AGENDA
REGULAR MEETING

February 25, 2019
4:30 p.m.

ST. JOHN'S

MEMORANDUM

February 22, 2019

In accordance with Section 42 of the City of St. John's Act, the Regular Meeting of the St. John's Municipal Council will be held on **Monday, February 25, 2019 at 4:30 p.m.**

By Order

Elaine Henley
City Clerk

ST. JOHN'S
CITY MANAGER
CITY OF ST. JOHN'S PO BOX 908 ST. JOHN'S NL CANADA A1C 5M2 WWW.STJOHNS.CA

AGENDA
REGULAR MEETING - CITY COUNCIL
February 25, 2019 – 4:30 p.m. – Council Chamber, 4th Floor, City Hall

1. CALL TO ORDER

2. PROCLAMATIONS/PRESENTATIONS

3. APPROVAL OF THE AGENDA

4. ADOPTION OF THE MINUTES

- Minutes of February 18, 2019

5. BUSINESS ARISING FROM THE MINUTES

a. Information Note dated February 15, 2019 re: Interpreting the Rural ® Zone Line along Paddy's Pond Floatplane Lots – DEV1800007

b. Decision Note dated February 21, 2019 re: Restoring Downtown Parking Relief to the St. John's Development Regulations, Section 9, St. John's Development Regulations Amendment Number 692, 2019

c. Decision Note dated February 4, 2019 re: Application to Amend St. John's Development Regulations to Designate and Protect Galway Wetlands

6. NOTICES PUBLISHED

a. A Discretionary Use application has been submitted requesting a change of Non-Conforming Use at **59 Flower Hill** to convert the existing Residential Retail Store into a Dwelling Unit.

b. A Discretionary Use application has been submitted requesting to operate a Car Washing Establishment in an existing building at **355-367 Main Road.**

c. A Discretionary Use application has been submitted by Clarke's Trucking & Excavation Ltd. requesting permission to use **4325 & 4327 Trans-Canada Highway** as a quarry for Mineral Workings Use.

7. PUBLIC HEARINGS/MEETINGS

8. COMMITTEE REPORTS

a. Committee of the Whole Report – February 20, 2019

b. Development Committee Report – February 19, 2019

9. RESOLUTIONS

10. DEVELOPMENT PERMITS LIST

- No Development Permits – Week ending February 20, 2019

11. BUILDING PERMITS LIST

- Building Permits List – February 14 to February 20, 2019

12. REQUISITIONS, PAYROLLS AND ACCOUNTS

- Payroll and Accounts – Week Ending February 20, 2019

13. TENDERS/RFPS

a. Bid Approval Note – 2019014 – PW – Lease of Excavator

b. Bid Approval Note – 2019015- PERS – Water Street Infrastructure Improvements – Phase II

c. Bid Approval Note – F&A - Aerial Imagery

14. NOTICES OF MOTION, RESOLUTIONS QUESTIONS AND PETITIONS

15. OTHER BUSINESS

16. ADJOURNMENT

MINUTES
REGULAR MEETING - CITY COUNCIL
February 18, 2019 – 4:30 p.m. – Foran/Greene Room, 4th Floor, City Hall

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Present Mayor Danny Breen
Deputy Mayor Sheilagh O'Leary
Councillor Maggie Burton
Councillor Sandy Hickman
Councillor Debbie Hanlon
Councillor Deanne Stapleton
Councillor Jamie Korab
Councillor Ian Froude
Councillor Wally Collins

Regrets Councillor Dave Lane
Councillor Hope Jamieson

Others Kevin Breen, City Manager
Lynnann Winsor, Deputy City Manager, Public Works
Jason Sinyard, Deputy City Manager, Planning, Engineering & Regulatory Services
Cheryl Mullett, City Solicitor
Ken O'Brien, Chief Municipal Planner
Elaine Henley, City Clerk
Karen Chafe, Supervisor – Office of the City Clerk

Land Acknowledgement

The following statement was read by Mayor Breen

"We respectfully acknowledge the Province of Newfoundland & Labrador, of which the City of St. John's is the capital City, as the ancestral homelands of the Beothuk. Today, these lands are home to a diverse population of indigenous and other peoples. We would also like to acknowledge with respect the diverse histories and cultures of the Mi'kmaq, Innu, Inuit, and Southern Inuit of this Province."

CALL TO ORDER/ADOPTION OF AGENDA

SJMC2019-02-18/89R
Moved – Councillor Korab; Seconded – Councillor Burton

That the agenda be adopted with the following addition:

- **Decision Note dated February 13, 2019 re: Request for Proposals 2018277 – Supply and Delivery of One Compact Wheel Loader Robin Hood Bay Material Recovery Facility.**

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

SJMC2019-02-18/90R
Moved – Councillor Froude; Seconded – Councillor Collins

That the minutes of February 11, 2019 be adopted as presented.

CARRIED UNANIMOUSLY

BUSINESS ARISING FROM THE MINUTES

a. Notice of Motion - Councillor Burton re: St. John's Development Regulations

SJMC2019-02-18/91R
Moved – Councillor Burton; Seconded – Councillor Hanlon

That the St. John's Development Regulations be amended to give Council discretion to waive parking requirements downtown to bring discretionary authority in line with the rest of the City of St. John's.

CARRIED UNANIMOUSLY

b. Notice of Motion - Councillor Burton re: Parking Minimums

SJMC2019-02-18/92R
Moved – Councillor Burton; Seconded – Councillor Hickman

That City staff study the City's current parking minimums and identify any opportunities to reduce or eliminate parking minimums in certain areas or for certain types of development; bringing forward a report of recommendations to Council in one year's time, no later than February 2020.

CARRIED UNANIMOUSLY

NOTICES PUBLISHED

a. A Discretionary Use application has been submitted requesting to occupy a portion of **26 Wadland Crescent** as a Home Occupation for an Art Studio.

SJMC2019-02-18/93R
Moved – Councillor Burton; Seconded – Deputy Mayor O'Leary

That Council approve the above noted application subject to all applicable City requirements.

CARRIED UNANIMOUSLY

b. A Discretionary use application has been submitted by The Geek Bar for a Lounge at **288 Duckworth Street**.

SJMC2019-02-18/94R
Moved – Councillor Burton; Seconded – Councillor Korab

That Council approve the above noted application subject to all applicable City requirements.

CARRIED UNANIMOUSLY

c. A Discretionary Use application has been submitted requesting permission to occupy the existing property of **260 Paddy's Pond Road** for two uses: A Heavy Equipment Storage Yard and a Vehicle Storage Yard.

SJMC2019-02-18/95R
Moved – Councillor Burton; Seconded – Councillor Collins

That Council approve the above noted application subject to all applicable City requirements.

CARRIED UNANIMOUSLY

COMMITTEE REPORTS

Committee of the Whole Report – February 6, 2019

1. Built Heritage Experts Panel Report – January 8, 2019

SJMC2019-02-18/96R
Moved – Councillor Burton; Seconded – Councillor Hanlon

That Council not designate 426 Water Street as a Designated Heritage Building.

CARRIED WITH COUNCILLOR BURTON DISSENTING

Development Committee Report – February 12, 2019

1. One Year Extension of Approval – Building Lot for Single Family Dwelling – DEV1600188 – 1000 Main Road

SJMC2019-02-18/97R
Moved – Councillor Burton; Seconded – Councillor Collins

That the Development Committee Report be approved as presented and that the one-year extension to the approval be granted, subject to expiry on March 7, 2020.

CARRIED UNANIMOUSLY

2. Crown Land Grant for a Residential Subdivision - CRW1900003 - 42 Maxwell Place

SJMC2019-02-18/98R
Moved – Councillor Burton; Seconded – Councillor Hickman

That Council approve the recommendation of the above cited report that the Crown Land Grant referral be rejected for the proposed Residential Subdivision, as Residential Use is not permitted in the Open Space (O) Zone as per section 10.33 of the St. John's Development Regulations.

Should the applicant wish to rezone the property, the City would require a separate rezoning application, with the permission of the property owner and Provincial Department of Fisheries and Land Resources. If the rezoning is successful, the City can then process a new Crown Land Grant referral from the Department of Fisheries and Land Resources.

CARRIED UNANIMOUSLY

3. Crown Land Grant for Extensions of Private Property CRW1900004 – 1162 Blackhead Road

SJMC2019-02-18/99R
Moved – Councillor Burton; Seconded – Councillor Collins

That the Crown Land Grant be approved.

CARRIED UNANIMOUSLY

DEVELOPMENT PERMITS LIST

Council considered, for information, the development permits list for the period January 31, 2019 to February 6, 2019.

BUILDING PERMITS LIST

Council considered the above noted for the period of January 31, 2019 to February 6, 2019.

SJMC2019-02-18/100R
Moved – Councillor Hanlon; Seconded – Councillor Stapleton

That Council approve the above cited building permits list as presented.

CARRIED UNANIMOUSLY

REQUISITIONS, PAYROLLS AND ACCOUNTS

Council considered the requisitions, payrolls and accounts for the week ending February 6, 2019.

SJMC2019-02-18/101R
Moved – Councillor Hanlon; Seconded – Councillor Stapleton

That the requisitions, payrolls and accounts for the week ending February 6, 2019 in the amount of $2,726,517.66 be approved as presented.

CARRIED UNANIMOUSLY

TENDERS

Decision Note dated February 13, 2019 re: Request for Proposals 2018277: Supply and Delivery of One Compact Wheel Loader, Robin Hood Bay Material Recovery Facility

SJMC2019-02-18/102R
Moved – Councillor Froude; Seconded – Councillor Collins

That the supply and delivery of a compact wheel loader be awarded to Harvey & Company Limited in the amount of $115,596.00 + HST.

Bid Approval Note 2019001: Supply of SCADA Hardware

SJMC2019-02-18/103R
Moved – Councillor Froude; Seconded – Deputy Mayor O'Leary

That the open call for the supply of SCADA hardware be awarded to IMP Solutions for $99,328.84 (HST Included), as the lowest bidder meeting specifications as per the Public Procurement Act.

CARRIED UNANIMOUSLY

Bid Approval Note – Supply and Install of Ultraviolet Light (UV) Reactor

SJMC2019-02-18/104R
Moved – Councillor Froude; Seconded - Councillor Stapleton

That the contract award without open call be awarded to Trojan Technologies in the amount of $240,100.00 (HST included). This is the only bidder able to supply product meeting specifications as per the Public Procurement Act.

CARRIED UNANIMOUSLY

ADJOURNMENT

There being no further business, the meeting adjourned at 5:31 p.m.

_____
MAYOR

_____
CITY CLERK

INFORMATION NOTE

Title:	Interpreting Zone Line along Paddy's Pond floatplane lots DEV1800007 308 to 392 Paddy's Pond Road
Date Prepared:	February 15, 2019
Report to:	His Worship the Mayor and Members of Council
Councillor and Role:	Councillor Maggie Burton, Planning lead
Ward:	5
Issue:	To Interpret the Rural (R) Zone Line

Discussion – Background and Current Status:

In 2005, Council approved amendments to redesignate and rezone land along the shore of Paddy's Pond near the Trans-Canada Highway to accommodate a new gravel road and a development of floatplane lots as proposed by the Province through its Crown Lands Division. We used maps provided by Crown Lands for the proposed road and lot layout. In the years since, the development proceeded, and people bought lots and developed them for floatplane hangars.

The amendments approved by Council were:

St. John's Municipal Plan Amendment No. 19, 2005 – Redesignate land from Forestry to Rural.

St. John's Development Regulations Amendment No. 340, 2005 – Rezone from Forestry (F) to Rural (R)

St. John's Development Regulations Amendment No. 366, 2005 – Development standards for floatplane lots

Recently, as a result of an inquiry by one of the property owners, we identified that the zone line does not run along Paddy's Pond Road as intended. When the road was extended, it was built further inland from the shoreline that the original intent. Thus, instead of the zone line between the Rural and Forestry zones running along the road, it runs through the middle of many of the lots.

We have approached the NL Department of Municipal Affairs and Environment about interpreting our zone lines to run along the middle of the road. This area is affected by the St. John's Urban Region Regional Plan, and the City's Municipal Plan and Development Regulations must conform to it. Staff at Municipal Affairs have agreed that we can interpret the zone line according to our rules of interpretation, to include all the floatplane lots on the water side of the road in the Rural (R) Zone.

Under the St. John's Development Regulations, Section 3.4 "Boundaries of Zones", where the boundary of a zone is uncertain and substantially follows lot lines, the lot lines shall be deemed to be the boundary of the zone. Also, where a zoning boundary runs substantially parallel to a street line, the boundary can be determined to run parallel to the street line. In this case, Crown Lands and the City intended the Rural (R) Zone to include all of the floatplane lots between 308 and 392 Paddy's Pond Road, which run from the road to the shoreline of the pond.

Therefore, in this case, I have interpreted the boundary between the Rural (R) Zone and the Forestry (F) Zone to run along Paddy's Pond Road. This change also applies to the Future Land Use Map of the St. John's Municipal Plan, where I have interpreted the boundary between the Rural District and the Forestry District to run along Paddy's Pond Road. The Province will interpret the Regional Plan map accordingly.

Key Considerations/Implications:

1. **Budget/Financial Implications**: Not applicable.

2. **Partners or Other Stakeholders:**
   Property owners and Crown Lands.

3. **Alignment with Strategic Directions/Adopted Plans:** Not applicable.

4. **Legal or Policy Implications:**
   This is in accordance with the rules of interpretation in St. John's Development Regulations, Section 3.4 "Boundaries of Zones".

5. **Engagement and Communications Considerations:** We will inform all affected parties.

6. **Human Resource Implications:** Not applicable.

7. **Procurement Implications:** Not applicable.

8. **Information Technology Implications:** Not applicable.

9. **Other Implications:** Not applicable.

Conclusion/Next Steps:
As per the rules of interpretation of Section 3.4 of the St. John's Development Regulations, I have interpreted the zone boundary between the Rural (R) and Forestry (F) Zones to run along Paddy's Pond Road, so that the floatplane lots between 308 and 392 Paddy's Pond Road are zoned Rural (R). In the same way, I have interpreted the Future Land Use Map so that the boundary between the Rural and Forestry Districts runs along the road.

This is provided for Council's information.

Prepared by/Date/Signature:
Ken O'Brien, MCIP, Chief Municipal Planner

Signature: _____

Approved by/Date/Signature:
Jason Sinyard, P.Eng., MBA – Deputy City Manager – Planning, Development and Engineering

Signature: _____

KO'B/dlm

Attachment: Map of the area


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PADDY'S POND PL
PADDY'S POND RD
F
Area to be interpreted so that the Rural (R) Zone boundary runs along Paddy'd Pond Road
DISCLAIMER: This map is based on current information at the date of production.
W:\Engwork\Planw\2018 projects\paddys pond road rezoning.mxd

DECISION/DIRECTION NOTE

Title:	Restoring Downtown Parking Relief to the St. John's Development Regulations, Section 9 St. John's Development Regulations Amendment Number 692, 2019
Date Prepared:	February 21, 2019
Report To:	His Worship the Mayor and Members of Council
Councillor & Role:	Councillor Maggie Burton, Planning and Development Lead
Ward:	2

Decision/Direction Required:
To consider restoring parking relief in the Downtown Parking Area.

Discussion – Background and Current Status:
Parking relief is the mechanism by which Council may reduce or waive the City's standards for off-street parking as set out in Section 9 of the St. John's Development Regulations. An applicant has to demonstrate that the City's standards are excessive for the development proposal at hand. At present, parking relief is not available for developments in the Downtown parking Area, as defined on Map D "Area Subject to the Downtown Parking Standard" (attached).

In 2009 Council accepted the Downtown Parking Study by IBI Group, which identified a significant parking shortfall downtown of approximately 700 parking spaces and set out recommendations for how to address the shortage. The impetus was a belief that lack of parking was constraining the focus of downtown for retail stores and office space. One recommendation was to eliminate parking relief downtown. Applicants who could not provide off-street parking on their site or nearby would be required to pay cash in lieu of parking, and the money would be placed in a fund to help pay for new parking spaces and to improve Metrobus public transit.

After a period of review, amendments were made to the St. John's Development Regulations in 2013 to eliminate downtown parking relief and to add new standards for land uses downtown. In the meantime, the City partnered with developers to provide public parking spaces in the new parking garages built at 351 Water Street and 330 Duckworth Street, significantly reducing the calculated shortfall in parking spaces.

More recently, there have been calls to re-establish the possibility of parking relief downtown. Applicants would still have to demonstrate why they should be allowed to reduce or eliminate the amount of parking provided in their development projects. In the draft Envision St. John's Municipal Plan and Development Regulations, staff have recommended that downtown parking relief be restored. As well, the applicant for expanding the Jag Hotel at 115 George Street West to add new hotel space as well as a concert hall has formally asked for parking relief. Each application can be dealt with on its merits.

At its regular meeting of February 18, 2019, Council voted to re-establish downtown parking relief and instructed staff to set the process in motion. This report would normally be sent to Council's Committee of the Whole for consideration, then go forward to Council – but since Council has already voted to proceed, this report is being brought directly to Council for next steps.

It is recommended that the attached amendment to restore downtown parking relief be publicly advertised as per Section 5.5 of the Development Regulations, as well as being referred to Downtown St. John's Inc. (formerly DDC) and any other groups which Council wishes to contact. After the advertising period, the amendment would be brought to Council for consideration of adoption, in accordance with the Urban and Rural Planning Act. Once adopted, it would be sent for registration and gazetting and then come into legal effect.

Key Considerations/Implications:

1. Budget/Financial Implications:
   This will have financial implications for developments in the downtown. Furthermore, it may impact any cash-in-lieu payments that the City would receive.

2. Partners or Other Stakeholders:
   Developers, downtown residents, businesses and property owners.

3. Alignment with Strategic Directions/Adopted Plans:
   Neighbourhoods Build our City – Maintain and position downtown as a distinct neighbourhood.

4. Legal or Policy Implications:
   A text amendment to the St. John's Development Regulations is required.

5. Engagement and Communications Considerations:
   Public advertisement of the proposed amendment.

6. Human Resource Implications: Not applicable.

7. Procurement Implications: Not applicable.

8. Information Technology Implications: Not applicable.

9. Other Implications: Not applicable.

Recommendation:
It is recommended that Council advertise the attached text amendment to the St. John's Development Regulations for public review and comment, including sending it to specific groups. The application would then be referred to a regular meeting of Council for consideration of adoption.

Prepared by/Signature:
Ken O'Brien, MCIP – Chief Municipal Planner

Signature: _____

Approved by/Date/Signature:
Jason Sinyard, P.Eng., MBA – Deputy City Manager, Planning, Engineering and Regulatory Services

Signature: _____

KOB/dlm

Attachments:
Map D "Area Subject to the Downtown Parking Standard"
Text amendment - St. John's Development Regulations Amendment Number 692, 2019

Area Subject To Downtown Parking Standards

Area Subject To Downtown Parking Standards

0 62.5 125 250 375 500 Meters

DATE: September 14, 2011

ST. JOHN'S
DEPARTMENT OF PLANNING

Map D

W:\Engwork\Planw\2010 projects\downtown parking areas_6.mxd

RESOLUTION
ST. JOHN'S DEVELOPMENT REGULATIONS
AMENDMENT NUMBER 692, 2019

WHEREAS the City of St. John's wishes to restore parking relief within the downtown parking area.

BE IT THEREFORE RESOLVED that the City of St. John's hereby adopts the following text amendment to the St. John's Development Regulations in accordance with the provisions of the Urban and Rural Planning Act:

1) **Repeal Section 9.1.2 Special Parking Requirements Subsection (1) Parking Relief and substitute the following:**

"1. Parking Relief
Council may relieve an applicant of all or part of the parking requirements set out under Section 9.1.1 and 9.1.2, provided that the applicant is able to show that because of the particular characteristics of the Development that the actual parking requirements within the foreseeable future are expected to be lower than those required by the City standard."

BE IT FURTHER RESOLVED that the City of St. John's requests the Minister of Municipal Affairs and Environment to register the proposed amendment in accordance with the requirements of the Urban and Rural Planning Act, 2000.

IN WITNESS THEREOF the Seal of the City of St. John's has been hereunto affixed and this Resolution has been signed by the Mayor and the City Clerk on behalf of Council this ___ day of _____, **2019**.

_____
Mayor

_____
MCIP
I hereby certify that this Amendment has been prepared in accordance with the Urban and Rural Planning Act, 2000.

