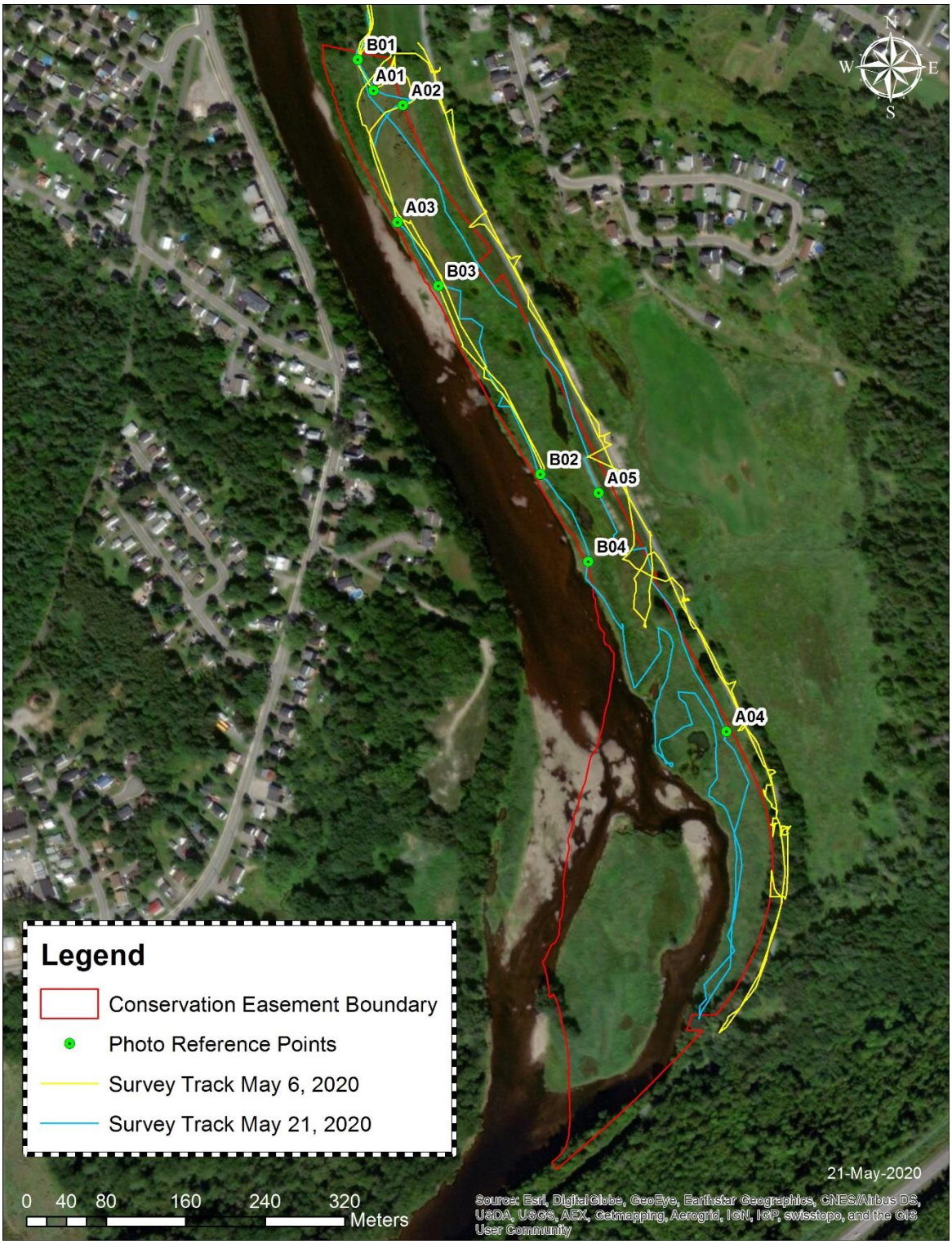

Figure 5. Photo Reference Points of the Marysville Flats Property.

Photo / Map Label	Description	Coordinates		Facing
		Lat	Lon	
A01	Anthropogenic Grassland (with planted Floodplain Forest)	45.974604	-66.589911	S
A02	Anthropogenic Grassland (Backwater Swale during flooding)	45.97447	-66.58953	S
A03	Anthropogenic Grassland transition to Open Water (Riverbank during flooding)	45.97341	-66.589602	S
A04	Anthropogenic Grassland (unplanted field and Backwater Swale)	45.968799	-66.585316	NE
A05	Alders colonizing old construction site	45.97096	-66.58698	S
B01	Property Access Trail	45.974884	-66.590118	S
B02	Rock Armouring	45.971129	-66.587738	S
B03	NWAI Bank Stabilization Project	45.972833	-66.589068	S
B04	Storm Drain	45.970338	-66.587118	S

A01a. Anthropogenic Grassland (planted Floodplain Forest). Taken on May 6, 2020 at 11:25am.

A01b. Anthropogenic Grassland (planted Floodplain Forest). Taken on May 21, 2020 at 10:36am.

A02a. Anthropogenic Grassland (Backwater Swale during flooding). Taken on May 6, 2020 at 11:30am.

A02b. Anthropogenic Grassland (Backwater Swale post-flooding). Taken on May 21, 2020 at 10:37am.

A03a. Anthropogenic Grassland transition to Open Water (**Riverbank** during flooding). Taken on May 6, 2020 at 11:34am.

A03b. Anthropogenic Grassland transition to Open Water (Riverbank post-flooding). Taken on May 21, 2020 at 10:39am.

A04. Anthropogenic Grassland (unplanted field and Backwater Swale). Taken on May 21, 2020 at 11:08am.

A05. Alders colonizing old construction site. Taken on May 21, 2020 at 11:13am.

B01. Primary Access Trail. Taken on May 6, 2020 at 11:20am.

B02a. Rock Armouring. Photo taken during flooding on May 6, 2020 at 11:39am.

B02b. Rock Armouring. Photo taken post-flooding on May 21, 2020 at 10:44am.

B03a. NWAI bank stabilization project. Photo taken during flooding on May 6, 2020 at 11:43am.

B03b. NWAI bank stabilization project. Photo taken post-flooding on May 21, 2020 at 10:40am.

B04a. Storm drain. Photo taken on May 21, 2020 at 10:46pm.

B04b. Storm drain. Photo taken on May 21, 2020 at 10:46pm.