_____
City Clerk

_____
Council Adoption

_____
Provincial Registration

DECISION/DIRECTION NOTE

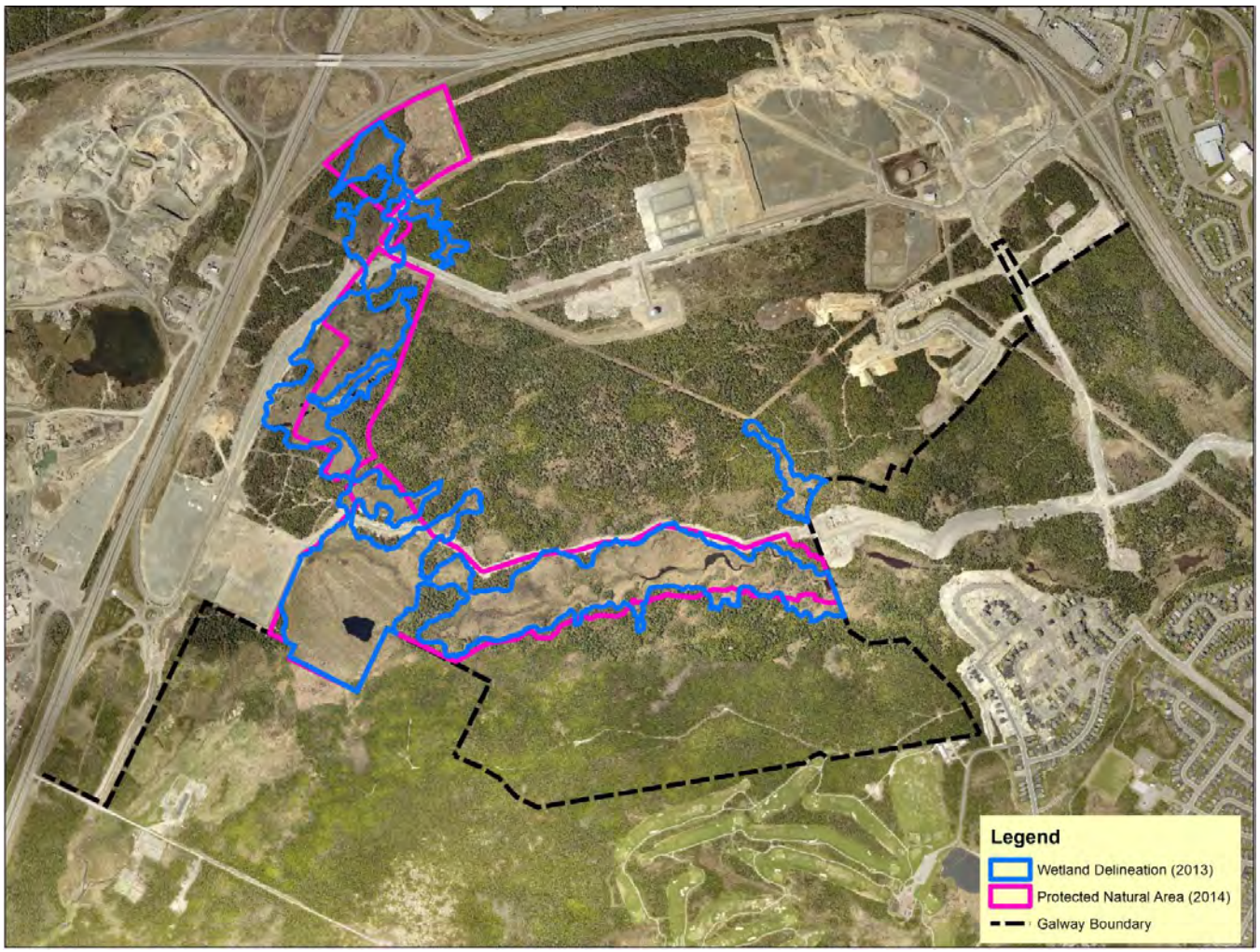
Title:	Application to Amend St. John's Development Regulations to Designate and Protect Galway Wetlands
Date Prepared:	February 4, 2019
Report To:	His Worship the Mayor and Members of Council
Councillor & Role:	Councillor Maggie Burton, Planning and Development Lead
Ward:	5

Decision/Direction Required:
That Council consider a proposed amendment to the St. John's Development Regulations to designate and protect the Galway wetlands.

Discussion – Background and Current Status:
This matter has been previously discussed at the July 25, 2018 Committee of the Whole and the August 6, 2018 Regular Meeting of Council (Appendix A) as well as the September 10, 2018 Regular Meeting of Council (Appendix B).

Prior to Galway, development above 190 metres elevation was prohibited. As such, the wetlands in this area were not previously identified or delineated. Therefore, prior to any development in the vicinity of the Galway wetlands, the City required that the wetlands be identified. The Developer commissioned engineering consultants Stantec to complete a study to delineate the wetlands. The resulting 2013 Wetland Delineation and Functional Assessment Study (the "Wetland Delineation Study") was submitted to the City. This study is shown in Appendix C. Prior to the City accepting the Wetland Delineation Study, the developer submitted a second Stantec report in 2014 titled "Proposed Protected Natural Areas Assessment" which proposed altering areas of the wetland to allow for more developable land. This is included in the developer's submission shown in Appendix B dated April 17, 2014. To date, neither of these reports have been adopted by the City.

Each report has generated a map delineating what areas to protect. The maps are titled Wetland Delineation (2013) and Protected Natural Area (2014) and are superimposed on one another and shown in the figure below. In agreement with the Developer, these maps have been adjusted slightly from those shown in the two reports to align the scope to only the wetlands within the Galway boundary of the original study area. Any wetlands on adjacent properties will have to be delineated separately in the future prior to those lands being developed. Likewise, any other wetland areas within the Galway property but outside the study area of these reports will have to be delineated separately in the future prior to those lands being developed.



The 2013 Wetland Delineation Study identified the existing wetlands within the study area according to the Canadian Wetland Classification System. It is staff's opinion that these wetlands should be protected in their entirety as shown by the Wetland Delineation (2013) map. If the Wetland Delineation (2013) map is adopted by Council, a 15m buffer will also be applied around the perimeter of the wetlands. The 2014 Protected Natural Areas Assessment states it "focused on the environmental assets associated with lands that will not be developed for urban uses." This Assessment looked at balancing wetland protection with development. The Protected Natural Area (2014) map is deemed to have any buffer already included in the protected natural area.

During the public engagement process, several written submissions were received and are included in Appendix B. In his submission, a neighbouring property owner asked for deferral of the application to allow more time to review the implication on his property. Council granted the deferral on September 10, 2018; however, the property owner has not provided any additional information. This application has since been revised to address only that portion of the wetland within the Galway boundary and therefore the neighbouring property is no longer impacted by this application. In its submission, the Developer claimed that the City already approved the wetland alteration in 2014 and the decision to proceed with the Galway development was based on that approval. Staff refute that any such approval was given in 2014. The decision regarding municipal approval is currently before Council. Furthermore, the

Developer did not seek the required Provincial approval until October 22, 2018, after the City made the Province aware of the Developer's intent.

The City's normal past practice would be for a developer to obtain Provincial approval to alter a wetland as per Section 48 of the Water Resources Act prior to applying for municipal approval. As the City had no indication from the Developer that it had done this, staff referred the matter to the Province on September 26, 2018. On October 29, 2018, the Province advised that it had not granted previous approval, however based on the Developer's October 22, 2018 submission the Province stated it would permit the proposed wetland alteration as per the Protected Natural Area (2014) map subject to the Developer obtaining prior City approval. See correspondence in Appendix D.

Staff also referred the matter to the City's Environmental Advisory Committee. The committee recommended that Council allow alteration of the wetland as proposed in the Protected Natural Area (2014) map. The recommendation is included in Appendix E.

The staff recommendation remains that the Galway wetlands should be protected in accordance with the Wetland Delineation (2013) map.

Key Considerations/Implications:

1. Budget/Financial Implications: Not applicable.

2. Partners or Other Stakeholders:
   Property owners of the affected lands, and property owners and residents nearby and downstream of the wetland.

3. Alignment with Strategic Directions/Adopted Plans:
   City's Strategic Plan 2015-18: Responsive and Progressive – Build social, *environmental* and demographic factors into decision-making.

4. Legal or Policy Implications:
   Protection of wetlands is an environmental policy and legislative obligation of the St. John's Municipal Plan.

5. Engagement and Communications Considerations: Not applicable.

6. Human Resource Implications: Not applicable.

7. Procurement Implications: Not applicable.

8. Information Technology Implications: Not applicable.

9. Other Implications: Not applicable.

Recommendation:
It is recommended that Council decide to protect the Galway wetland as delineated by either the Wetland Delineation (2013) map or the Protected Natural Area (2014) map. Following Council's decision, staff will bring forward the appropriate Development Regulation amendments at a future meeting of Council.

Prepared by - Date/Signature:
Ken O'Brien, MCIP – Chief Municipal Planner

Signature: _____

Approved by - Date/Signature:
Jason Sinyard, P. Eng., MBA
Deputy City Manager – Planning, Engineering & Regulatory Services

Signature: _____

KO'B/dlm

Attachments:
Appendix A: July 25, 2018 Committee of the Whole and August 6, 2018 Regular Meeting of Council
Appendix B: September 10, 2018 Regular Meeting of Council including public submissions and 2014 Protected Natural Areas Assessment
Appendix C: 2013 Wetland Delineation and Functional Assessment Study
Appendix D: Correspondence with Provincial Department of Municipal Affairs & Environment
Appendix E: Recommendation from City's Environmental Advisory Committee

Appendix A

DECISION/DIRECTION NOTE

Title:	Galway Wetland Protection St. John's Development Regulations Amendment No. 684, 2018
Date Prepared:	July 20, 2018
Report To:	Committee of the Whole
Councillor & Role:	Councillor Maggie Burton, Planning and Development Lead
Ward:	5

Decision/Direction Required:
To consider proposed amendment to the St. John's Development Regulations to designate and protect the Galway wetlands.

Discussion – Background and Current Status:
The City has been dealing with rezonings and development applications in the Galway area, including the Galway industrial area (formerly called Glencrest) along the Trans-Canada Highway. The area was initially rezoned for development in 2012, allowing serviced development above 190 metres elevation, followed by rezoning to Industrial General (IG) Zone for industrial development near the Trans-Canada Highway in 2013, then a further rezoning in 2015 to expand the industrial lands.

Under the St. John's Municipal Plan, Council's policy is to protect environmentally valuable areas such as wetlands and waterways, including significant tributaries of the Waterford River, including South Brook. These policies are contained in Part III, Section 8 "Resource and Environmental Areas" of the Municipal Plan, page III-39 and following pages.

Under the St. John's Development Regulations, which implement the policies of the Municipal Plan, Section 11 "Overlay Districts" sets out the regulations to protect wetlands. Section 11.2.3 lists the specific wetlands that are protected from development, with at least a 15-metre buffer from the edge of the wetland. There are several maps associated with this section, notably map J-2 "Flood Hazard Areas, Watersheds, Waterways and Wetlands".

The Galway lands are located above 190 metres elevation. Until 2012, lands in St. John's above that elevation were reserved from development, as they were higher than the elevation planned for future servicing with municipal water and sewer. The policy change in 2012 allowed municipal services to be provided above 190 metres in select areas. In the Galway development area, this allowed for services to be extended at the developer's cost.

Going back to 1993, the City had commissioned a Significant Waterways and Wetlands Study. The area that would become Galway was not included in the study, since it was above 190 metres and therefore could not be developed as per City policy at that time. When the results of the study were incorporated into the 1993 St. John's Municipal Plan and the 1994 St. John's Development Regulations, there was no mention of the Galway wetlands.

When the rezonings were done for Galway, the City did not have wetland mapping in place for the area. At the direction of the City, the developer commissioned a wetland study by Stantec to map the wetlands that needed to be protected. The resulting report, showing 71.91 hectares (178 acres) of wetland (the "Wetland Delineation"), was submitted to the City but had not been finalized or accepted by the City when the most recent industrial rezoning was applied for. Prior to the City accepting the Wetland Delineation, the developer commissioned and submitted another report which they titled "Proposed Protected Natural Areas Assessment", which proposed trimming out areas of the wetland to allow for more developable land; this report has not been accepted by the City. The rezoning was completed prior to the designation of wetland in Galway.

At the time of the rezoning application above, the City was in discussions with the developer about mapping and protecting the wetlands. The City strives to use zones to assist in identifying and protecting wetlands, such as Open Space (O) and Open Space Reserve (OR), however, the primary protection provided in the Development Regulations for wetlands is through the establishment of environmental overlays provided for in the Municipal Plan (Part III, Section 8) and the Development Regulations (Section 11). Both methods have been used in other parts of the city.

It is recommended that the Galway wetlands, as mapped in the Wetland Delineation, be added to the City's map J-2 "Flood Hazard Areas, Watersheds, Waterways and Wetlands" of the Development Regulations, with the addition of a buffer. The boundary for the wetlands will be as shown on the Wetland Delineation, except for a very small area near the Trans-Canada Highway where the extension of water and sewage services to the area required construction at the edge of the wetland, resulting in this land no longer forming part of the wetland (the "Excepted Land"). The amount of land affected is minimal.

Also, it is also recommended that a text amendment be approved to add the Galway wetlands to the list of wetlands in Section 11.2.3 of the Development Regulations.

In the meantime, until the protection noted above is completed and gazetted, it is recommended that Council defer any applications for development of land within the Wetland Delineation, less the excepted lands, to ensure that no development proceed which might have a detrimental effect on the Galway wetlands. Deferring such applications would be in keeping with the Municipal Plan and Development Regulations and would align with the City's legislative obligation to protect wetlands.

Key Considerations/Implications:

1. Budget/Financial Implications: Not Applicable.

2. Partners or Other Stakeholders:
   Property owners of the affected lands, and property owners and residents nearby and downstream.

3. Alignment with Strategic Directions/Adopted Plans:
   City's Strategic Plan 2015-18: Responsive and Progressive – Build social, *environmental* and demographic factors into decision-making.

4. Legal or Policy Implications:
   Protection of wetlands is an environmental policy and legislative obligation of the St. John's Municipal Plan.

5. Engagement and Communications Considerations:
   Recommended to be advertised for public review as per Section 5.5 of the St. John's Development Regulations.

6. Human Resource Implications: Not Applicable.

7. Procurement Implications: Not Applicable.

8. Information Technology Implications: Not Applicable.

9. Other Implications: Not Applicable.

Recommendation:
It is recommended that Council consider the proposed amendment to the St. John's Development Regulations to set out the boundaries of the Galway wetland and to add the Galway wetland to the list of protected wetlands. A resolution is attached.

Staff recommend that the application be advertised for public review as per Section 5.5 of the St. John's Development Regulations. Following the review period, the application would be referred to a regular meeting of Council for consideration.

It is also recommended that, until the protections for the Galway wetlands are in legal effect, Council defer any applications for development of land within the Wetland Delineation, less the Excepted Lands.

This is provided for Council's consideration and direction.

Prepared by/Signature:
Ken O'Brien, MCIP – Chief Municipal Planner

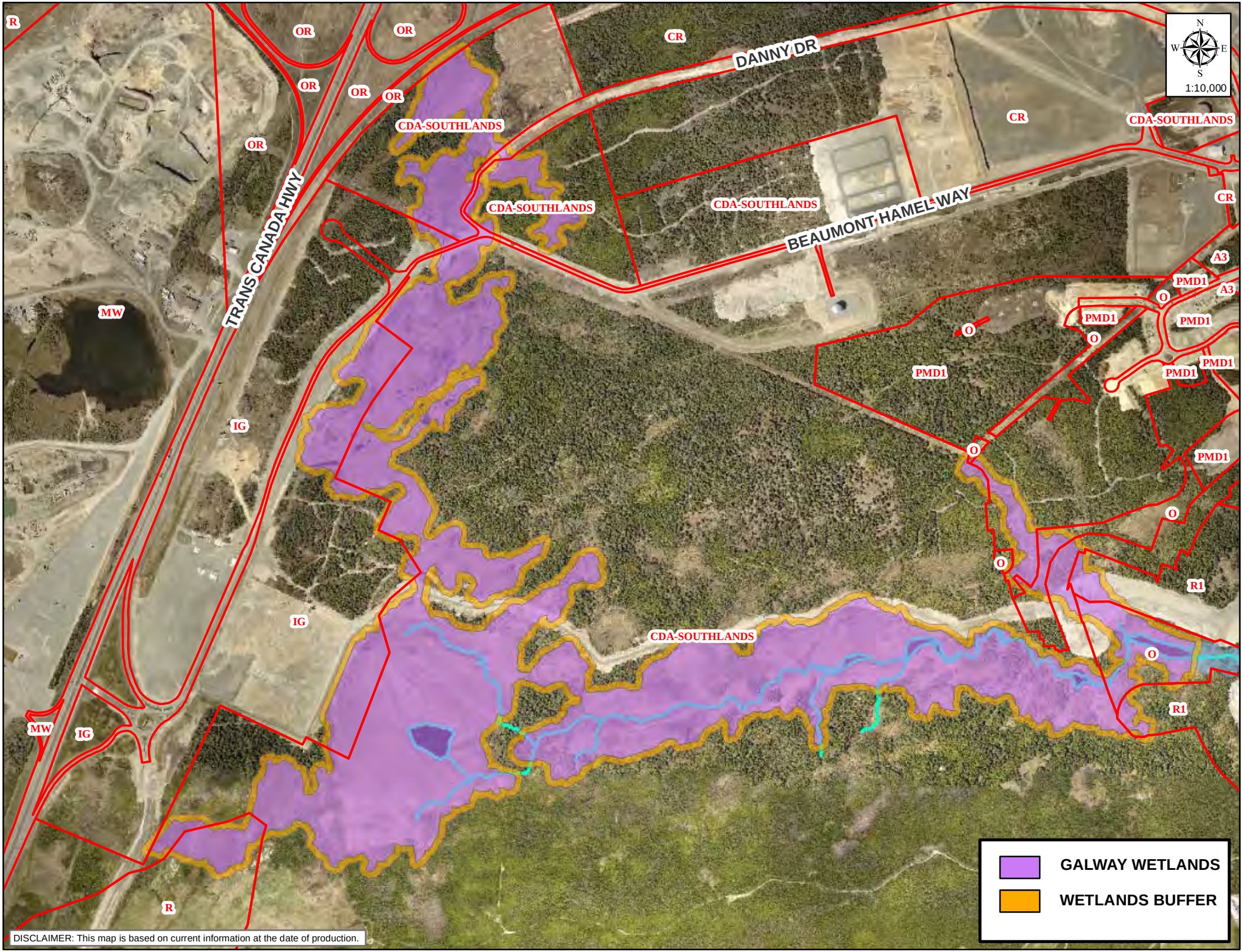
Signature: _____

Approved by/Date/Signature:
Jason Sinyard, P.Eng., MBA – Deputy City Manager, Planning, Engineering and Regulatory Services

Signature: _____

KO'B/dlm

Attachments: Resolution and maps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BEAUMONT HAMEL WAY
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GALWAY WETLANDS
WETLANDS BUFFER
DISCLAIMER: This map is based on current information at the date of production.

RESOLUTION
ST. JOHN'S DEVELOPMENT REGULATIONS
AMENDMENT NUMBER 684, 2018

WHEREAS the City of St. John's wishes to ensure the future protection of the wetland within the Galway development.

BE IT THEREFORE RESOLVED that the City of St. John's hereby adopts the following text and map amendments to the St. John's Development Regulations under the provisions of the Urban and Rural Planning Act, 2000.

1. **Add Section 11.2.3 Wetlands:**

   "(p) Galway Wetland"

2. **Amend Map J-2 (Environmentally Valuable Areas, Waterways & Wetlands, Flood Hazard Areas & Watersheds Map) by adding the Galway Wetland as shown on Map J-2.**

BE IT FURTHER RESOLVED that the City of St. John's requests the Minister of Municipal Affairs and Environment to register the proposed amendment in accordance with the requirements of the Urban and Rural Planning Act, 2000.

IN WITNESS THEREOF the Seal of the City of St. John's has been hereunto affixed and this Resolution has been signed by the Mayor and the City Clerk on behalf of Council this ____ day of _____, 2018.

_____
Mayor

_____
MCIP
I hereby certify that this Amendment has been prepared in accordance with the Urban and Rural Planning Act, 2000.

_____
City Clerk

_____
Council Adoption

_____
Provincial Registration

N
W E
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TOWN OF TORBAY

TOWN OF LOGY BAY/ MIDDLE COVE/ OUTER COVE

TOWN OF PORTUGAL COVE/ ST. PHILLIPS

TOWN OF PARADISE

CITY OF MOUNT PEARL

TOWN OF CONCEPTION BAY SOUTH

TOWN OF PETTY HARBOUR MADDOX COVE

TOWN OF BAY BULLS

Windsor Lake
Gull Pond
Power's Pond
Moriarity's Pond
Ryall's Pond
Juniper Pond Wetlands
Yellow Marsh Wetlands
Big Pond
Middle Pond
Left Pond
Oxen Pond
Quidi Vidi Lake
Robin Hood Bay
Small Point
Cuckhold's Cove
The Narrows
Freshwater Bay
Deadman's Bay
Blackhead Bay
Cape Bay
Cape Spear
Petty Harbour Long Pond
Rocky Pond
North Head
Capeline Cove
Three Arm Pond
Paddy's Pond
Cochrane Pond
Cochrane Pond Brook
Fourth Pond
First Pond
Second Pond
Third Pond
Thomas Pond
Northern Pond
Hennessey's Pond
Loon Pond
Black Mountain Pond
Big Northern Pond
Bay Bulls Big Pond
Middle Pond
Motion Head
Shoal Bay
The Spout
Bald Head

I hereby certify that this amendment has been prepared in accordance with the Urban and Rural Planning Act.

M.C.I.P. signature and seal

Mayor

City Clerk

Council Adoption

Provincial Registration

MAP J-2

ST. JOHN'S DEVELOPMENT REGULATIONS

ENVIRONMENTALLY VALUABLE AREAS, WATERWAYS & WETLANDS, FLOOD HAZARD AREAS & WATERDHEDS

- MUNICIPAL BOUNDARY
- WATERWAYS AND PONDS
- PROTECTED PUBLIC WATER SUPPLY WATERSHED
- ENVIRONMENTALLY VALUABLE AREAS
- FLOOD HAZARD AREAS
- WETLANDS

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ST. JOHN'S

Date: July 19, 2018

EXCERPT FROM COMMITTEE OF THE WHOLE REPORT
July 25, 2018 – 9:00 am – Council Chamber, 4th Floor, City Hall

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Present Mayor Danny Breen (joined at 10:30 am)
Deputy Mayor Sheilagh O'Leary
Councillor Sandy Hickman
Councillor Ian Froude
Councillor Jamie Korab
Councillor Wally Collins
Councillor Maggie Burton
Councillor Dave Lane

Regrets Councillor Deanne Stapleton
Councillor Hope Jamieson
Councillor Debbie Hanlon

Staff Tanya Haywood, Deputy City Manager of Community Services
Cheryl Mullett, City Solicitor
Brian Head, Manager of Parks and Open Spaces
Kris Connors, Manager of Budget and Treasury
Susan Bonnell, Manager of Communications and Office Services
Victoria Etchegary, Manager of Organizational Performance and Strategy
Garrett Donaher, Manager of Transportation Engineering
Sean Janes, Internal Auditor
Brendan O'Connell, Director of Engineering
Ken O'Brien, Chief Municipal Planner
Elaine Henley, City Clerk
Kenessa Cutler, Legislative Assistant

Others Melendy Muise, Delegation
Darrin Keough, Delegation

Five members of the media and two members of the public were also present.

4. Decision Note dated July 20, 2018 re: Galway Wetland Protection – St. John's Development Regulations Amendment No. 684, 2018

Councillor Burton spoke to the above noted. Mayor Breen asked the City Solicitor if the developer would have an opportunity to put forward any other information. Cheryl stated that there have been meetings and correspondence with the developer. She noted the recommendation must still go to the regular meeting of Council and if there is more the developer would like to bring forward they are welcome to.

Recommendation
Moved – Councillor Burton; Seconded – Councillor Hickman

It is recommended that Council consider the proposed amendment to the St. John's Development Regulations to set out the boundaries of the Galway wetland and to add the Galway wetland to the list of protected wetlands. A resolution is attached.

Staff recommend that the application be advertised for public review as per Section 5.5 of the St. John's Development Regulations. Following the review period, the application would be referred to a regular meeting of Council for consideration.

It is also recommended that, until the protections for the Galway wetlands are in legal effect, Council defer any applications for development of land within the Wetland Delineation, less the Excepted Lands.

CARRIED UNANIMOUSLY

Appendix B

DECISION/DIRECTION NOTE

Title:	Application to Amend St. John's Development Regulations to Designate and Protect Galway Wetlands
Date Prepared:	September 5, 2018
Report To:	His Worship the Mayor and Members of Council
Councillor & Role:	Councillor Maggie Burton, Planning and Development Lead
Ward:	5

Decision/Direction Required:
That Council defer its decision on the attached resolution for St. John's Development Regulations Amendment 684, 2018.

Discussion – Background and Current Status:
Council has been considering map and regulation changes to protect the Galway Wetlands.

In 2013 an area of land near the Trans-Canada Highway was rezoned to the Industrial General (IG) Zone for industrial development, followed by a further rezoning in 2015 to further expand the industrial lands.

At the time the rezoning applications were completed for Galway, the City did not have wetland mapping in place for the area due to the previous policy of not allowing development above 190 metres elevation. At the direction of the City, the developer commissioned Stantec to complete a study to map the wetlands that needed to be protected. The resulting report, showing 71.91 hectares (178 acres) of wetland (the "Wetland Delineation"), was submitted to the City but had not been finalized or accepted by the City when the most recent industrial rezoning was submitted. Prior to the City accepting the Wetland Delineation, the developer commissioned and submitted another report titled "Proposed Protected Natural Areas Assessment", which proposed trimming out (filling in) areas of the wetland to allow for more developable land; this report has not been accepted by the City. The rezoning was completed prior to the designation of wetland in Galway.

At the time of the above noted rezoning application, the City was in discussions with the developer about mapping and protecting the wetlands. The City strives to use zones to assist in identifying and protecting wetlands, such as Open Space (O) and Open Space Reserve (OR), however, the primary protection provided in the Development Regulations for wetlands is through the establishment of environmental overlays provided for in the Municipal Plan (Part III, Section 8) and the Development Regulations (Section 11). Both methods have been used in other parts of the city, therefore it is recommended that the Galway wetlands be added to map J-2 "Flood Hazard Areas, Watersheds, Waterways and Wetlands" of the Development Regulations, with the addition of a buffer. The boundary for the wetlands will be as shown on the Wetland Delineation, except for a very small area near the

Trans-Canada Highway where the extension of water and sewer services to the area required construction at the edge of the wetland, resulting in this land no longer forming part of the wetland (the "Excepted Land"). The amount of land affected is minimal. Text will also be added to list Galway wetlands under Section 11.2.3 of the Development Regulations.

The proposed text and map amendment was advertised on three occasions in The Telegram newspaper and was posted on the City's website. Property owners within 150 metres of the application site were notified, along with neighbouring municipalities. Written submissions were received by the City Clerk and these are included in the agenda for the Regular Meeting of Council.

One of the neighbouring property owners has asked for more time to review the implication on his property which has triggered this Decision Note. Additionally, the Public engagement process has resulted in various submissions. The deferral of this item allows staff time to review the submissions from the public and stakeholders and to seek input from the Environmental Advisory Committee prior to finalizing the final staff recommendation.

Key Considerations/Implications:

1. Budget/Financial Implications: Not applicable.

2. Partners or Other Stakeholders:
   Property owners of the affected lands, and property owners and residents nearby and downstream.

3. Alignment with Strategic Directions/Adopted Plans:
   City's Strategic Plan 2015-18: Responsive and Progressive – Build social, *environmental* and demographic factors into decision-making.

4. Legal or Policy Implications:
   Protection of wetlands is an environmental policy and legislative obligation of the St. John's Municipal Plan.

5. Engagement and Communications Considerations: Not applicable.

6. Human Resource Implications: Not applicable.

7. Procurement Implications: Not applicable.

8. Information Technology Implications: Not applicable.

9. Other Implications: Not applicable.

Recommendation:
It is recommended that Council defer its decision on St. John's Development Regulations Amendment Number 684, 2018, at the request of an affected property owner. This deferral also allows staff the opportunity to review submissions and to refer the matter to the City's Environmental Advisory Committee.

Prepared by - Date/Signature:
Lindsay Lyghtle Brushett, MCIP – Planner III

Signature: _____

Approved by - Date/Signature:
Ken O'Brien, MCIP – Chief Municipal Planner

Signature: _____

LLB/dlm

Attachments:
Resolution
Zoning Map
Public submissions

RESOLUTION
ST. JOHN'S DEVELOPMENT REGULATIONS
AMENDMENT NUMBER 684, 2018

WHEREAS the City of St. John's wishes to ensure the future protection of the wetland within the Galway development.

BE IT THEREFORE RESOLVED that the City of St. John's hereby adopts the following text and map amendments to the St. John's Development Regulations under the provisions of the Urban and Rural Planning Act, 2000.

1. **Add Section 11.2.3 Wetlands:**

   "(p) Galway Wetland"

2. **Amend Map J-2 (Environmentally Valuable Areas, Waterways & Wetlands, Flood Hazard Areas & Watersheds Map) by adding the Galway Wetland as shown on Map J-2.**

BE IT FURTHER RESOLVED that the City of St. John's requests the Minister of Municipal Affairs and Environment to register the proposed amendment in accordance with the requirements of the Urban and Rural Planning Act, 2000.

IN WITNESS THEREOF the Seal of the City of St. John's has been hereunto affixed and this Resolution has been signed by the Mayor and the City Clerk on behalf of Council this ____ day of _____, 2018.

_____
Mayor

_____
MCIP
I hereby certify that this Amendment has been prepared in accordance with the Urban and Rural Planning Act, 2000.

_____
City Clerk

_____
Council Adoption

_____
Provincial Registration

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TOWN OF TORBAY

TOWN OF LOGY BAY/ MIDDLE COVE/ OUTER COVE

TOWN OF PORTUGAL COVE/ ST. PHILLIPS

TOWN OF PARADISE

CITY OF MOUNT PEARL

TOWN OF CONCEPTION BAY SOUTH

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Cuckhold's Cove
The Narrows
Freshwater Bay
Deadman's Bay
Blackhead Bay
Cape Bay
Cape Spear
Petty Harbour Long Pond
Rocky Pond
North Head
Capeline Cove
Three Arm Pond
Paddy's Pond
Cochrane Pond
Cochrane Pond Brook
Fourth Pond
First Pond
Second Pond
Third Pond
Thomas Pond
Northern Pond
Hennessey's Pond
Loon Pond
Black Mountain Pond
Big Northern Pond
Bay Bulls Big Pond
Middle Pond
Motion Head
Shoal Bay
The Spout
Bald Head

I hereby certify that this amendment has been prepared in accordance with the Urban and Rural Planning Act.

M.C.I.P. signature and seal

Mayor

City Clerk

Council Adoption

Provincial Registration

MAP J-2

ST. JOHN'S DEVELOPMENT REGULATIONS

ENVIRONMENTALLY VALUABLE AREAS, WATERWAYS & WETLANDS, FLOOD HAZARD AREAS & WATERDHEDS

- MUNICIPAL BOUNDARY
- WATERWAYS AND PONDS
- PROTECTED PUBLIC WATER SUPPLY WATERSHED
- ENVIRONMENTALLY VALUABLE AREAS
- FLOOD HAZARD AREAS
- WETLANDS

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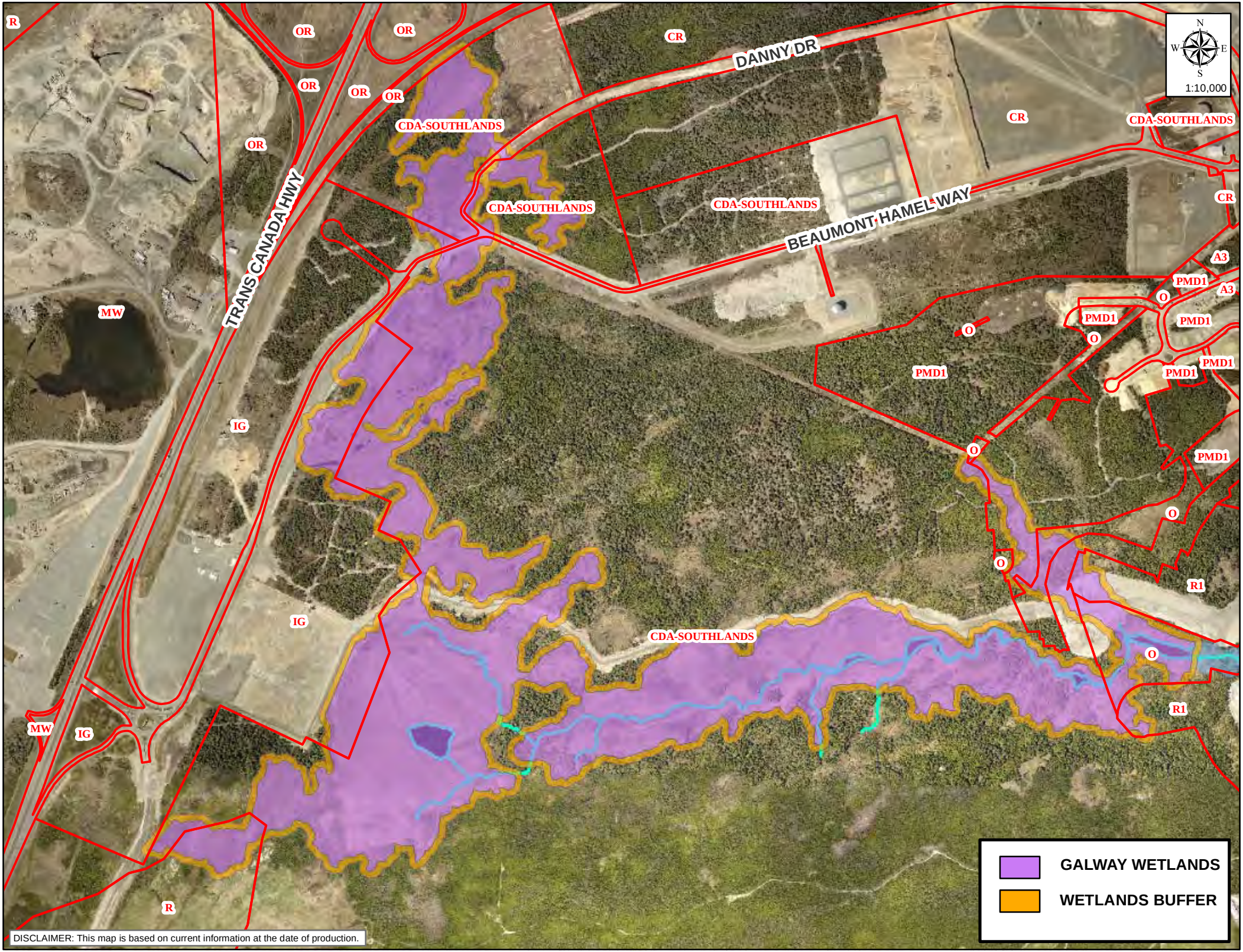
ST. JOHN'S

Date: July 19, 2018


DANNY DR
BEAUMONT HAMEL WAY
TRANS CANADA HWY
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GALWAY WETLANDS
WETLANDS BUFFER
DISCLAIMER: This map is based on current information at the date of production.

CITY OF
Mount Pearl

August 22, 2018

File: 122-3

Office of the City Clerk
City of St. John's
P. O. Box 908
St. John's, NL A1C 5M2

Dear Sir/Madam:

REFERRAL – CITY OF ST. JOHN'S
PROPOSED DEVELOPMENT REGULATIONS AMENDMENT RE: GALWAY WETLANDS

In response to the notice received on August 13, 2018, regarding the above-noted proposed amendment, please be advised that the Mount Pearl City Council acknowledges the notice, and the matter was discussed at the City of Mount Pearl Council meeting of August 22, 2018.

The lands proposed to be designated and protected as Galway wetlands and wetlands buffer are outside of the boundary of the City of Mount Pearl; however, within the City of Mount Pearl, the wetlands in Donavan's Business Park are zoned under the Conservation (CON) Land Use Zone. The Galway wetlands and the wetlands in Donavan's Industrial Park connect by a series of storm drains running under the Trans Canada Highway/Pitts Memorial Drive/Conception Bay Bypass junction. Therefore, any development or changes that occur in the Galway wetlands may impact the wetlands in Donavan's Industrial Park and the Waterford Valley, further downstream.

As a result of the information above, and in general environmental support of the protection of wetlands, the Mount Pearl City Council supports the proposed amendment to the St. John's Development Regulations to set out the boundaries of the Galway Wetlands and to add the Galway Wetlands to the list of protected wetlands in St. John's.

Yours truly,

Jason Collins
Director of Community Development

JC/paf
cc Mona Lewis, Deputy City Clerk
Catherine Howell, Manager of Planning and Development
Sapphire Pearson, Planner

DEWCOR

10718 NFLD. INC.

Tel: 709-570-2222

September 4, 2018

Office of the City Clerk
City of St. John's
P.O. Box 908
St. John's, NL, A1C 5M2

Via email: cityclerk@stjohns.ca

RE: Proposed amendment to the St. John's Development Regulations to set out the boundaries of the Galway wetland and to add the Galway wetland to the list of protected wetlands

Dear City Clerk,

We are providing this submission in response to the notice of the above referenced proposed amendment to the St. John's Development Regulations.

Galway developers, DewCor, strongly support City Council approving a motion to protect wetlands. However, the identified wetlands to be protected cannot be the area outlined in the plan that was attached to the notice but rather **must be those clearly delineated in the Protected Natural Areas Assessment as shown in Schedule A which was approved by the City in 2014 prior to Galway development proceeding**.

These critical points are expanded upon in this submission:

- Galway worked side by side with City Staff to delineate wetlands and protected natural areas in 2014 and City Staff signed off on a wetland and natural protected areas plan (confirmed by 3rd party and evidenced with substantial paper trail);
- No fewer than THREE reputable professional, experienced 3rd parties (2 environmental companies; 1 development/engineering company) have confirmed Galway wetland and natural protected areas protection plans are exemplary;
- Some of the land in question has been zoned and taxed "industrial", and approved by City Staff for over a hundred million dollars of infrastructure and construction since 2014;
- Galway design and development has not only protected wetlands and natural areas; it has actually enhanced and strengthened those areas (as confirmed by independent environmental consultants).
- Specific designs and rezonings been approved by the City which included the agreed boundaries clearly delineated.

Master planned communities like Galway create an authentic sense of place, offering residents and businesses an abundance of green space, connectivity through bike and walking trails, and places to play, live and shop — all within easy walking distance. Schedule H attached hereto as the last schedule illustrates the enormous effort and cost that has gone into making just the first phase of Galway a GREEN community.

Creating this kind of real neighbourhood with the best chance to thrive for decades to come takes careful planning, thoughtful design, and respect for the surrounding natural environment.

In 2011, DewCor began working with the City of St. John's and started a lengthy and detailed four-year journey to determine if we could realize the vision for this new, innovative neighbourhood which was and remains an exciting growth opportunity for the City. Land development, construction, thousands of jobs, property sales, and a massive new taxation base - all stimulating economic growth.

During this pre-planning phase, DewCor asked the City for clear ground rules before making the immense decision to move forward and invest more than one hundred million dollars initially. Clarity and certainty was required — not just for developers but also for the banks that would finance the project.

In 2014, it was clearly understood that the new development area was adjacent to wetlands. It was equally understood that we all have a duty to protect this land.

Given that Galway contains more than 150 acres of wetlands, DewCor agreed that it was critical to work with trusted professionals to identify, delineate, and mitigate any impact on the natural space.

As a result, DewCor enlisted two independent and very experienced experts — KMK Capital/Pinnacle Engineering and Stantec Consulting Limited — to conduct considerable and extensive environmental assessments.

The goal was to determine how to best protect and improve adjacent wetlands while creating "developable" parcels of land for sale. Stantec's Senior Terrestrial Ecologist worked diligently to do just this — working within the City's own guidelines, provincial legislation, and best practices.

Stantec's letter dated January 31, 2014 states:

> *"This information will help to ensure that the proposed development activities are planned and carried out in compliance with the various legislation, regulations, and policies that may apply."*

Those reports prepared by Stantec's Senior Terrestrial Ecologist were provided to all parties including City Staff. And their conclusion? That the revised wetland borders — including limited areas of encroachments — actually improved the quality of the wetlands by creating larger, homogenous wetland areas with less fragmentation and less external pressures.

Stantec's letter dated January 31, 2014 states:

> *".....based on the type, size and limited scale of development or encroachment, it is anticipated to have little significance on the overall wetland complex or its function. Furthermore, wetlands are not considered limiting in the region."*

Stantec's letter dated April 17, 2014 states:

> *"When decisions are being made about the natural areas within Glencrest-Galway Project area it is important to realize that large pieces of contiguous habitat are much more likely to preserve their ecological function than small parcels which may be adversely affected by external pressures."*

In fact, the Senior Terrestrial Ecologist hailed the work done by Galway to protect and enhance wetlands as a potential model for the City.

Stantec's letter dated January 31, 2014 states:

> *"... if followed (referring to wetland delineation and overall plan proposed by Stantec)....could prove to be a model for other developments within the City of St. John's."*

Stantec's letter dated April 17, 2014 states:

> *"The assessment strives to minimize the effect of future development in areas with important natural resources and supports the creation and enhancement of important natural area preserves and open space areas. Through the designation of this Protected Natural Area, 10718 Newfoundland Inc. intends to:*
>
> - *Preserve, protect and maintain the integrity of diverse, high-quality natural features and open space lands within and in vicinity to the proposed Glencrest-Galway Project development;*
> - *Provide a safe, aesthetic and comfortable environment through delivery of a quality landscape development;*
> - *Protect important natural habitats, including waterway and wetland areas and their special ecological functions throughout the development;*
> - *Provide a development which is connected, open, accessible, usable, diverse, affordable, clean, green, and attractive to future residents; and*
> - *Provide opportunities for environmental stewardship, education, programs and services.*
>
> *Thus, protection and preservation of the natural environment are values that strongly influence planning, decision-making and future operations for the Glencrest-Galway Project. The Protected Natural Areas Assessment reaffirms and clarifies 10718 Newfoundland Inc.'s on-going commitments to values articulated in the Concept Plan."*

The complete Stantec letter detailing the final protected natural area that was approved by the City of St. John's can be found in Schedule B.

In the normal practice of working with the City to resolve the City Staff's comments from their review of development applications and upon receipt of the reports by Stantec on June 10, 2014, the issue was resolved and accordingly was removed BY CITY STAFF from the list of remaining ongoing items for resolution on July 23, 2014. There were no further requirements from the City regarding the wetland boundaries which signified acceptance of the materials submitted and that the issue had been addressed to the City's satisfaction. Final approval was granted and construction commenced.

In 2014, with the draft Envision St. John's Municipal Plan in mind, DewCor began creating a master-planned community with lasting, eco-friendly structures and walking trails, and by since planting more than 600 trees for landscaping that was not even required by regulation. With the wetlands issue resolved by mid-2014, the developer's consultant, Pinnacle Engineering, began finalizing the massive exercise of engineering the master water, sanitary sewer, stormwater, and road networks for the entire 2,400 acres of Galway, all based on the approved developable land. DewCor abided by all legislation, guidelines and best practices agreed upon by the City.

Following the City's approval of the master servicing, economic feasibilities were created from construction budgets and future sales of all developable land based on the approved wetland boundaries from 2014. The project was sanctioned based on this feasibility, external bank financing was put in place, and construction commenced.

In 2015, DewCor submitted an application for rezoning — including maps with the delineation of wetlands recommended by the professional ecologist at Stantec which were accepted by the City in 2014. The purpose of the rezoning, as stated by City Staff in a memo to the Planning and Development Standing Committee dated June 16, 2015, was "to allow for future industrial development, which is part of the Glencrest development". This memo formed part of the agenda for the Planning and Development Standing Committee meeting dated July 2, 2015.

As further indicated in a letter dated September 14, 2015, from the City of St. John's, the former Comprehensive Development Area – Southlands Zone was rezoned to the Industrial General (IG) Zone for future industrial development and came into legal effect on September 18, 2015. Schedule C contains a site plan with the IG Zone identified in the blue area of Figure 1 and supported by the rezoning approval letters and resolution.

There was no question that the area outlined in blue was approved for development and the area in green was reserved as a protected natural area. These are the areas approved by the City in 2014 as outlined by Stantec.

Since that time of rezoning, City Staff have insisted on the signing of Development Agreements on all work done on this land. These Development Agreements include the complete engineering plans for the area that City Staff has signed off on and approved. The engineering plans include all roads, the installation of water and sewer, stormwater, electrical, landscaping, and all other construction. Most notably, the engineering plans attached to the Development Agreements clearly show the agreed lot boundaries and the agreed upon wetlands as shown in Schedule A. If the boundary is as proposed by the City in CP-03 for example the approved sanitary pipe and berm infrastructure would have been located north of its actual position.

Also, since the time of rezoning in 2015 the City has assessed and has been taxing DewCor on this land as "industrial" for several years – quite notably, this taxation rate is some 75 to 100 times more than a wetland zoned rate.

Fast forward to 2018:

- In July, after more than 100 million dollars of investment and just as land sales are gathering momentum, City Staff claim that the agreement was never approved and the land in question is not available for development. The City implies that Galway has improperly filled an area of wetland — part of the very area identified for development by Stantec's Senior Terrestrial

Ecologist; part of the very maps approved for engineering and infrastructure by City Staff and included in Development Agreements; part of the very area that the City approved the installation of a trunk sewer pipe; and part of the very area zoned and taxed by the City as industrial land.

- The City then alleges that they didn't receive one of the original Stantec reports, but later acknowledged and confirmed they "found it" in 2018 and have actually had it in hand since 2014.

In addition to all of the facts clearly laid out in the extensive paper trails, KMK/Pinnacle Engineering CEO, Justin Ladha, has provided a clear, definitive letter with 56 pages of supporting material and correspondence with the City affirming the City's acceptance and approval of this wetland delineation back in 2014 (see Schedule D).

In fact, the wetlands and protected natural areas were front and center in the City Staff's review and approval of the engineering plans in 2014. The wetlands were not overlooked or neglected. Quite the opposite. Over the course of 7 months there was frequent, ongoing correspondence, meetings and reports prepared specifically to address the wetland delineation as outlined in detail on pages 2 and 3 of Schedule D. The paper trail clearly demonstrates that the City was ultimately satisfied with the final wetland delineation as prepared by Stantec in Schedule A and approved it using City Staff's normal operating procedure.

Letter from Justin Ladha dated August 16, 2018 states:

> *"... in the City's normal practice of issuing development approvals, the City did approve the land shown in Figure 10003-F405 as developable by way of an email on July 23,2014 from Mr. Dave Wadden of the City to Mr. Trevor Moore of Pinnacle Engineering Limited..... This email provided approval to commence work on Stage 1 Industrial based on the Cp02 and CP-03 submissions..."*

The finalized master servicing design brief (master engineering plan for Galway's global servicing for the entire 2,400 acres of Galway that was thoroughly reviewed by City Staff) has engineered and sized the water, sewer, and road network design for the entirety of Galway based on the amount of developable land after the final approved wetland delineation as outlined in Schedule A and as approved by the City in 2014.

Schedule E contains the sanitary drainage area plan upon full build out of Galway, taken directly from the master servicing design brief. The areas shaded in green indicate protected natural areas, the areas shaded in blue indicate developable industrial land and the areas shaded in yellow indicated developable residential land; all as delineated by Stantec on April 17, 2014 and approved by the City. The red lines shown on Schedule E are the approved locations of trunk sewers and it is clear that the sewer running along South Brook (which is now fully constructed with City approvals and is operational) is the dividing line between Protected Natural Areas to the South and developable land to the North.

A majority of the global master infrastructure has now been engineered, approved by the City and has been constructed on that basis costing upwards of $100 million. Any change in the amount of developable land now will affect the modeling, engineering, sizing and locations of massive infrastructure that has already been installed at the approval of the City.

Letter from Justin Ladha dated August 16, 2018 states:

> *"The MSDB (Master Servicing Design Brief) provides a written description, drawings and calculations for the global design of a development and reflects everything from underground infrastructure to road layouts.....There were no comments provided by the City with respect to the MSDB that indicated the approach that was being taken was unacceptable, and indeed the development proceeded based on this understanding."*

Justin Ladha led the discussion with the City and is clearly on the record confirming the City's approval at the time.

Since 2014, DewCor has invested significantly in the Galway development on the basis of this approval.

Based on the City's approvals DewCor has marketed this land for the last four years as available for development and sale which included a 20 acre parcel the former Mayor and City Manager toured and requested we hold for City acquisition. This 20 acre parcel contains the very piece of land that the City now implies Galway has improperly filled an area of wetland. In fact the City actually evaluated this very piece of land for purchase twice – once directly with DewCor and secondly as a DewCor submission to a City request for proposal.

DewCor takes the protection of the environment so seriously that in August 2018 we engaged further experts to perform an independent wetland assessment review of the work originally performed by Stantec in 2014. The report from Sikumiut Environmental Management Ltd. (SEM) and Boreal Environmental can be found in Schedule F.

Letter from SEM and Boreal Environmental dated August 31, 2018 states:

> *"Upon completing a review of the reports for the Glencrest-Galway development, it was found that Stantec had employed a rigorous wetland assessment protocol which exceeded all requirements by the province of Newfoundland and Labrador and the City of St. John's."*
>
> *"The scope of the wetland mitigation strategy outlined by Stantec considers a full range of individual wetland functions… These all serve to increase biodiversity and increase the resilience of the entire ecosystem."*
>
> *"Stantec and KMK Capital & Pinnacle Engineering Limited have strived to maintain the integrity of the wetland ecosystems through careful planning and design."*

Galway values the importance of wetlands — which is precisely why we hired experts to ensure best practices were put in place. Once again, the Stantec Senior Terrestrial Ecologist has stated clearly that the land delineation which created new wetland boundaries actually improved the ecological function of the wetlands area.

Additionally, Galway has created over 20 acres of storm detention ponds with natural habitat. Research has shown that while the detention ponds are not native wetlands, over time they become very important protected ecological wetlands and will support many species of plant, insect, bird and other wildlife. The evidence of the development of such habitat is already evident in the 10 acre CP-07C stormwater detention pond, and this is occurring less than one year after construction.

In fact, while the original area identified 157 acres of wetlands in Galway, the newly defined area agreed upon by all in 2014 resulted in 168 acres of protected natural areas. This is a net 11 acre increase in protected natural areas as shown in Schedule G. The total natural area increases to 178 acres when including the regional stormwater detention pond.

This is NOT about Galway destroying or ignoring precious wetlands.

Quite the opposite — we took the greatest possible care, entrusted the best possible experts, and proceeded in-line with all regulations and policies

In fact, the site plan in Schedule H shows the magnitude of green space that actually exists in Galway with a majority of the land comprised of protected natural areas, wetlands, floodplains, parklands, trails, landscaped roadside medians and boulevards, residential rear lot tree retention and professionally landscaped areas.

If the City now reneges on the clearly delineated, approved and developable land it will mean the loss of untold tens of millions of dollars. The full Galway development, including all financing and associated land sales were forecast based on these City approvals in 2014.

Without the 2014 approval of the City, Galway quite frankly would likely never have proceeded.

We all agree - protection of wetlands and our natural areas is critical. And in doing so, we must balance development with preserving green space. Galway is proud of the extensive and detailed work we have completed to achieve this important goal.

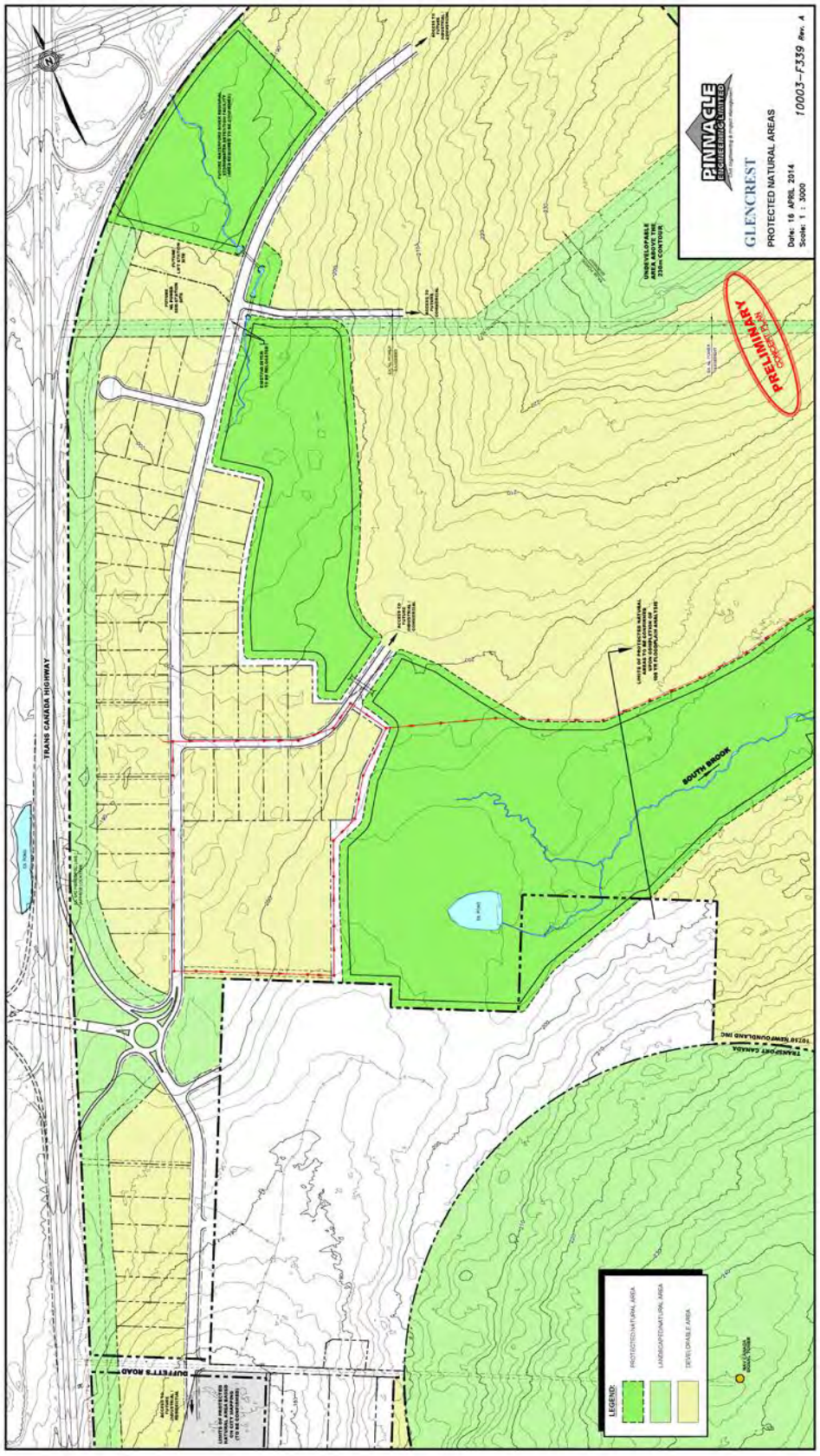
DewCor absolutely performed due diligence in our approach to protecting wetlands and other natural protected areas. Not only did our consultants work daily with City Staff for many months prior to sanctioning the project, we hired not one, not two, but THREE independent experts to ensure the Galway development was undertaken in the most environmentally responsible manner. We applaud City Council for taking steps to protect important wetlands. However, we respectfully cannot support City Staff's recommendation to backtrack on their decision at enormous expense and destroy years of hard work and carefully and thoughtfully planned design – design which actually ensures wetlands are not only protected but enhanced.

All of the experts cannot be wrong. We urge City Council to confirm the previous City approval to DewCor and listen to these environmental experts and vote to protect the natural areas delineated in Schedule A – not just for the future of the Galway development, but for the wetlands and protected areas contained therein.

Sincerely,

Danny Williams
President

Schedule A
Galway Protected Natural Areas approved by the City of St. John's



Schedule B

Letter from Stantec Consulting Ltd.
Galway Protected Natural Areas Assessment
Dated April 17, 2014

Stantec Consulting Ltd.
141 Kelsey Drive, St. John's, NL A1B 0L2
Tel: (709) 576-1458 Fax: (709) 576-2126

April 17, 2014
File: 121511177

Attention: Keith Noseworthy
10718 Newfoundland Inc.
c/o KMK Capital & Pinnacle Engineering Limited
Suite 202, 40 Aberdeen Ave
St. John's, NL, A1A 5T3

Dear Mr. Noseworthy

Reference: Glencrest-Galway / Proposed Protected Natural Areas Assessment (PN 10003)

INTRODUCTION

10718 Newfoundland Inc. is proposing to construct a mix of residential, commercial and light-industrial developments in St. John's, Newfoundland and Labrador. The Glencrest-Galway Project ("the Project") located east of the Trans-Canada Highway (TCH) (Outer Ring Road) and south of Pitts Memorial Drive, is within the City of St. John's (Attachment A). The area of proposed development is currently zoned Productive Forest (PF), Open Space Reserve (OR) and Open Space (O) Rural Zone and changes to the current land development regulations will be required before the area can be re-designated and a Concept Plan for the area can proceed. A preliminary Concept Plan for the Project, proposes the following land uses: developable areas (i.e., residential, commercial, industrial), landscaped / natural area and protected open space, to be served by a network of arterial, collector and local access roads. Residential and commercial properties would be accessed via a new collector road running from Ruth Avenue Extension and connecting to a future extension of Southlands Boulevard. Access to the industrial lands would be achieved via the TCH.

BACKGROUND

Construction activities related to the proposed Project have the potential to affect the natural environment, including terrestrial upland, wetland and aquatic habitats. Stantec Consulting Ltd. (Stantec) was retained by Pinnacle Engineering Limited on behalf of their client 10718 Newfoundland Inc. to conduct an assessment of the subject property ("the Property"), delineating and investigating the extents of various environmental assets in an effort to limit the likelihood of interactions with biological resources (i.e., individual species and their habitats) that may be present on site. The primary objectives of this assessment were to: describe, evaluate and quantify onsite environmental resources that may exist

and that must be considered, and planned for, during the concept planning stage of the Project; and to review, interpret and report on these data in support of an application for development under the City of St. John's Development Regulations (1994) and in accordance with the Development Control Process. Recognition of these resources at an early stage of development provides the opportunity to avoid or mitigate undesirable environmental effects through the consideration of alternative means, as required, to meet construction needs. This approach helps reduce the risks and helps ensure that time and resources are not expended unnecessarily. Delivered in accordance with applicable environmental, safety and other pertinent laws and regulations, it is anticipated that careful planning prior to construction will result in the control of both predictable and preventable environmental effects through the preservation and protection of key environmental assets.

The following proposed Protected Natural Areas Assessment is based on existing information sources and environmental field studies on the natural environment and land use in the area of the Project. While inevitably some overlap remains among the Concept Plan elements, the Protected Natural Areas Assessment is focused on the environmental assets associated with lands that will not be developed for urban uses (i.e., natural areas, upland (forests, woodlands) and lowland (wetlands) environments (incl. transitional communities), wildlife habitat, water bodies and waterways).

CONCEPT PLAN

The purpose of Concept Plan - 10003-F339 RevA (Appendix A) is to present a generalized future land use concept which will be used by the Proponent to:

- Guide the preparation of detailed Area Structure Plans undertaken by the developers;
- Promote orderly development within the area encompassed by the plan boundaries; and
- Provide guidance to City of St. John's Administration and Council in reviewing future zoning, subdivision and development proposals.

The current Concept Plan, dated April 16, 2014, includes a combination of business, commercial and residential development and was developed to identify lands best suited for potential natural areas, parks, and green spaces in the City of St. John's and underscore recommendations related to the preservation and protection of these areas as determined through consultation with the City of St. John's Administration.

Under the proposed Protected Natural Area Assessment the aerial extent of lands to be protected is approximately 50 ha. As previously indicated, the Plan proposes the following land uses: developable areas (i.e., residential, commercial, industrial),

landscaped / natural area and protected open space. This includes all lands designated as protected north of the cutoff line which is indicated on the Plan.

Ownership of the natural area under the current Concept Plan shall be conveyed to the City of St. John's. Through transfer of title, the City will secure, retain ownership of, and maintain a diverse network of natural areas and open space lands encompassing these particularly valuable natural resources for future generations. This area will ultimately be connected with the green space / landscape areas throughout the proposed Glencrest-Galway Project development, and has potential to be integrated within the City's existing trail network - the Grand Concourse.

PROTECTED NATURAL AREAS ASSESSMENT

In the context of this assessment, "natural area " is defined as any parcel or area of land or water minimally modified by human activity, or which have sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities (and their habitats) considered representative of the area in which they occur. The term natural area is often a general term and is used interchangeably with terms such as natural habitat or natural heritage feature. In the scope of this document these three terms all refer to lands, which support native plants and animals of a mixture representative of the natural ecology of the region. Natural areas are not ornamental gardens, vegetable gardens, turf grass, athletic fields, grass boulevards, or trees with a lawn understory. It does refer to natural habitat such as spruce-fir forest where native shrubs and natural understory vegetation are present beneath the canopy of the trees and which are designated to remain in their natural state for open space use.

Natural areas and open spaces play an essential role in the economic, environmental, and social well-being of communities. They form part of a regional system of protected landscapes that depict the natural diversity of the region. Natural areas, including open space, natural parks, green space and conservation areas provide important community space, increase neighboring property values, attract businesses and residents, offer opportunities for passive recreational opportunities (e.g., walking trails, wildlife viewing), and provide places of scenic natural beauty. Forests, wetlands, water bodies/waterways, stream buffers, and other natural features provide many additional benefits, including water and air filtration, recharge of groundwater resources, protection of drinking water supplies, and habitat for plants, animals, and beneficial insects, as well as protection of environmentally sensitive areas (e.g. wetlands). Conserving these resources is important to the environmental health and well-being of any community as it grows and develops. They are special places in the city that are protected from development, where the natural world comes first.

The Protected Natural Areas Assessment is consistent with legislative requirements, policies, programs and guidelines in response to changing community needs and issues

and will establish direction for development and management of lands encompassed by the Project, while providing long-term protection for some of the unique and remarkable natural features of the City of St. John's, where applicable. Increasingly, St. John's residents are becoming aware of the rich and diverse environmental setting in which they live. Forests, woodlands, heath barrens, water bodies/waterway and wetlands alike create a striking landscape which is home to a wide variety of plants and animals. These natural landscapes form a uniquely distinctive backdrop to the Glencrest-Galway Project and will help maintain the overall quality of life for all to enjoy.

The Glencrest-Galway Concept Plan - 10003-F339 RevA (Phase 1), updated April 16, 2014 (attached), forms the basis of the Protected Natural Areas Assessment and is intended to reflect the predominant characteristics of the property while protecting these natural landscapes, creating passive outdoor recreational and educational opportunities, and providing public access to City of St. John's residents and visitors alike. Preservation of the natural environment is considered essential for maintaining environmental and community sustainability, improving quality of life and guiding new growth into existing communities.

Through preliminary concept planning and design, the Proponent has identified and prioritized a diverse array of natural features, such as forests, woodlands, meadows, heath barrens, wetlands, and water bodies/waterways that will remain in a natural condition to protect long-term ecological health of the surrounding landscapes, while correspondingly building a sustainable and thriving community. The process began with an assessment of the Property's most important environmental assets, identifying the natural features, water bodies/waterways and wetlands that may need to be protected from development. It includes an assessment of natural features, which systematically identifies areas of the landscape (environmentally sensitive features including their biological and physical attributes) that are vulnerable to, or that can be buffered from potential development hazards. The result is a framework (e.g., Concept Plan - 10003-F339 RevA) that delineates which environmental assets are most in need of protection and which areas can best accommodate development. The Protected Natural Areas Assessment is intended a tool to protect these unique community resources.

GOALS AND OBJECTIVES

The primary focus of the Protected Natural Areas Assessment is to provide direction that can be applied to future development associated with the proposed Glencrest-Galway Project. Its overarching goal is to protect resources (such as water, watersheds, terrestrial and aquatic habitats, wildlife and wildlife habitat) associated with the Property. The primary objectives of the Protected Natural Areas Assessment are to identify the range of natural resources that characterize the Property.

Reference: Glencrest-Galway / Proposed Protected Natural Areas Assessment (PN 10003)

The assessment strives to minimize the effect of future development in areas with important natural resources and supports the creation and enhancement of important natural area preserves and open space areas. Through the designation of this Protected Natural Area, 10718 Newfoundland Inc. intends to:

- Preserve, protect and maintain the integrity of diverse, high-quality natural features and open space lands within and in vicinity to the proposed Glencrest-Galway Project development;
- Provide a safe, aesthetic and comfortable environment through delivery of a quality landscape development;
- Protect important natural habitats, including waterway and wetland areas and their special ecological functions throughout the development;
- To ensure active and passive recreational activities are compatible with the natural environment and other ecological objectives;
- Provide a development which is connected, open, accessible, useable, diverse, affordable, clean, green, and attractive to future residents; and
- Provide opportunities for environmental stewardship, education, programs and services.

Thus, protection and preservation of the natural environment are values that strongly influence planning, decision-making and future operations for the Glencrest-Galway Project. The Protected Natural Areas Assessment reaffirms and clarifies 10718 Newfoundland Inc's on-going commitments to values articulated in the Concept Plan.

OVERVIEW OF NATURAL AREAS WITHIN GLENCREST-GALWAY

A current inventory and analysis of the natural heritage features associated with this aspect of Glencrest-Galway Project development is complete. In the early stages of the planning process, information was gathered to create an inventory of the natural features of the Property (with focus on environmentally sensitive areas), the species that inhabit them, and their existing values and functions to the community.

The Glencrest-Galway Project is home to over 880 hectares of predominantly native vegetation. This includes all areas within the Property which appear to have some substantial natural heritage value (e.g., waterways). These features have been identified through ground surveys of the site and through an examination of existing aerial photos.

Reference: Glencrest-Galway / Proposed Protected Natural Areas Assessment (PN 10003)

Wetlands are the single most common habitat within the assessed area and make up over half of the overall assessed area. Disturbed habitat is the least common habitat in the Glencrest-Galway Project area and accounts for a small percentage (less than 2%) of the total assessed natural areas.

The habitat quality in the Project area is variable ranging from very high quality areas with little to no disturbance down to moderate to poor quality habitat associated with the Duffett Farm which has very little natural heritage and few if any native species.

Particularly valuable resources within or in proximity to those areas identified as Protected Open Space on the Concept Plan - 10003-F339 (Phase 1), as proposed, may include:

a) Stream corridors, including open channels with natural banks and vegetation;
b) South Brook and its undeveloped margins;
c) waterbodies, wetlands and vernal pools;
d) forested communities and woodlands;
e) wildlife habitat and corridors;
f) unique plant and animal communities, including "species of local concern."
g) groundwater recharge areas (i.e. large, domed bog);
h) historically open-space settings and/or native landscapes; and
i) undeveloped land within proximity to the development not intended for urban uses.

GENERAL DESCRIPTION OF HABITAT TYPES WITHIN AREA

Several habitat types, with specific plant communities, occurring within the overall boundary of the Glencrest-Galway Development, are described by noting the dominants in each of three main vegetation classes (trees, shrubs and ground vegetation). During habitat surveys, plant species observed were recorded as well as the locations of any rare or possible suspected rare species. Surveys were timed to coincide with the optimum season for plant growth in an effort to permit the accurate identification of all species encountered. Generally with habitat surveys, a spring / early summer vegetation survey and a later summer / early fall survey are ideal for best locating and allowing for identification of flora taxa present in a given area. Many taxa, such as the diverse sedges (Carex spp.), typically must be in a mature flowering or seeding condition to be accurately identified.

In 2013, Stantec classified and delineated (mapped) the predominant vegetation cover types (with focus on wetlands) within Phase 1 of the 883 ha Project area. It was found that 59.6 ha of the assessed area supported wetland vegetation. The most common cover type was fen / bog vegetation, whereas marsh and shallow open water habitat occupied less area.

Reference: Glencrest-Galway / Proposed Protected Natural Areas Assessment (PN 10003)

Spruce-Fir Forest

The forest areas located within Glencrest-Galway tends to be of high quality and form a mosaic of coniferous forests intersected by wetlands. There is little evidence of past disturbance in this habitat type and the species diversity is typical of these habitat types. Prominent tree cover within well-drained areas is balsam fir (*Abies balsamea*), black spruce (*Picea mariana*) and white spruce (*Picea glauca*) and minor components of paper birch (*Betula papyrifera*). Imperfectly drained areas are predominantly comprised of black spruce, American larch, and to a lesser extent balsam fir. The understory vegetation of the upland forests varies depending on local edaphic properties. Abundant sheep laurel (*Kalmia angustifolia*), rhodora (*Rhododendron canadaense*), Labrador tea (*Rhododendron groenlandicum*), low-bush blueberry (*Vaccinium angustifolium*), sweet gale (*Myrica gale*) and other shrubs form the ground cover. Characteristic understory species within mesic and imperfectly drained areas include the bunchberry (*Cornus canadensis*), northern starflower (*Trientalis borealis*) and cinnamon ferns (*Osmunda cinnamomea*). Bryophytes include red-stemmed feathermoss (*Pleurozium schreberi*), stair-step moss (*Hylocomium splendens*), broom mosses (*Dicranum* spp.) and braided mosses (*Hypnum* spp.). Drier sites are dominated by bracken fern (*Pteridium aquilinum*) and a variety of ericaceous shrubs such as rhodora and lowbush blueberry. Where the drainage is poor the forest floor may be dominated by marsh reed grass (*Calamagrostis canadensis*).

Heath Barrens

At elevation, patches of heath barrens are present on hill tops and other exposed areas with a thin till veneer. These habitats are characterized by a dominance of sheep laurel, Labrador tea, lowbush blueberry, black crowberry, bunchberry and reindeer lichens (*Cladina* spp.). Stunted trees are sometimes present, as are patches of ericaceous shrubs and exposed bedrock. Some intermittent herbaceous cover is provided by crinkled hairgrass (*Deschampsia flexuosa*) and other species which are tolerant of open, drier conditions.

Wetlands

Wetland types encountered on-site vary substantially, as do the vegetation communities (i.e., wetland cover types) that comprise them. They include a mosaic of wet meadows / herbaceous (e.g., wet herb), scrub-shrub wetlands (e.g., wet heath) and forested wetlands along a gradient of reducing water availability. The highest quality wetlands were generally surrounded by forested areas and included large area wetlands associated with waterways in the area, including South Brook and that of two other unnamed streams. The wetland complex has numerous vegetation communities that define its ecological character, the overall wetland complex was deemed to support five

general habitat types. Using designations provided by the Canadian Wetland Classification System (NWWG 1997), wetland types considered relevant to the Property and potentially significant in terms of their preservation include:

- domed / raised bog (ombrotrophic);
- string fen (weakly minerotrophic);
- slope bog (ombrotrophic);
- slope fen (weakly minerotrophic); and
- riparian marsh (minerotrophic).

A more comprehensive summary of detailed descriptions of the extent and character of wetland habitat types occurring within assessed areas can be made available upon request.

RECOMMENDATIONS AND CONSIDERATIONS FOR HABITAT PRESERVATION

Natural areas, including lands containing unique ecological or environmental features to be retained in their natural state within the Glencrest-Galway Project would benefit from the development of a Natural Areas Management Plan by the City. Management plans lay out the goals and objectives, and guide the protection and management of natural heritage features, and activities in natural areas, parks and open space lands. Only limited development shall be permitted where it is clearly demonstrated that such development will not be detrimental to the environment by creating excessive disturbance, flooding, erosion, or other detrimental consequences.

When considering the protection of natural areas to provide habitat function there are a number of important ecological and social factors that have been included in the current Concept Plan:

Waterbodies / Waterways: An effective way to protect and enhance existing waterbodies and waterways is to ensure there is an adequate development setback, buffer zone, or other development constraints. The application of a 15 m buffer on each watercourse in the Project area, with the area to be protected from development to be considered the larger of the 100-year floodplain analysis[1], the wetland/buffer or a combination of the two will be applied to the current Concept Plan. Within the prescribed buffer there will be no removal of vegetation, excavation, in-filling, or placement of any building or structure (except as permitted [e.g., watercourse / wetland crossing (bridge, culvert, etc.)], or other earthen storm water treatment devices (i.e.,

[1] Hydrological modeling for this project is responsibility of Pinnacle Engineering Limited. Results of floodplain analysis are not yet known. Natural area boundaries as depicted on the Concept Plan are somewhat simplified, for general planning purposes, and should be considered draft. Therefore, errors if any are not the responsibility of Stantec Consulting Limited.

berms) as necessary for storm water management). Encroachment and/or stockpiling of natural materials such as brush, grubbings, soil, or other manmade objects or materials is also prohibited within 15 m of the edge of a waterbody.

Wetlands: The occurrence of a large wetland complex within the Property provides a unique opportunity to maintain the hydrology of the immediate area, along with that of the hydrological resources (e.g., waterbodies and wetlands) down-gradient. The wetland complex is comprised, in part, of a domed / raised peat bog, its hydrological regime dominated by rainfall, with little interaction between the dome and the drainage areas bounding the bog. The physical features of the peat dome and the adjoining mineralised wetland areas provide storage for flood water from the surrounding catchments. This undevelopable open space land included in the current Concept Plan represents an environmentally sensitive area that will remain undisturbed. There may also exist an opportunity to create and expand upon the passive recreational experience provided in the form of future pedestrian walking trails.

Habitat fragmentation: Isolated patches of high quality vegetation provide very little benefit to flora or fauna. Many species of animals have large home ranges and require an ability to move between different areas to survive. Additionally plants require pollinators and benefit from gene flow between individuals which may not be present in small isolated areas. Considering how to keep areas of habitat connected is an important consideration when trying to protect ecological function amidst development. In the Glencrest-Galway Project area, South Brook and a number of unnamed tributaries provide excellent east-west (with potential for wildlife dispersal through the Waterford River Valley) and north-south corridors throughout the area. Preserving habitat adjacent to these natural corridors will help to limit the effects of habitat fragmentation.

Edge effect: The perimeter of a patch of natural habitat is exposed to very different conditions than the interior of the patch. In an urban setting the edge of a natural habitat is generally the poorest in quality due to both human pressure (i.e. disturbance) and pressure from invasive species populations. As habitat patch size is reduced a larger proportion of it is subjected to edge effects. When decisions are being made about the natural areas within Glencrest-Galway Project area it is important to realize that large pieces of contiguous habitat are much more likely to preserve their ecological function than small parcels which may be adversely affected by external pressures.

Wildlife corridors: Large contiguous areas of high quality habitat provide corridors for wildlife movement and dispersal. Features of particular importance to wildlife include riparian corridors, wetlands, transitional forests (i.e., ecotones), and other natural areas with cover and water. Linkages and corridors are included in the Concept Plan to maintain connections between habitat areas.

Drainage patterns: To a large extent habitat types are determined by soil moisture and drainage. For example spruce-fir forests tend to be located in upland areas and have a complement of species that are adapted to this environment whereas lowland areas and their species compliments are more tolerant of high moisture / wetted conditions and are populated by a different complement of plants. If the moisture level or drainage of an area is changed significantly this can severely affect the plant community and could potentially negate any benefits from its preservation. If a large component of a protected plant community succumbs to a change in drainage and the habitat has become separated from other natural areas it may be more likely to repopulate with undesirable invasive species than the desirable native species that it originally protected.

Public access and passive recreation: Public access to open space resources, with interpretive information, will be considered when doing so is consistent with protection of the natural resources, and with the security and privacy of affected future landowners and occupants is not affected. Access should generally be limited to non-vehicular movement, and may be visually or physically restricted in sensitive areas. Small-scale structures accessory to low-intensity recreational uses, such as trails, boardwalks, foot bridges, benches, and related facilities may be permitted if it can be demonstrated that the adverse effects on the ecological integrity will be acceptable. The City should also designate open space areas that are not intended for human presence or activity.

Stormwater management: Stormwater management systems serving the development may be located within natural areas or open space lands. Surface systems, such as retention and detention ponds, will not qualify towards the Open Space area. While it is almost impossible to fully replicate the complexity of a natural wetland ecosystem, properly designed, sited, and maintained retention, detention or storm water ponds have the potential to make positive contributions to down-gradient waterbodies and wetlands, providing for both the retention and treatment of contaminated storm water runoff.

Closure

This report has been prepared for the benefit of 10718 Newfoundland Inc. and for submission to the City of St. John's Department of Planning, Development and Engineering, in part recognizing the City's overall development requirements. This report may not be used by any other person or entity without the express written consent of Stantec and 10718 Newfoundland Inc.

Any use that a third party makes of this report, or any reliance on decisions made based on it, is the responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made, or actions taken, based on this report.

Reference: Glencrest-Galway / Proposed Protected Natural Areas Assessment (PN 10003)

The information presented in this report represents the best technical judgment of Stantec based on the data obtained from the work. The conclusions are based on the site conditions observed by Stantec at the time the work was performed at the specific testing and/or sampling locations, and can only be extrapolated to another time and location without further analysis.

This assessment was prepared by Sean Bennett and reviewed by Colleen Leeder. We trust that the above meets your requirements at this time. Please contact Sean Bennett at (709) 576-1458 if there are any questions respecting this report.

Regards,

STANTEC CONSULTING LTD.

Sean Bennett
Senior Terrestrial Ecologist, Project Manager
Phone: 709.690.4324
sean.bennett@stantec.com

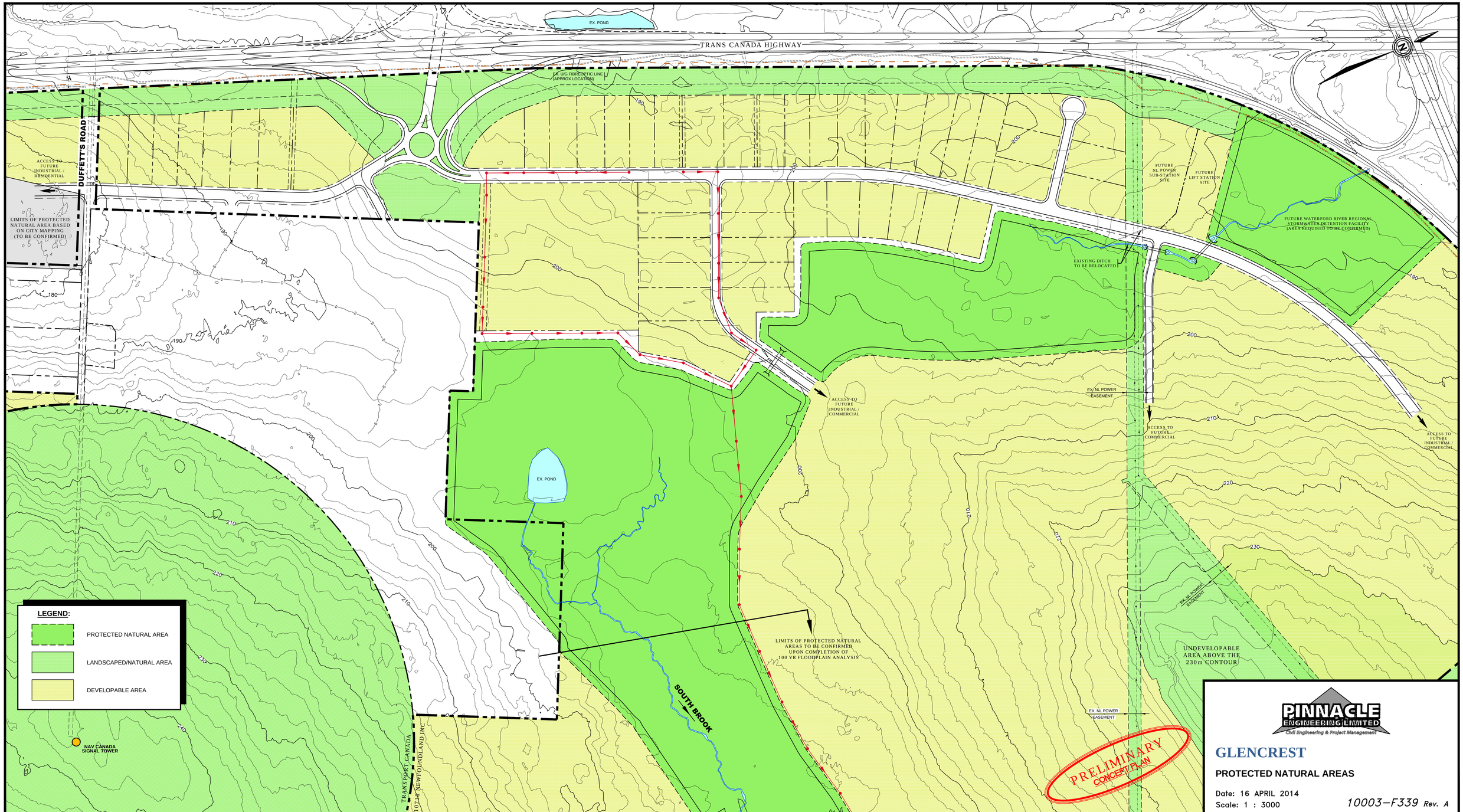
Attachment: Pinnacle Engineering Ltd. Figure Concept Plan 10003-F339 RevA

c. Keith Noseworthy, KMK Capital
Trevor Moore, Pinnacle Engineering Ltd.

ATTACHMENT A

Concept Plan

Pinnacle Engineering Ltd. Figure 10003-F339



PINNACLE ENGINEERING LIMITED
Civil Engineering & Project Management

GLENCREST

PROTECTED NATURAL AREAS

Date: 16 APRIL 2014
Scale: 1 : 3000

10003–F339 Rev. A

Schedule C

Galway Rezoning
Blue - Zoned "Industrial General" for industrial development
Green – Protected Natural Area
Approved September 18, 2015

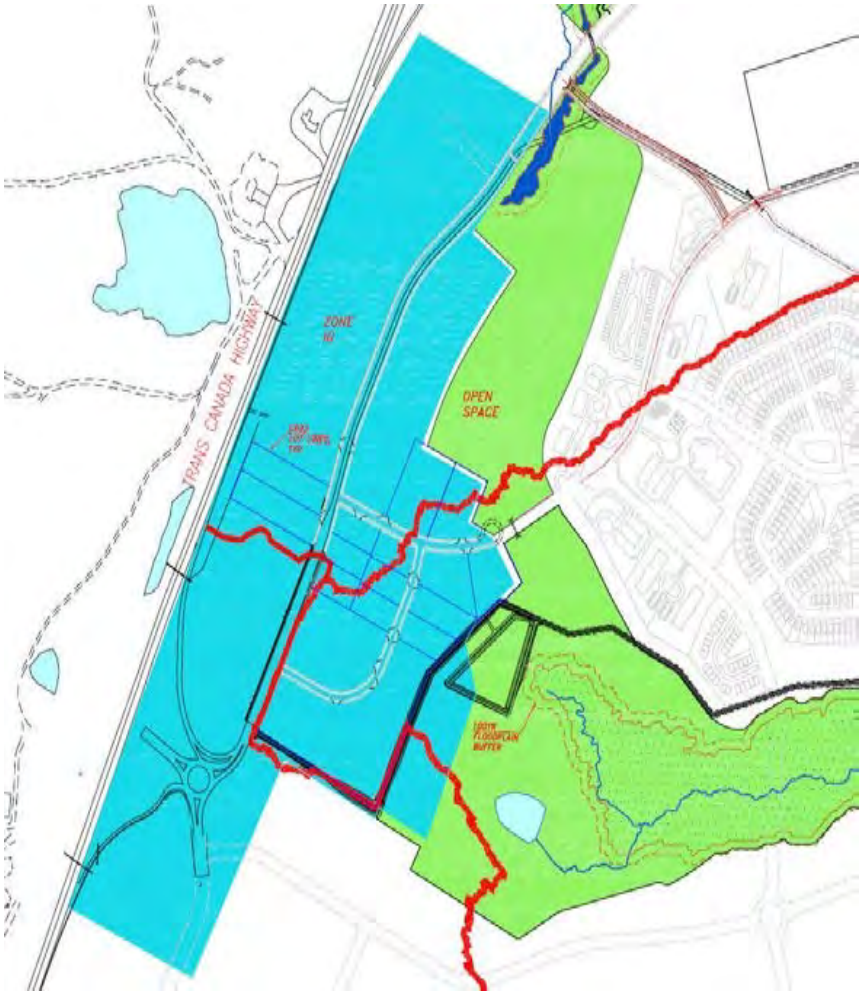


Figure 1

September 14, 2015

KMK Capital Inc.
c/o Mr. Keith Noseworthy, PTech
40 Aberdeen Avenue
St. John's NL A1A 5T3

Dear Mr. Noseworthy:

Re: St. John's Development Regulations Amendment Number 619, 2015
Proposed Rezoning from the Comprehensive Development Area – Southlands Zone to the Industrial General (IG) Zone
Trans-Canada Highway – Glencrest Development

At the Regular Meeting of the St. John's Municipal Council held on August 10, 2015, Council adopted St. John's Development Regulations Amendment Number 619, 2015, with regards to the Trans-Canada Highway – Glencrest property. The amendment would have the effect of rezoning land from the Comprehensive Development Area – Southlands Zone to the Industrial General (IG) Zone for future industrial development.

The amendment has now received Provincial registration from the Department of Municipal and Intergovernmental Affairs. The amendment will come into legal effect on Friday, September 18, 2015, the date on which the notice of the Provincial registration for the amendment is printed in The Newfoundland and Labrador Gazette. A copy of the registered amendment is enclosed for your file.

Please note that Council's approval of the amendment does not yet constitute final development approval. Should you have any further questions please do not hesitate to contact our department.

Yours truly,

Lindsay Lyghtle Brushett, MCIP
Planner III
Department of Planning, Development & Engineering

LLB/ss

Enclosure

G:\Planning and Development\Planning\2015\Correspondence\Trans-Canada Highway - Glencrest IGZone reg ltr Sept 14 2015(llb).docx

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Municipal and Intergovernmental Affairs
Land Use Planning, Lands Branch

COR/2015/04147

September 4, 2015

Ms. Lindsay Lyghte Brushett, MCIP
Planner II
City of St. John's
P.O. Box 908
St. John's, NL
A1C 5M2

Dear Ms. Brushett:

ST. JOHN'S
Development Regulations Amendment No. 619, 2015

I am pleased to inform you that the **City of St. John's Development Regulations Amendment No. 619, 2015,** as adopted by Council on the **10th day of August, 2015,** has now been registered.

Council must publish a notice in the **Newfoundland and Labrador Gazette** within 10 days of this letter. The Amendment comes into effect on the date that this notice appears in the Gazette. The notice must also appear in a local newspaper.

The Newfoundland and Labrador Gazette is published every Friday. **Notices must be submitted a week in advance.** Council can submit the notice by email (queensprinter@gov.nl.ca), by fax (729-1900) or by mail (Queen's Printer, P.O. Box 8700, St. John's, and NL, A1B 4J6.

Council's registered copy of the Amendment is enclosed. As it is a legal document, it should be reserved in a safe place.

Yours truly,

Corrie Davis, MCIP
Manager
Land Use Planning, Lands Branch

Encls.

/ch

RESOLUTION
ST. JOHN'S DEVELOPMENT REGULATIONS
AMENDMENT NUMBER 619, 2015

WHEREAS the City of St. John's wishes to accommodate industrial development along the Trans-Canada Highway, in the Glencrest development.

BE IT THEREFORE RESOLVED that the City of St. John's hereby adopts the following map amendment to the St. John's Development Regulations, in accordance with the Urban and Rural Planning Act:

> **Rezone land along the Trans-Canada Highway from the Comprehensive Development Area - Southlands (CDA – Southlands) Zone to the Industrial General (IG) Zone as shown on Map Z-1A attached.**

BE IT FURTHER RESOLVED that the City of St. John's requests the Minister of Municipal Affairs to register the proposed amendment in accordance with the requirements of the Urban and Rural Planning Act, 2000.

IN WITNESS THEREOF the Seal of the City of St. John's has been hereunto affixed and this Resolution has been signed by the Mayor and the City Clerk on behalf of Council this 13 day of August, 2015.

Dennis O'Keefe
Mayor

Diane Hedley
City Clerk

August 10, 2015
Council Adoption

LINDSAY LYGHTLE BRUSHETT
CANADIAN INSTITUTE OF PLANNERS
INSTITUT CANADIEN DES URBANISTES
MCIP

MCIP
I hereby certify that this Amendment has been prepared in accordance with the Urban and Rural Planning Act, 2000.

Development Regulations/Amendment
REGISTERED
Number 4400-2015-324
Date September 4, 2015
Signature

Provincial Registration

CITY OF ST. JOHN'S DEVELOPMENT REGULATIONS Amendment No. 619, 2015 [Map Z-1A]

2015 07 31 SCALE: 1:10000
CITY OF ST. JOHN'S
DEPARTMENT OF PLANNING,
DEVELOPMENT & ENGINEERING

I hereby certify that this amendment has been prepared in accordance with the Urban and Rural Planning Act.

AREA PROPOSED TO BE REZONED FROM CDA-SOUTHLANDS LAND USE ZONE TO INDUSTRIAL GENERAL (IG) LAND USE ZONE

LINDSAY LYGHTLE BRUSHETT
CANADIAN INSTITUTE OF PLANNERS
INSTITUT CANADIEN DES URBANISTES

M.C.I.P. signature and seal

Dennis O'Keefe
Mayor

Elaine Henley
City Clerk

August 10, 2015
Council Adoption

Development Regulations/Amendment
REGISTERED
Number 4400-2015-324
Date September 4, 2015
Signature

Provincial Registration

Schedule D

Letter from Perennial Management Limited to DewCor
Outlining the City's approval of the revised Galway Protected Natural Area
Dated August 16, 2018

PERENNIAL PM MANAGEMENT LIMITED
Property & Accounting Services

August 16th 2018

Mr. Craig Hippern
10718 NFLD. Inc. (DewCor)
P.O. Box 1919
34 Harvey Road, 5th Floor
St. John's, NL, A1C 5R4

Dear Mr. Hippern:

Re: Galway Wetlands

We are writing in response to the letter you forwarded of July 20, 2018 from the City of St. John's (the "City") to DewCor in reference to the Galway Wetlands (letter attached as Schedule "A"). Specifically, we are addressing the City's positon that they did not approve the land as shown for development as developable on the attached Figure 10003-F405 (see Schedule "B"). From our experience, in the City's normal practice of issuing development approvals, the City did approve the land shown in Figure 10003-F405 as developable by way of an email on July 23, 2014 from Mr. Dave Wadden of the City to Mr. Trevor Moore of Pinnacle Engineering Limited (DewCor's civil engineering firm at the time)(see Schedule "C"). This email provided approval to commence work on Stage 1 Industrial based on the CP-02 and CP-03 submissions, with no further mention of the wetlands or the Protected Natural Areas Report.

An additional point to consider with respect to the overall development approvals, and the issues surrounding the wetlands, is the Master Servicing Design Brief ("MSDB"). As a part of the approval process for the complete development, the consultants were/are required to continually revise and update the MSDB for review by the City. The MSDB provides a written description, drawings and calculations for the global design of a development and reflects everything from underground infrastructure to road layouts. This MSDB is submitted multiple times over the course of the design process for review and comment. The MSDB associated with the Glencrest/Galway Development was submitted to the City multiple times, as required.

This design brief underwent ongoing revision during the process to include multiple aspects of the development which were completed based on the Protected Natural Areas Plan that had been submitted. These aspects include the land use/staging plan, the sanitary and water infrastructure, and the road networks and traffic impact studies. All of this information was provided based on the above noted Protected Natural Areas Plan and the work was carried out. There were no comments provided by the City with respect to the MSDB that indicated the approach that was being taken was unacceptable, and indeed the development proceeded based on this understanding.

Approval Process

From our experience in various developments in the City, the process of obtaining approval for development drawings and related construction, including developable land has been as follows:

1. Drawings are submitted to the City for review and comment.
2. A list of comments come back from the City that are required to be addressed on the drawings submitted prior to being able to obtain permission to proceed; there is also a list of standard items that must be adhered to during development.
3. Drawings are resubmitted to address the City's comments.
4. Clarification meetings or correspondence may take place with the City between submissions.
5. Once all City comments have been addressed, the City will respond with approval of the plans, and to proceed to construction, but will not specifically state their previous comments have been addressed; the City will just not include them on the correspondence.

The above process can take place via couriered letters and drawings (via CD's) and/or emails. There may also be more than one resubmission of a set of drawings to ultimately address all of the City comments, obtain approval for the plan, and to proceed with construction. We have found this process has generally worked well and we have had no major issues. This is the process that was occurring with Galway approvals.

Timeline of Events for Approval of Stage 1 - Glencrest/Galway DEV1300060 and What Was Approved

To properly illustrate the sequence of events surrounding the approval being questioned by the City, please see below Table 1:

Table 1

Date	Correspondence
Jan 3 2O14	Correspondence sent to City of St. John's requesting the land exchange between the Glencrest Development and the City of St. John's (see Schedule "D")
	Included was the Stantec report dated December 11, 2013, "Wetland Delineation and Functional Assessment Study, Glencrest Development/Wetland (Open Space) Delineation (PN 10003)", for review and approval.
Jan 14 2014	Correspondence received from City of St. John's with comments on the land exchange proposal from Mr. Dave Wadden requesting additional information (see Schedule "E")
Jan 31 2014	Response letter sent to City of St. John's to address comments received on land exchange proposal, with supplemental information from Stantec submitted to Mr. Dave Wadden (see Schedule "F").
	Included was the Stantec letter dated January 31,20I4, referencing the "Wetland Delineation and Functional Assessment Study, Glencrest Development/Wetland (Open Space) Delineation (PN 10003)" report. The letter addressed the additional items requested by the City (see Schedule "F").
Apr 2 2014	Submission of design drawings for Glencrest Development - Stage 1 These design drawings referenced the land exchange

	Discussions took place with the City regarding how best to proceed with the proposed land exchange, and the wetland delineation evolved into the Protected Natural Areas Plan
Apr 17 2014	In a meeting held with the City of St. John's, Mr. Dave Blackmore (Deputy City Manager of Planning, Development and Engineering) requested the Protected Natural Area Report and figures be sent to his office for review.
Apr 21 2014	Correspondence sent to Mr. Dave Blackmore, as requested, including transmittal letter (see Schedule "G").
	Included was the Stantec report dated April 17, 2014, "Glencrest-Galway / proposed Protected Natural Areas Assessment (PN 10003)", which included Figure 1 shown above. This report was submitted as requested.
May 28 2014	Correspondence received from City of St. John's with comments on Stage 1 Industrial from Mr. Mike Cantwell, requesting final signed Protected Natural Areas Report confirming the wetland area used in Civil Engineering Design Drawings (see Schedule "H").
June 10 2014	Correspondence sent from Pinnacle Engineering Ltd. to the City of St. John's which included the signed final Protected Natural Areas Report from Stantec, dated April 17,2014, as requested (see Schedule "I") .
July 22 2014	Meeting held with the City of St. John's to discuss Glencrest Development and industrial approvals.
July 23 2014	Correspondence received from City of St. John's with approval on Stage 1 Industrial from Mr. Dave Wadden, requesting additional information be provided (see Schedule "J").
	No reference to any further requirements regarding the Protected Natural Areas Report, which signifies acceptance of the materials submitted and that the issue has been satisfactorily addressed.
Aug 7, 2014	Correspondence sent from Pinnacle Engineering Ltd. to the City of St. John's to address the items noted in the July 23, 2014 correspondence from Dave Wadden (see Schedule "K").
Mar 29 2016	Correspondence received from City of St. John's indicating approval of the CP-03 - Industrial Park following requests for formal approval documentation (see Schedule "L").

In reviewing the above timeline, and as is clear from the attached July 20th, 2018 letter from the City, the issue of developable acreage in Galway Stage 1 was an important point of discussion, and was being dealt with by the City and DewCor's consulting team as a part of the approval to proceed with the construction of Stage 1. This was important to establish the alignment of infrastructure such as the sanitary sewer and road network, and from a financial perspective to establish what made economic sense to proceed with.

As per the above timeline, following comments issued on the Stage 1 design by the City on May 28th, 2014, Pinnacle Engineering Limited resubmitted a package on June 10, 2014, and approval to proceed was issued on July 23, 2014 by the City (see schedules "H", "I" and "J")

Specific Responses to City Letter of July 20, 2018

Our comments on certain sections of the above noted letter are as follows:

Stantec Report

1. The Developer asked if the City would consider altering the boundaries of the wetland to increase the developable acreage for Stage 1. It was proposed to provide 12.6 ha of additional area to the

wetland, with 11.9 ha being added to the developable land. The City indicated if, upon a further study by a qualified third party consultant accepted by the City, showed it would not be environmentally detrimental to alter the boundaries as being proposed by the Developer, the City would be amenable to approving.

2. Following the submission of the Wetland Delineation and the request for the land exchange, there were discussions with the City that took place regarding the proposed exchange and how best to proceed. The result of these discussions was the decision to modify the submission to the Protected Natural Areas Plan as this approach was deemed to be better suited for what the developer was trying to achieve in cooperation with the City.

3. The Stantec report was being reviewed by the City prior to a signed copy being received on June 10, 2014. The last comment received on the report was from the City on May 28, 2014 as a part of its overall comments on the design drawings for Stage 1. All that was noted is that a copy of the signed report was required.

4. The signed report was sent to the City on June 10, 2014 (see Schedule "I")

Galway CP03 Lot No. 1

1. The installation of the underground pipe the City is referring to was approved by the City as part of the approval issued for Stage 1 – CP-03, which included a berm that separated the small area (0.6685 ha)of wetland the City is referring to from the larger portion of wetland. If, at the time of approval of Stage 1 and the alignment of the subject pipe, the City wanted to preserve this area of wetland they would have requested the alignment be altered to the North slightly so as to not interfere with this wetland. The City accepted the alignment as shown the Figure 10003-F405, attached as Schedule "B".

Claims made by DewCor

1. As DewCor's consultant, we were retained to assist with financing for the Galway development. The economic feasibility and financing for the development, associated appraisals of the developable land after the revised wetland boundary was agreed with the City, and ultimately mortgages being put in place, was not completed until January 2015. The financing package did include the developable land as shown in Figure 10003-F405, attached in Schedule "B".

If you require anything further, please contact our office.

Sincerely,

Justin Ladha
Chief Executive Officer
Perennial Management Limited

SCHEDULE A

DECISION/DIRECTION NOTE

Title:	Galway Wetland Protection St. John's Development Regulations Amendment No. 684, 2018
Date Prepared:	July 20, 2018
Report To:	Committee of the Whole
Councillor & Role:	Councillor Maggie Burton, Planning and Development Lead
Ward:	5

Decision/Direction Required:
To consider proposed amendment to the St. John's Development Regulations to designate and protect the Galway wetlands.

Discussion – Background and Current Status:
The City has been dealing with rezonings and development applications in the Galway area, including the Galway industrial area (formerly called Glencrest) along the Trans-Canada Highway. The area was initially rezoned for development in 2012, allowing serviced development above 190 metres elevation, followed by rezoning to Industrial General (IG) Zone for industrial development near the Trans-Canada Highway in 2013, then a further rezoning in 2015 to expand the industrial lands.

Under the St. John's Municipal Plan, Council's policy is to protect environmentally valuable areas such as wetlands and waterways, including significant tributaries of the Waterford River, including South Brook. These policies are contained in Part III, Section 8 "Resource and Environmental Areas" of the Municipal Plan, page III-39 and following pages.

Under the St. John's Development Regulations, which implement the policies of the Municipal Plan, Section 11 "Overlay Districts" sets out the regulations to protect wetlands. Section 11.2.3 lists the specific wetlands that are protected from development, with at least a 15-metre buffer from the edge of the wetland. There are several maps associated with this section, notably map J-2 "Flood Hazard Areas, Watersheds, Waterways and Wetlands".

The Galway lands are located above 190 metres elevation. Until 2012, lands in St. John's above that elevation were reserved from development, as they were higher than the elevation planned for future servicing with municipal water and sewer. The policy change in 2012 allowed municipal services to be provided above 190 metres in select areas. In the Galway development area, this allowed for services to be extended at the developer's cost.

Going back to 1993, the City had commissioned a Significant Waterways and Wetlands Study. The area that would become Galway was not included in the study, since it was above 190 metres and therefore could not be developed as per City policy at that time. When the results of the study were incorporated into the 1993 St. John's Municipal Plan and the 1994 St. John's Development Regulations, there was no mention of the Galway wetlands.

When the rezonings were done for Galway, the City did not have wetland mapping in place for the area. At the direction of the City, the developer commissioned a wetland study by Stantec to map the wetlands that needed to be protected. The resulting report, showing 71.91 hectares (178 acres) of wetland (the "Wetland Delineation"), was submitted to the City but had not been finalized or accepted by the City when the most recent industrial rezoning was applied for. Prior to the City accepting the Wetland Delineation, the developer commissioned and submitted another report which they titled "Proposed Protected Natural Areas Assessment", which proposed trimming out areas of the wetland to allow for more developable land; this report has not been accepted by the City. The rezoning was completed prior to the designation of wetland in Galway.

At the time of the rezoning application above, the City was in discussions with the developer about mapping and protecting the wetlands. The City strives to use zones to assist in identifying and protecting wetlands, such as Open Space (O) and Open Space Reserve (OR), however, the primary protection provided in the Development Regulations for wetlands is through the establishment of environmental overlays provided for in the Municipal Plan (Part III, Section 8) and the Development Regulations (Section 11). Both methods have been used in other parts of the city.

It is recommended that the Galway wetlands, as mapped in the Wetland Delineation, be added to the City's map J-2 "Flood Hazard Areas, Watersheds, Waterways and Wetlands" of the Development Regulations, with the addition of a buffer. The boundary for the wetlands will be as shown on the Wetland Delineation, except for a very small area near the Trans-Canada Highway where the extension of water and sewage services to the area required construction at the edge of the wetland, resulting in this land no longer forming part of the wetland (the "Excepted Land"). The amount of land affected is minimal.

Also, it is also recommended that a text amendment be approved to add the Galway wetlands to the list of wetlands in Section 11.2.3 of the Development Regulations.

In the meantime, until the protection noted above is completed and gazetted, it is recommended that Council defer any applications for development of land within the Wetland Delineation, less the excepted lands, to ensure that no development proceed which might have a detrimental effect on the Galway wetlands. Deferring such applications would be in keeping with the Municipal Plan and Development Regulations and would align with the City's legislative obligation to protect wetlands.

Key Considerations/Implications:

1. Budget/Financial Implications: Not Applicable.

2. Partners or Other Stakeholders:
   Property owners of the affected lands, and property owners and residents nearby and downstream.

3. Alignment with Strategic Directions/Adopted Plans:
   City's Strategic Plan 2015-18: Responsive and Progressive – Build social, *environmental* and demographic factors into decision-making.

4. Legal or Policy Implications:
   Protection of wetlands is an environmental policy and legislative obligation of the St. John's Municipal Plan.

5. Engagement and Communications Considerations:
   Recommended to be advertised for public review as per Section 5.5 of the St. John's Development Regulations.

6. Human Resource Implications: Not Applicable.

7. Procurement Implications: Not Applicable.

8. Information Technology Implications: Not Applicable.

9. Other Implications: Not Applicable.

Recommendation:
It is recommended that Council consider the proposed amendment to the St. John's Development Regulations to set out the boundaries of the Galway wetland and to add the Galway wetland to the list of protected wetlands. A resolution is attached.

Staff recommend that the application be advertised for public review as per Section 5.5 of the St. John's Development Regulations. Following the review period, the application would be referred to a regular meeting of Council for consideration.

It is also recommended that, until the protections for the Galway wetlands are in legal effect, Council defer any applications for development of land within the Wetland Delineation, less the Excepted Lands.

This is provided for Council's consideration and direction.

Prepared by/Signature:
Ken O'Brien, MCIP – Chief Municipal Planner

Signature: _____

Approved by/Date/Signature:
Jason Sinyard, P.Eng., MBA – Deputy City Manager, Planning, Engineering and Regulatory Services

Signature: _____

KO'B/dlm

Attachments: Resolution and maps

SCHEDULE B

LEGEND

- PROPERTY BOUNDARY
- PROTECTED NATURAL AREAS
- RESIDENTIAL
- POTENTIAL LAND ACQUISITION RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL

COCHRANE POND
WATER EL. 140.90±

27.00m R.O.W.
SEE ROAD CROSS SECTION 'B'

23.50m R.O.W.
CITY OF ST. JOHN'S
RESIDENTIAL COLLECTOR
DRAWING No. 820-07

800mR

NAV CANADA SIGNAL TOWER

23.50m R.O.W.
CITY OF ST. JOHN'S
RESIDENTIAL COLLECTOR
DRAWING No. 820-07

GLENDENNING GOLF CLUB

pond

pond

pond

21.00m R.O.W.
SEE ROAD CROSS SECTION 'C'

27.00m R.O.W.
SEE ROAD CROSS SECTION 'B'

NEW RESERVOIR TOWERS

23.50m R.O.W.
CITY OF ST. JOHN'S
RESIDENTIAL COLLECTOR
DRAWING No. 820-07

NEW BOOSTER PUMP STATION

50.00m R.O.W.
SEE ROAD CROSS SECTION 'A'

FUTURE SOUTHLANDS BLVD

SOUTHLANDS BLVD

OLD PLACENTIA ROAD

RUTH AVENUE

SAGONA AVENUE

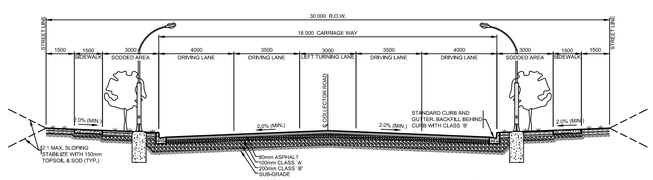
TOTTS MEMORIAL HIGHWAY

GLENCOE DRIVE

City of Mount Pearl

City of St. John's

PRELIMINARY CONCEPT PLAN



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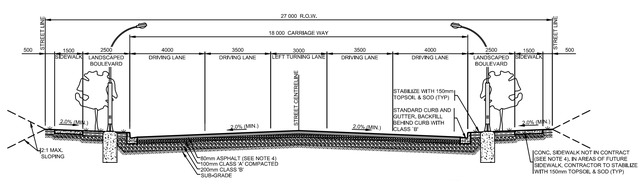
SCALE: 1:150 (H) ; 1:75 (V)



TYPICAL ROAD CROSS SECTION 'B' — B F405
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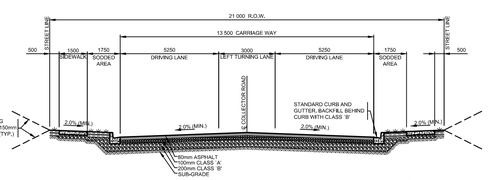

TYPICAL ROAD CROSS SECTION 'C' — C F405
SCALE: 1:150 (H) ; 1:75 (V)

PINNACLE ENGINEERING LIMITED
Civil Engineering & Project Management

GLENCREST / GALWAY

PROPOSED ROAD NETWORK

Date: 02 JUNE 2014
Scale: 1 : 7500

10003 – F405

SCHEDULE C

Karen Paddock

From:	Dave Wadden <DWadden@stjohns.ca>
Sent:	Wednesday, July 23, 2014 11:29 AM
To:	Trevor Moore
Cc:	Kevin King; Justin Ladha; Keith Noseworthy; Dave Blackmore; Jason Sinyard; Lynnann Winsor; Jason Phillips; Mike Cantwell; Andrea Roberts; Govern PDE Multi Media Mail
Subject:	DEV1300060 Proposed Industrial Subdivision ? Stage 1 - Glencrest/Galway

Trevor:

Further to our meeting of July 22, 2014, approval is given to commence work on the above referenced project which the understanding that revised drawings will be submitted within the next two weeks that address the following items.

1. A Subdivision Plan must be provided containing all the required information, including Newfoundland Power easements.

2. A copy of the Federal DFO & Provincial Department of Environment approvals for the above referenced project must be forwarded.

3. We would like to reiterate that no building permits will be issued for this development until the new water pumping station and the storage reservoir have been constructed, commissioned and accepted by the City.

4. On the future local road at STA 0+800 near the intersection with future collector road *North*, the reducer, headwall and flap gate should be removed. A hydrant should be installed near the end of the water main on the future local road to allow for the system to be drained. The water main should be end capped for future connection.

5. On the future local road at STA 0+200, a water meter is required to be installed west of the proposed 600 mm x 400 mm reducer. This meter will be supplied by the City, however, the Developer should install a 2100 mm diameter manhole at this location with a pipe extending through the manhole. A spool piece 750 mm in length with two couplings should be provided within the manhole.

6. The 50 mm combination air relief and vacuum valve at STA 0+310 on collector road *North* does not appear to be sufficient for the 400 mm water distribution main. We recommend that the developer consider a direct bury AMI air valve for this application.

7. Considering that the 400 mm water main will be a distribution main with hydrants and service stubs connected to it, water main valves should not exceed a maximum spacing of 180 m. The valve spacing is exceeded in the following sections of the water distribution main:

Collector Road *North*

1. STA 0 - 020 to STA 0+220

2. STA 0 + 415 to STA 0+710

3. STA 0 +710 to 1+000

Future Local Road

1. STA 0 + 785 to 0 + 550

2. STA 0+ 550 to 0 + 325

The developer should revise their valve spacing such that the maximum spacing of 180 m is not exceeded along the above sections.

8. Emergency Access, the construction of an emergency access route from Ruth Ave to the new proposed commercial development off the Trans-Canada Highway, east of the Cochrane Pond overpass is to be constructed. The construction of the access route is acceptable by the SJRFD provided the route:

i) Is a temporary measure during the development stage of the project
ii) Has a minimum paved surface of 4m width and 1.5 meter gravel shoulders (details must be provided in plan & profile)
iii) Be designed to support the expected loads imposed by firefighting equipment
iv) Dedicated one way, west bound.
v) Gated access for both ends to restrict traffic.
vi) Gates would be locked in such a manner as to be accessible by emergency personnel to be cut by bolt cutter
vii) "Emergency Vehicle Use Only" signs to be erected
viii) shall be maintained and clear of snow year round by the area developer

Should it be decided that construction vehicles be permitted to access the road, the road shall be constructed for the purpose of two traffic as per NFPA 1141 Means of Access 5.2.3 "roadways shall have a minimum clear width of 12ft (3.7m) for each lane of travel, excluding shoulders and parking.

9. Until the water reservoir, water pump station and associated transmission mains have been constructed and tested by the Developer and accepted by the City of St. John's, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

10. Until the sanitary trunk sewer has been constructed and tested by the Developer (from the Industrial Park to the connection in Southlands Boulevard, along with the flow monitoring station) and accepted by the City of St. John's, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

11. Until all work associated with the construction of the interchange (Contract 2) from the Trans-Canada Highway has been completed and accepted by the City, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

12. Until all storm infrastructure is constructed and accepted by the City of St. John's, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

13. The 100-year floodplain for the watercourse tributary to Paddy's Pond must be delineated

and all necessary upgrades completed for existing/proposed stream crossings before building permits will be issued for Stage 1 of the Industrial Subdivision.

14. It is the applicant's responsibility to contact Canada Post regarding the installation of mailbox(es) and the delivery of mail and associated fees; contact person at Canada Post is Dave Francais 758-1001 ext. 2026. Failure to contact Canada Post may result in no mailbox installation or mail delivery service. The City of St. John's accepts no responsibility for the applicant's failure to contact Canada Post regarding these matters or failure to pay any required fee for these services.

15. All street stubs for future streets must have Jersey Barriers placed in order to prevent though traffic. Barriers must be placed at the street line of the major street and must have proper reflective signs.

16. Catchbasin leads to be constructed with PVC as per Section 222.02 of the City's Specification book.

17. Accurate as-built drawings must be submitted to the City for record purposes upon completion of the Work.

In addition to the above the following fees/securities are required and we'd like to set up a meeting next week to discuss prior to finalizing these.

18. A Subdivision application fee of $200 per lot.

19. A 10% maintenance security for Phase 1 work once the Developer has completed and tested the work and it has been accepted by the City.

20. The Phase 2 Security.

21. A 10-year 10% maintenance security for the water reservoir to be paid after this item has been constructed, tested, and accepted by the City. This would be required before any Building Permits were issued.

22. A 10% maintenance security for the water pump station and associated distribution mains to be paid after this item has been constructed, tested, and accepted by the City. This would be required before any Building Permits were issued.

23. A 10% maintenance security for the trunk sanitary sewer to be paid after this item has been constructed, tested, and accepted by the City. This would be required before any Building Permits were issued.

You should ensure that all necessary precautions are in place to prevent siltation of downstream watercourses and wetlands.

Dave Wadden, M.Eng., P.Eng.
Manager, Development - Engineering
Planning, Development & Engineering
City of St. John's
Phone: (709)-576-8260
Fax: (709)-576-8625
e-mail: dwadden@stjohns.ca

SCHEDULE D

KMK CAPITAL

40 Aberdeen Avenue, Suite 202, St. John's, NL, A1A 5T3
Tel: 709-754-2057 Fax: 709-738-0707

January 3, 2014

Mr. Gerard Doran, C.E.T.
Development Officer
Planning, Development & Engineering
City of St. John's
P.O Box 908
St. John's, NL A1C 5M2

Re: Land Exchange Proposal for City of St. John's Wetland at Glencrest Development

Dear Mr. Doran,

As you are aware our company is now in the early stages of construction for the first phases of the Glencrest Development. Glencrest's planned industrial and residential developments will be adjacent to or border the wetland in this area. Over the next two years this will be a heavy construction zone with primary road network and services being constructed. Following this, the industrial and residential areas, although having an improved aesthetic appeal, will be of a scale and proximity to these wetlands that a land exchange would be beneficial to both the development and the protection of the wetland areas.

As per a request from the City of St. John's to complete a Wetland Delineation and Functional Assessment Study for this development, Stantec was retained by our office to complete this work. The Wetland Delineation Report is attached for your review and approval. In reviewing the wetland delineation and the development plans, we felt it may be advantageous for both parties to exchange portions of this land thereby allowing the development to proceed with minimal impact on the newly delineated wetland. With this in mind, we have prepared a proposal that involves a land exchange between the Glencrest Development and the City of St. John's. This proposal would have no cost to the City of St. John's and would see a larger portion of land designated as wetland/open space than was previously allocated and shown on city mapping. It would also allow the majority of this wetland and open space to maintain its natural state as virgin land. This wetland/open space would then be available for use in a variety of capacities such as, but not limited to, recreational purposes, i.e. walking trails. We would also like to explore the possibility that a portion of this additional wetland could be used towards the allocation of open/green space required for the development.

Details of the proposal are as follows (please refer to Figure 10003-F255 and Legend):

- Wetland as delineated by Stantec: 57.08 ha
- Area to be added to Wetland: 12.60 ha
- Area to be taken from Wetland: 11.90 ha
- Proposed total area of Wetland after exchange: 58.50 ha
    - Additional Wetland provided: 0.69 ha
- Land to be used for one of possibly three regional storm water detention facilities: 5.26 ha

KMK CAPITAL

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The proposed border on South Brook is preliminary as we recognize that a flood plain analysis has not yet been completed. Additionally, it is understood that the final location and design of the proposed regional storm water detention pond would have an impact on these borders. Once these aspects of analysis and design have been completed the development would be adjusted as necessary to ensure that all development incorporates and respects the borders of these elements.

We would welcome the opportunity to meet with you to discuss this proposal further. Please contact the undersigned to arrange a meeting or request further information.

Sincerely,

Keith Noseworthy, PTech
Project Coordinator/Technologist
KMK Capital Inc.

Mobile: 709 689 6853
Office: 709 754 2057 ext. 281
Fax: 709 738 0707
Email: keith.noseworthy@kmkcapital.ca
Suite 202 - 40 Aberdeen Avenue
St. John's, NL Canada A1A 5T3
www.kmkcapital.ca

SCHEDULE E

Keith Noseworthy

From: Keith Noseworthy
Sent: Tuesday, January 14, 2014 2:25 PM
To: Trevor Moore; Justin Ladha
Subject: FW: Land Exchange Proposal - Glencrest Wetlands

FYI

From: Dave Wadden [mailto:DWadden@stjohns.ca]
Sent: Tuesday, January 14, 2014 2:23 PM
To: Keith Noseworthy
Cc: Gerard Doran; Robert F Smart; Dave Blackmore; Jason Sinyard; Govern PDE Multi Media Mail; Ryan Crewe
Subject: Land Exchange Proposal - Glencrest Wetlands

Keith:

In response to your January 3, 2014, letter to Gerard Doran regarding a land exchange proposal for the Glencrest wetlands, the following items would have to be forwarded to the City for review in order to evaluate this proposal.

1. The Stantec report would have to be revised to individually assess in the field each parcel of the wetland that is proposed to be removed from the wetland and provide a commentary on the significance of each parcel relative to the overall function of the wetland and the impact of removal.

2. The Stantec report needs to be modified so that the recommended wetland buffer(s) are shown on Figure 5-1.

3. The 100-year floodplain and its 15m buffer must be delineated for each watercourse in the study area. This would typically be accomplished using a 2D hydraulic model in XPSWMM using a 3m grid, or smaller resolution if required, to delineate the 100-year floodplain.

The area to be protected from development would be the larger of the 100-year floodplain/buffer, the wetland/buffer or a combination of the two. The deliverables would be the following:

a) A revised Stantec report in PDF format addressing items 1 and 2. As well, a NAD83 referenced ArcGIS polygon shape file containing the proposed wetland and its recommended buffer.

b) A 2D XPSWMM model, with all associated files, which calculates the 100-year runoff for each watercourse and determines the 100-year floodplain. A PDF of the 100-year floodplain overlayed upon the City's aerial mapping. As well, a NAD83 referenced ArcGIS polygon shapefile containing the proposed 100-year floodplain and its 15m buffer.

c) A PDF of the area to be protected from development overlayed on the City's aerial mapping based on the larger of the 100-year floodplain/buffer, the wetland/buffer or a combination of the two.

If you have any questions then please contact me at 576-8260 to discuss.

Dave Wadden, M.Eng., P.Eng.
Manager, Development - Engineering
Planning, Development & Engineering
City of St. John's
Phone: (709)-576-8260
Fax: (709)-576-8625

e-mail: dwadden@stjohns.ca

SCHEDULE F

KMK CAPITAL

40 Aberdeen Avenue, Suite 202, St. John's, NL, A1A 5T3
Tel: 709-754-2057 Fax: 709-738-0707

January 31, 2014

Mr. Dave Wadden, M.Eng., P.Eng..
Manager, Development - Engineering
Planning, Development & Engineering
City of St. John's
P.O Box 908
St. John's, NL A1C 5M2

Re: Land Exchange Proposal for City of St. John's Wetland at Glencrest Development

Dear Mr. Wadden,

In response to your e-mail dated January 14, 2014, regarding the land exchange proposal for the Glencrest wetlands, please see below for the supplemental information requested. These are organized in the same sequence as they were provided.

1. As requested, Stantec was engaged to prepare a supplemental report on the areas of the wetland which have been proposed to be exchanged. They have prepared a response which addresses the significance of the proposed exchange areas and the overall effect this will have on the wetland as a whole. Please reference the attached PDF 'Glencrest response letter_fnl_31Jan2014'.
2. As requested, Stantec has modified their Figure to show the recommended wetland buffer of 15m. Please reference Figure 1 contained within the Stantec report.
3. With respect to your requests regarding the 100-year floodplain and its buffer, we understand that a 100-year floodplain analysis will be required and that the greater of the floodplain and wetland buffer, or a combination of the two, will be required to be used. However at this time it is not required for Stage 1 – Industrial as this area of the development does not impact South Brook. This will be addressed as development progresses along South .

This information and the attached response from Stantec should address the areas put forth in your e-mail. If there are any additional requirements, or any issues with the information submitted, please let us know.

Sincerely,
Keith Noseworthy, PTech
Project Coordinator/Technologist
KMK Capital Inc.

Mobile: 709 689 6853
Office: 709 754 2057 ext. 281
Fax: 709 738 0707
Email: keith.noseworthy@kmkcapital.ca
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St. John's, NL Canada A1A 5T3

Stantec Consulting Ltd.
141 Kelsey Drive, St. John's, NL A1B 0L2
Tel: (709) 576-1458 Fax: (709) 576-2126

January 31, 2014
File: 121511177

Attention: Dave Wadden, M.Eng., P.Eng.
Manager, Development – Engineering
Planning, Development & Engineering
City of St. John's
PO Box 908
St. John's, NL A1C 5M2

Dear Mr. Wadden

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

INTRODUCTION

In response to your e-mail request dated January 14, 2014, Stantec Consulting Ltd. (Stantec) is pleased to submit the following supplemental information in support of the Glencrest Wetland Land Exchange Proposal. It is understood that the City of St. John's require individual assessment of the parcels of wetland habitat to be affected by the project, including the recommended buffer widths to protect areas of wetland habitat that are to be avoided.

BACKGROUND

In December 2013, Stantec submitted a report of the Glencrest Development / Wetland (Open Space) Delineation and Functional Assessment. The intent of the assessment and subsequent report was to:

- identify representative natural features (wetland ecosystems) to be set aside to protect identified values (e.g., water quantity, water quality, hydrologic characteristics or functions, and terrestrial and aquatic habitats);
- recommend ways to allow use of wetlands where the social and economic benefits of development are considered to be greater than the loss of wetland functions and values; and
- recommend ways to minimize, and mitigate where necessary, the adverse effects of developments in the watershed which directly and/or indirectly effected wetlands.

In Newfoundland and Labrador, effects on wetlands associated with the Project are subject to regulatory requirements under Section 48 of the provincial *Water Resources Act* (Government of Newfoundland and Labrador. 2002) and *Policy for Development in Wetlands*. Under the Policy, development activities in and affecting wetlands require a permit. The objective of the Policy is to permit developments in wetlands that do not adversely affect the water quantity, water quality, hydrologic characteristics or functions, and terrestrial and aquatic habitats of the wetlands

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

(Government of Newfoundland and Labrador 2011a). All uses and development of wetlands that result in potentially adverse changes to water quantity or water quality, ecological or hydrologic functions of the wetlands require the implementation of mitigative measures to be specified in the terms and conditions for the environmental approval. At present, there is no specific regulation, policy or strategy that provides comprehensive legal protection for wetlands across the province or guidelines to be followed when working in and around wetlands.

On a provincial scale organic wetlands (peatlands) are ubiquitous. The region is physically heterogeneous and defined by, among other things, bedrock and surficial geology, climate, physiography, glacial history, and land use. Similarly, the Project area and surrounding landscapes are considered wetland-rich, with an abundance of forested and shrubby wetland types (i.e., bogs/fens). Generally, depressional areas, waterways (including South Brook and two unnamed streams) and drainage channels, support more wetland habitat than that of the surrounding uplands in the Project area (Figure 1 and Table 1). As a consequence, surrounding proposed development and stormwater management can have an adverse effect upon the wetland(s) – it has the potential to compromise wetland diversity, water quality and water quantity. Therefore, careful planning during project design and development is required to minimize the related loss and long-term effects to the remaining wetlands on site.

Wetland Alteration and Effect Assessment

In 2013, Stantec completed an assessment and evaluation of the Project, classifying and delineating (mapping) the predominant vegetation cover types (with focus on wetlands) within the 883 ha area that encompasses the proposed Glencrest Development (Figure 1). It was found that 15% (59.6 ha) of the land supported wetland vegetation. The most common land cover type was fen / bog vegetation, whereas marsh and shallow open water habitat were scarce (Table 1).

A direct comparison of the pre- and post-development landscapes provided the relative abundance of pre- and post-development wetland vegetation cover (Table 1) in the Project area. The size and classification of individual parcels of wetland to be affected by the Project are identified in Table 1 and Figure 1.

Table 1 Comparison of Pre- and Post-development Wetland Cover Types

Wetland ID	Wetland Type	Approximate Wetland Area (ha)				
		Pre-Development - Natural (ha)	Parcels affected by the Project (m2 / ha)	Change (ha)	Post-Development - Concept Plan1 (ha)	Change (%)
1	Domed bog	10.6	-	0.0	10.6	0.0
2	Slope Fen	17.7	-	0.0	17.7	0.0

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

Wetland ID	Wetland Type	Approximate Wetland Area (ha)				
		Pre-Development - Natural (ha)	Parcels affected by the Project (m2 / ha)	Change (ha)	Post-Development - Concept Plan1 (ha)	Change (%)
3	(3a) String Fen – Ladder	5.9	-	0.0	5.9	0.0
	(3b) String Fen – Atlantic Ribbed Fen	6.6	1017 / 0.10	0.1	6.5	-1.0
4	(4a) Slope Bog - Shrub	6.6	950 / 0.09	0.3	6.2	-4.7
			1606 / 0.16			
			136 / 0.01			
			335 / 0.03			
			178 / 0.02			
			469 / 0.05			
	(4b) Slope Bog - Treed	12.2	6685 / 0.67	1.1	11.1	-9.0
			4228 / 0.42			
5	Riparian Marsh	0.0	-	0.0	0.0	0.0
6	Stream Fen	0.0	-	0.0	0.0	0.0
Total		**59.6**	**-**	**1.6**	**58.0**	**-2.6**
[1] – Concept Plan as of January 20, 2014						

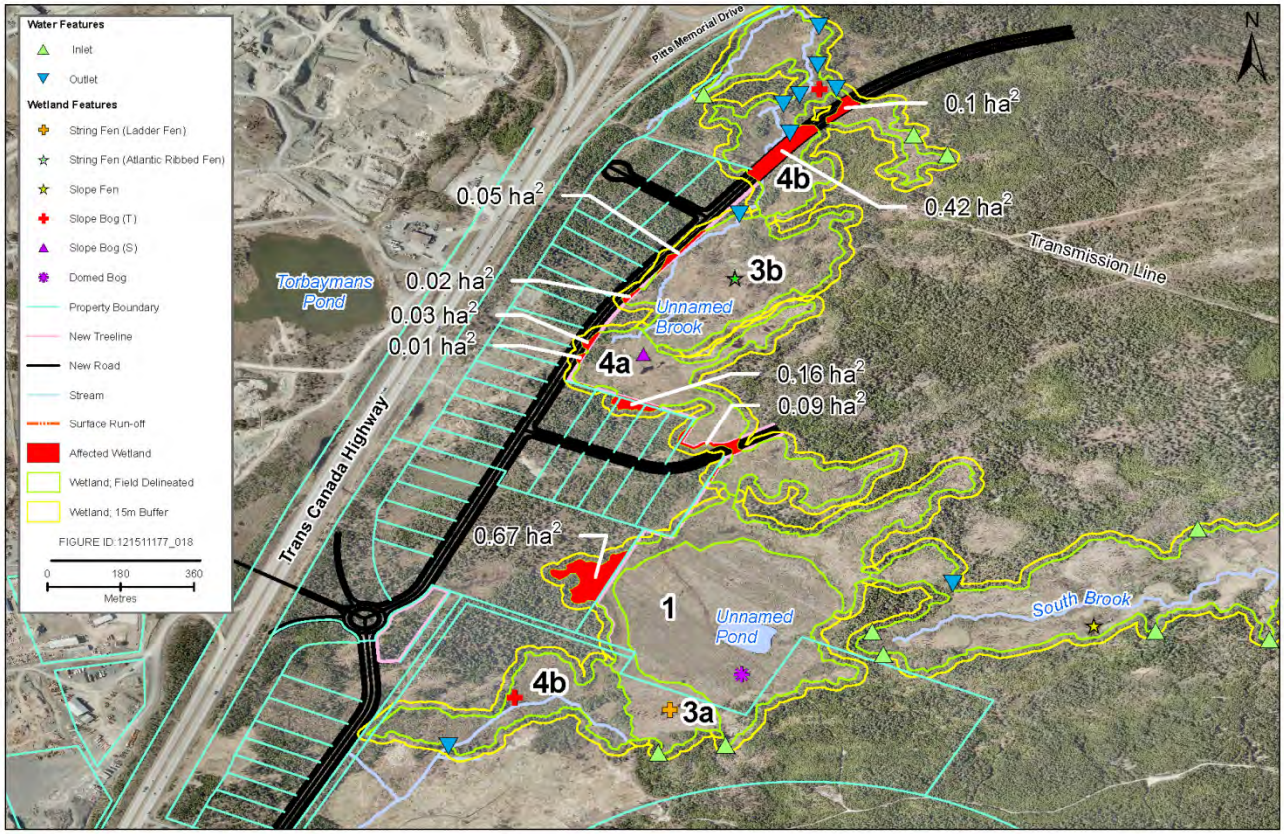
Direct wetland loss has been minimized to the extent possible while achieving Project goals. Direct loss is estimated to be less than 2% of the total wetland area on site. Although we cannot quantify changes to land cover across the entire region, we can make generalizations about vegetation changes with some confidence. Net change in wetland vegetation cover types in the region, based on results of the Wetland Delineation and Functional Assessment Study report prepared for the Project area, is negligible.

The function of the individual parcels of wetland to be altered function together with the greater wetland that they comprise, and cannot be assessed on an individual basis. It can be confirmed that in each case where direct loss was unavoidable, the parcel affected is considered to be marginal, is not integral to the continued function or viability of the wetland complex, and was confirmed to be free of species of conservation concern. For a summary of the function assessment of wetlands found on site, please refer to the Glencrest Development / Wetland (Open Space) Delineation and Functional Assessment Report (December, 2013)

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

Indirect wetland loss will be minimized through the implementation of both general and site specific mitigation. General mitigation is outlined in Stantec 2013. For example, the development should be designed to eliminate erosion and sedimentation into the wetland complex during construction, and be buffered from indirect effects by controlling water quality and quantity generated from this residential, commercial and industrial zone to protect those resources for the life of the Project (post-construction). In addition to general mitigation measures identified in Stantec 2013, site specific mitigation, including a Project Environmental Protection Plan and Erosion and Sediment Control Plan, will be prepared in advance of construction. Many of these specific measures are required in order to comply with federal, provincial, and/or municipal regulations, regardless of whether they are specifically identified above or in the Wetland Delineation and Functional Assessment Study report.

Figure1 Aerial Extent of Affected Wetland Parcels – Glencrest Development



Temporarily altered or degraded wetlands and their habitats and processes will be actively rehabilitated (progressive rehabilitation), to the extent that is practical. Unintended / unplanned or indirect effects to wetlands will be rehabilitated, where possible. Furthermore, while it is almost impossible to fully replicate the complexity of a natural wetland ecosystem, properly designed,

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

sited, or maintained storm water ponds identified for incorporation in the development have the potential to make positive contributions to down-gradient waterbodies and wetlands, providing both retention and treatment of contaminated storm water runoff. Although, they are fundamentally different from natural wetland systems, a variety of storm water wetlands design considerations have been shown to improve water quality, protect downstream channels, reduce flooding, effects on fisheries and provide habitat for select wildlife (i.e., songbirds, waterfowl). As these areas become naturalized, there potential use may increase.

In accordance with that stated above, the success of applicable mitigation alternatives is based on the ability of the Project to identify and implement effective mitigation measures. If no alternative exists to disturbing the wetland for development, alternatives strategies over and above those outlined in the aforementioned document must be evaluated.

To this end, KMK Capital and their client, through negotiations with the City of St. John's, have suggested that a portion of those wetlands permanently lost or altered as a result of development maybe offset through the conversion of ownership of the affected wetland, to be addressed through a land exchange. The exchange would transfer 1.6 ha of adjacent private property, comprised primarily of upland, transitional habitats to the City in exchange for 1.6 ha of wetland area required under the current concept plan. Typically, when implementing compensatory wetland mitigation, there is a strong preference for the compensatory wetland should be an equivalent type of wetland, located in a landscape that is equally or less impacted, offer the same degree of permanency as that of the effected wetland and as near to the development site as possible, though this may not always be possible. At present, however, there exists no regulatory requirement for this type of mitigation in Newfoundland and Labrador, nor any guidance on the mitigation area required to offset wetland losses, adding an additional layer of uncertainty to mitigation based on such a compensatory approach. Alternatively, the proposed land exchange can be viewed as a voluntary measure, would provide increased protection (i.e., buffering) of wetland-riparian areas and associated uplands, and is anticipated to maintain a level of connectivity with that of the adjacent wetland, thereby providing *in situ* opportunities for the maintenance of ecological and hydrologic function.

Buffers & Setbacks

The amount of natural habitat that is located adjacent to wetlands can be important to the maintenance of wetland functions and attributes, particularly for wetland-dependent species that rely on these adjacent natural areas for portions of their life cycle (Environment Canada 2013). The diversity of habitat types found within and adjacent to wetlands makes them attractive to more species of wildlife than any other ecosystem type. In cases where these adjacent natural areas form an intrinsic part of the wetland ecosystem - providing a variety of ecosystem functions, changes made to, or adjacent to, a watercourse or wetland may result in adverse effects. These activities, if not carried out properly, may diminish the quality of our water, and could place aquatic and wildlife resources at risk. An effective way to protect and enhance existing wetlands is to ensure there is an adequate development setback, wetland buffer zone, and other development constraints or environmental protection opportunities placed upon the wetland to provide adequate protection.

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

Requiring buffers or setbacks of a specific width has been one of the primary methods by which various jurisdictions use to protect the functions and values of wetlands. Generally, buffers are the uplands adjacent to an aquatic resource that can, through various physical, chemical, and biological processes, reduce impacts to wetlands from adjacent land uses. The amount of wetland buffer or setback required for adequate protection however depends upon the wetland. Because of site-specific differences, a one-size-fits-all buffer width is not recommended, and flexibility in width may be warranted on a site-by-site basis. The physical characteristics of buffers (e.g., slope, soils, vegetation, and width) determine how well buffers reduce the adverse impacts of human development. Typically, the most effective buffer for both water quality protection and wildlife is a diverse, multi-layered, undisturbed vegetation community. A strip of native trees, shrubs and grasses will increase the effectiveness of the buffer and enhance attractiveness to wildlife. The buffer needs to be wide enough to slow and reduce surface runoff and provide wildlife habitat. As a result, minimum buffer widths may depend on a variety of factors, including purpose of the buffer, slope (increased slope = increased buffer), soil type (low permeability clays require greater buffer widths), adjacent landuse, wetland size and function.

In its response to a Land Exchange proposal submitted by KMK Capital, the City of St. John's has recommended the application of a 15 metre buffer on each watercourse in the Project area, with the area to be protected from development to be considered the larger of the 100-year floodplain/buffer, the wetland/buffer or a combination of the two. As reference, the Government of Prince Edward Island Prince Edward Island Watercourse, Wetland and Buffer Zone Activity Guidelines define buffer zones as "*the 15 metre area surrounding all watercourses and wetlands on PEI*" (Government of Prince Edward Island. 2012). A 15 metre buffer would be effective for sediment and nutrient removal, except where steep slopes are present. Alternatively, buffers in excess of 30 metres may be warranted to protect environmentally sensitive wetlands, in particular those wetlands harbouring locally, regionally, or provincially significant species (flora or fauna). Based on current knowledge, the literature increasingly indicates that larger buffer requirements tend to be associated with the habitat requirements for wildlife, especially those species inhabiting marshes (Environment Canada 2013). Therefore, minimum buffer widths based on water quality parameters alone are unlikely to be sufficient for wildlife protection. Established buffers should be monitored and maintained to ensure they sustain their maximum benefit for wildlife and water quality.

Within the prescribed buffer there will be no removal of vegetation, excavation, in-filling, or placement of any building or structure (except as permitted [e.g., watercourse / wetland crossing (bridge, culvert, etc.), or other earthen storm water treatment devices (i.e., berms) as necessary for storm water management) for a minimum of 15 m from any bank, bog, fen, marsh, bordering vegetated wetland, isolated vegetated wetland, vernal pool, pond, creek, river or stream. Encroachment and/or stockpiling of natural materials such as brush, grubbings, soil, or other manmade objects or materials is also prohibited within 15 m of the edge of a wetland.

Conclusion

According to Stantec's analysis, the objectives of preserving natural features (i.e., wetlands) value and function may not be fully achieved as a result of development, however, based on the type,

Reference: Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003).

size and limited scale of development or encroachment, it is anticipated to have little significance on the overall wetland complex or its function. Furthermore, wetlands are not considered limiting in the region. The application of proposed mitigation / monitoring strategies and accepted Best Management Practices (BMPs), if followed, should allow KMK Capital and its client to meet the required standard(s) or achieve the desired objective(s) and could prove to be a model for other developments within the City of St. John's. This information will help to ensure that the proposed development activities are planned and carried out in compliance with the various legislation, regulations, and policies that may apply.

References

- Environment Canada. 2013. How Much Habitat is Enough? Third Edition. Environment Canada, Toronto, Ontario.
- Government of Newfoundland and Labrador. 2002. Water Resources Act, SNL 2002 cW-4.01. Available at: http://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm.
- Government of Newfoundland and Labrador. 2011a. Policy for Development in Wetlands. Department of Environment and Conservation. Available at: http://www.env.gov.nl.ca/env/waterres/regulations/policies/wetlands.html.
- Government of Prince Edward Island. 2012 Prince Edward Island Watercourse, Wetland and Buffer Zone Activity Guidelines. Available at: http://www.gov.pe.ca/photos/original/elj_webpkg.pdf
- NWWG (National Wetlands Working Group). 1997. The Canadian Wetland Classification System. Second Edition. B.G. Warner and C.D.A Rubec (eds.), Wetlands Research Centre, University of Waterloo.

Regards,

STANTEC CONSULTING LTD.

Sean Bennett
Senior Terrestrial Ecologist, Project Manager
Phone: 709.690.4324
sean.bennett@stantec.com

Attachment: Pinnacle Engineering Ltd. Figure 10003-F292

c. Keith Noseworthy, KMK Capital
Trevor Moore, Pinnacle Engineering Ltd.

SCHEDULE G

KMK CAPITAL

40 Aberdeen Avenue, Suite 202, St. John's, NL, A1A 5T3
Tel: 709-754-2057 Fax: 709-738-0707

TRANSMITTAL FORM

To: Mr. Dave Blackmore
Company: City of St. John's

From: Keith Noseworthy
Date: 4/21/2014

Project: Glencrest-Galway Development – Protected Natural Areas
Project No.: 10003

- [ ] For Approval
- [ ] For Records and Distribution
- [ ] For Comments
- [ ] For Reproduction
- [x] As Requested
- [ ] Revise and Resubmit
- [ ] Reviewed
- [ ] For Tendering
- [ ] Preliminary
- [ ] Approved for Construction

Enclosed Items:

ITEM	# OF COPIES	DESCRIPTION
Protected Natural Areas Assessment - Stantec	1	Submitted for review
Figure 10003-F339 Rev. A	1	Submitted for review

Mr. Dave Blackmore,
As requested in our meeting held on Thursday, April 17, please find enclosed a CD which contains the Protected Natural Areas Assessment as completed by Stantec as well as the Proposed Protected Natural Areas Plan completed by Pinnacle Engineering. These items are being submitted for review, please provide comments at your earliest convenience.

Thanks and Regards,

Signed: KNoseworthy

Keith Noseworthy, PTech
Project Coordinator/Technologist
KMK Capital Inc.
Suite 202 - 40 Aberdeen Avenue
St. John's, NL Canada A1A 5T3

Mobile: 709 689 6853
Office: 709 754 2057 ext. 281
Fax: 709 738 0707

SCHEDULE H

Keith Noseworthy

From: Mike Cantwell <MCantwell@stjohns.ca>
Sent: Wednesday, May 28, 2014 9:48 AM
To: Trevor Moore; Gerard Doran
Cc: Dave Wadden; Jason Sinyard; Govern PDE Multi Media Mail; Keith Noseworthy; justin.lahda@kmkcaptial.ca
Subject: Proposed Industrial Subdivision ? Stage 1 - Glencrest Pinnacle Engineering 15 Duffett?s Road Decision Application #DEV1300060

Date: May 28, 2014

To: Gerard Doran, CET
Development Officer

From: Mike Cantwell, P. Eng.,
Development Engineer

Re: Proposed Industrial Subdivision – Stage 1 - Glencrest
Pinnacle Engineering
15 Duffett's Road
Decision Application #DEV1300060

Further to your Referral Form regarding the above referenced project, please be advised that the information provided has been reviewed. The following comments apply:

1) All work must be performed in accordance with the requirements of the applicable sections of the City of St. John's Specifications Book.

2) A Subdivision Plan must be provided containing all the required information, including Newfoundland Power easements.

3) A copy of the DFO & Department of Environment approval for the proposed works must be forwarded.

4) The City's Traffic Division is requesting more details concerning the Glencrest development. While requesting this material please note that in general a layout of the road network and property uses would greatly benefit the City. As it currently stands, the concept plan for Glencrest has changed immensely, by having information available on the anticipated road network (including street classifications) and the projected property uses, the City will be better capable to determine if there are any potential issues as developments increase in the area.

5) The protected natural area (wetland) layout used in drawings is not a City approved layout. Please submit a signed wetland study report which confirms the reduced wetland area.

6) The proponent must submit a floodplain analysis for South Brook, and two tributaries near the industrial lands.

7) For the stormwater discharging to Paddy's pond for the Stage 1 industrial development, the City requires a report stating the effects of water level increase in Paddy's pond due to proposed development. The report

needs to show the net increase in runoff from the outlet of Paddy's pond and show the existing culverts have the capacity to carry post development flow for the development. The City believes that NL Power has a control structure on Paddy's Pond. The proponent must obtain approval from NL Power concerning any increases to water levels in the pond.

8) The proponent must submit a NAD83 referenced ArcGIS polygon for the storm drainage pervious and impervious areas.

9) The proponent must submit a impervious area calculation for pre-development XPSWMM model associated with NAD83 referenced drawings.

10) The proponent must submit a impervious area calculation for post-development XPSWMM model associated with NAD83 referenced drawings.

11) It is not clear from the drawing (F-359) the proposed outfall of the 7.25 hectare development. If it is discharging to South Brook a detention pond design is required to achieve net zero increase of flow.

12) Sanitary pipe profile is only shown only up to manhole number 7222S. The City requires a profile to the existing manhole connection in Southlands Boulevard in order to complete the review of the sanitary sewer computation spreadsheet.

13) The proponent must submit a NAD83 referenced ArcGIS polygon for the sanitary drainage areas.

14) Glencrest sanitary trunk sewer – Option no 1 - Stage 1 in spread sheet from MH5758S to MH5831S increased tributary area 2.51ha was added in calculation but drawing 10003-F366 does not reflect this area. Please revised and resubmit.

15) MH5514S does not correspond with drawing 10003-F362.

16) Details are required for the proposed temporary sanitary connection from 9063S to existing manhole.

17) In the vicinity of Southland Blvd and Great Western Drive a permanent flow monitoring station must be installed according to the City's current standards with all electrical and mechanical devices.

18) The City needs confirmations from the Southlands developer (below 190m) that the proposed trunk sewer route is acceptable. The current drawings, submitted by the Southlands Developer, do not show any of the proposed infrastructure from the Glencrest development.

19) The developer should provide a copy of the conceptual water distribution layout for the entire development. This conceptual layout should show the location of the pump station, water storage reservoir(s), pressure reducing stations and all water mains equal to or greater than 300 mm in diameter. To effectively pass comment on the water main layout proposed for CP-02, an overall understanding of the developer's future servicing intentions is required.

20) The developer should provide a copy of a working hydraulic water model for the entire development area. The water model shall be in the latest version of Innovyze Infowater.

21) Currently, a 500 mm water main is proposed with services and hydrant leads connected to the main. In areas where services will be stubbed off for future lots, a water transmission main in parallel with a smaller distribution main should be specified. All future services should be connected to the water distribution main.

22) The road crossing culvert at STA 1+125 on future collector road North and the culvert crossing the sanitary trunk sewer at STA 0+300 should have concrete headwalls specified at the inlet and outlet rather than flat stones and sod.

23) On the future local road at STA 0+800 near the intersection with future collector road North, the headwall and reducer on the 500 mm water main must be removed. This water main should be end capped for future connection (see drawings C10 and C11).

24) A permanent drain should be provided for the water main near STA 1+050 on the collector road north. Drainage should be directed to the neighboring watercourse. Consideration should be given to providing a second permanent drain near the southwestern extents of the project.

25) A third water main valve should be provided east of the 500 mm tee at STA 0+790 on the future 15.0 m wide road near the intersection with future collector road North (see drawings C10 and C11).

26) Within the limits of the industrial development, hydrants must be provided on **both** sides of the street and spaced a maximum of 140 m on either side. Hydrants on opposite sides of the street must be staggered so that a hydrant on one side will fall at the midpoint of two hydrants on the opposite side of the street. The proponent has indicated that they propose to place hydrants at 90m intervals (staged on both sides of the street). This spacing will be adequate for the development.

27) In any location where there is a local distribution main then the hydrants should be connected to the local main. In any areas where the transmission main is not twinned we will permit fire hydrants to be connected to the transmission main.

28) The service easement width for the sanitary trunk sewer should be increased in the following areas based on the proposed depth of the sewer:

i) Drawings C13 (starting at STA 0+465), C14 and C18: a 9.0 m wide easement is required.

ii) Drawings C15 and C19: a 10.0 m wide easement is required.

iii) Please note the developer may specify a consistent easement width of 10.0 m if they wish to avoid the sanitary sewer easement jogging in and out.

29) The proponent must provide test pit data for the entire area of development.

30) The proponent must provide an access control plan for the properties to ensure adequate left turn storage availability. It was noted in previous reviews that the properties with access to the "future primary collector road" will require shared access points do to the limited storage. It is suggested that these items be considered at this point in to time eliminate any issues with access control as the properties are sold off to various developers.

31) The plans indicate a 15 meter right of way travelling east from the "future primary collector road" towards the cemetery sites. We will require clarification on the intended purpose of this right of way and any proposed development that will have access to the right of way. Based on the 15 meter available width this would allow for the installation of a local street which would connect the upper and lower end of the main collector. Consideration needs to be given to the possible connections and properties accessing this right of way to better determine if a collector as opposed to local would be required, should the intention be for the installation of a future street.

32) Emergency Access, the construction of an emergency access route from Ruth Ave to the new proposed commercial development off the Trans-Canada Highway, east of the Cochrane Pond overpass is to be constructed. The construction of the access route is acceptable by the SJRFD provided the route:

i) Is a temporary measure during the development stage of the project
ii) Has a minimum paved surface of 4m width and 1.5 meter gravel shoulders (details must be provided in plan & profile)
iii) Be designed to support the expected loads imposed by firefighting equipment
iv) Dedicated one way, west bound.
v) Gated access for both ends to restrict traffic.
vi) Gates would be locked in such a manner as to be accessible by emergency personnel to be cut by bolt cutter
vii) "Emergency Vehicle Use Only" signs to be erected
viii) shall be maintained and clear of snow year round by the area developer

Should it be decided that construction vehicles be permitted to access the road, the road shall be constructed for the purpose of two traffic as per NFPA 1141 Means of Access 5.2.3 "roadways shall have a minimum clear width of 12ft (3.7m) for each lane of travel, excluding shoulders and parking.

33) Until the water reservoir, water pump station and transmission mains are in place and all testing and acceptance by the City of St. John's, no Building Permits will be issued for proposed industrial buildings within this stage of development.

34) Until the sanitary trunk sewer is constructed to the connection in Southlands Boulevard, along with the installation of the required flow monitoring no Building Permits will be issued for proposed industrial buildings within this stage of development.

35) Until all work associated with the construction of the interchange (Contract 2) from the Trans-Canada Highway has been completed and accepted by the City, no Building Permits will be issued for proposed industrial buildings within this stage of development.

36) Until all storm infrastructure is constructed and accepted by the City of St. John's, no Building Permits will be issued for proposed industrial buildings within this stage of development.

37) It is the applicant's responsibility to contact Canada Post regarding the installation of mailbox(es) and the delivery of mail and associated fees; contact person at Canada Post is Dave Francais 758-1001 ext. 2026. Failure to contact Canada Post may result in no mailbox installation or mail delivery service. The City of St. John's accepts no responsibility for the applicant's failure to contact Canada Post regarding these matters or failure to pay any required fee for these services.

38) All street stubs for future streets must have Jersey Barriers placed in order to prevent though traffic. Barriers must be placed at the street line of the major street and must have proper reflective signs.

39) Catchbasin leads to be constructed with PVC as per Section 222.02 of the City's Specification book.

40) Accurate as-built drawings must be submitted to the City for record purposes upon completion of the Work.

41) A note must be added to the plans. - All work on existing water mains must be performed by City Forces.

42) A note must be added to the plans - The applicant must obtain a Street excavation Permit from the City streets Inspector prior to performing any excavation work within the street right-of-way.

43) The applicant must complete a Permit to Connect prior to performing any servicing work.

In addition to the foregoing, the following assessments and/or fees must be paid, and the following securities provided:

1. Development & Application Fee

To be calculated.

2. Phase 1 Security

Phase 1 Security as per Section 6.2 of the City of St. John's Development Regulations has been calculated to be: **To be calculated once revised drawings are submitted.**

Security in this amount will be required if Building Permits are needed prior to City acceptance of Phase 1 work.

3. Phase 2 Security

Phase 2 Security as per Section 6.3 of the City of St. John's Development Regulations has been calculated to be: **To be calculated once revised drawings are submitted.**

The purpose of Phase 2 Security is to provide a source of funding that will enable the City to complete the Phase 2 works in a subdivision should the original developer become unable to do so. If such circumstances develop, the City would proceed to tender to have the necessary work performed, using the Phase 2 Security to pay for the work.

The amount of Phase 2 Security requested by the City is based on an estimate of the value of Phase 2 work using historical pricing information from contracts for similar type work. It is assumed that should the City be required to call a tender for completion of a subdivision, the bid prices would reflect historical pricing trends for projects that have been tendered by the City.

The required securities must be in a form acceptable to the Director of Finance (certified cheque or letter of credit).

The foregoing items must be addressed and revised plans submitted for review.

I am available at your convenience should you wish to discuss this matter.

Mike Cantwell, P.Eng.,
Development Engineer
Department of Planning, Development &Engineering
City of St. John's
T 709.576.8722
F 709.576.8625

City of St. John's | 10 New Gower Street | P.O.Box 908 | St. John's, NL | A1C 5M2

SCHEDULE I

PINNACLE ENGINEERING LIMITED
Civil Engineering & Project Management

40 Aberdeen Avenue, Suite 202, St. John's, NL A1A 5T3

T. 709.754.2114 • F. 709.738.0707

10 June 2014

PN 10003

Mr. Gerard Doran, C.E.T.
Development Officer
Dept. of Planning, Development and Engineering
City of St. John's
P.O. Box 908
St. John's, NL A1C 5M2

Dear Mr. Doran,

Re: Glencrest Development
CP03 / Stage 1 Industrial
(City File No. DEV1300060)

Enclosed please find a complete set of revised design drawings based on the comments in your Mr. Mike Cantwell's email dated 28 May 2014. We offer the following comments using the same numbering system noted in Mr. Cantwell's email.

1. All work will be in accordance with the City of St. John's Specification Book and was noted on the previous submission.

2. A subdivision plan will be submitted under separate cover.

3. Approvals from Fisheries & Oceans Canada and the Department of Environment and Conservation will be forwarded upon receipt.

4. As requested, please see Figure 10003-F405 for a preliminary road network.

5. Enclosed please see the signed Protected Natural Area Report prepared by Stantec Consulting Limited (File No. 121511177), dated April 17, 2014.

6. The floodplain for South Brook will be submitted under separate cover.

7. All correspondence, including reports and acceptance, sent to Newfoundland Power and Department of Transportation and Works are enclosed for your reference.

8. Enclosed please find the NAD83 referenced ArcGIS polygons for the storm drainage areas.

9. Enclosed please find the NAD83 referenced ArcGIS polygons for the pre-development storm drainage areas, broken into pervious and impervious areas for

each drainage area. The area of each drainage shape file was directly entered into XP SWMM as an input, no calculation necessary.

10. Enclosed please find the NAD83 referenced ArcGIS polygons for the post-development storm drainage areas, broken into pervious and imperious areas for each drainage area. The area of each drainage shape file was directly entered into XP SWMM as an input, no calculation necessary. Please note, for the industrial lots, as we currently do not know what size building or parking configuration will be used, a maximum of 80% impervious was used and a minimum of 20% imperviousness was used for each lot as the XP SWMM inputs.

11. Enclosed, please refer to Drawings C25 (Plan and Profile, Primary Collector Road South Drainage Ditch – 01) and C26 (Plan and Profile, Primary Collector Road South Drainage Ditch – 02) which delineates the proposed ditch from the headwall on Figure 10003-F359. The drainage from CP02 and CP03 will be directed to Paddy's Pond.

12. We are currently working with Fairview Investments on the design of the sanitary trunk sewer. Please refer to Figure 10003-F340 for the proposed trunk sewer route. This will be submitted under separate cover.

13. ArcGIS polygons for the sanitary drainage areas are enclosed.

14. The additional 2.51 ha has been removed from the Stage 1 computations.

15. The manhole number on Figure 10003-F362 has been updated.

16. Details of the sanitary connection to the existing trunk sewer will be provided along with the trunk sewer design as noted in Point 12.

17. A permanent flow monitoring station will be incorporated into the design as noted in Point 12.

18. Please refer to Point 12.

19. The Master Servicing Design Brief has been submitted.

20. The InfoWater model was submitted with the Master Servicing Design Brief.

21. The watermain size has been revised from 500 mm to 400 mm.

22. Headwalls have been added.

23. As discussed with your Mr. Jason Philips we have not revised the drain detail at this time. We understand the City is reviewing the detail again and will advise once this review is completed.

24. Please refer to Point 23.

25. A valve has been added.

26. Hydrants are now spaced at 90 m.

27. Services and hydrants are connected to the 400 mm main.

28. A constant easement width of 10 m is provided.

29. The following geotechnical reports are enclosed (electronic pdf copies only).

- Glencrest Development – Industrial Area Mass Earthworks Program
- Glencrest Development – Stage 1, Proposed Watermain Area G
- Glencrest Development – Stage 1, Proposed Right In/Right Out Roadworks Area I
- Glencrest Development –Stage 1, Proposed Collector Road, Area H

30. Please refer to Figure 10003-F401 attached for the access control plan.

31. This roadway is an emergency access road. Labelling has been removed.

32. The emergency access road has been revised to a 4.0 m wide asphalt surface and will have gates at both ends complete with lock and signage.

    The developer will be responsible for snow clearing.

33. Understood.

34. Understood.

35. Understood.

36. Understood.

37. It is understood that we must contact Canada Post.

38. Jersey Barriers will be added to street stubs.

39. Catchbasin lead material is noted on the drawings.

40. As-builts will be submitted to the City.

41. This note was on the previous submission.

42. This note was on the previous submission.

43. This note was on the previous submission.

We understand fees and security will be calculated based on this submission.

If you have any questions regarding the above, please do not hesitate to contact the undersigned.

Sincerely,

Trevor Moore, P. Eng.
Project Engineer

TM/aw
Enclosures
Via courier

CC: Mr. Justin Ladha, KMK Capital Inc. (letter only)
Mr. Keith Noseworthy, KMK Capital Inc. (letter only)

SCHEDULE J

Karen Paddock

From:	Dave Wadden <DWadden@stjohns.ca>
Sent:	Wednesday, July 23, 2014 11:29 AM
To:	Trevor Moore
Cc:	Kevin King; Justin Ladha; Keith Noseworthy; Dave Blackmore; Jason Sinyard; Lynnann Winsor; Jason Phillips; Mike Cantwell; Andrea Roberts; Govern PDE Multi Media Mail
Subject:	DEV1300060 Proposed Industrial Subdivision ? Stage 1 - Glencrest/Galway

Trevor:

Further to our meeting of July 22, 2014, approval is given to commence work on the above referenced project which the understanding that revised drawings will be submitted within the next two weeks that address the following items.

1. A Subdivision Plan must be provided containing all the required information, including Newfoundland Power easements.

2. A copy of the Federal DFO & Provincial Department of Environment approvals for the above referenced project must be forwarded.

3. We would like to reiterate that no building permits will be issued for this development until the new water pumping station and the storage reservoir have been constructed, commissioned and accepted by the City.

4. On the future local road at STA 0+800 near the intersection with future collector road *North*, the reducer, headwall and flap gate should be removed. A hydrant should be installed near the end of the water main on the future local road to allow for the system to be drained. The water main should be end capped for future connection.

5. On the future local road at STA 0+200, a water meter is required to be installed west of the proposed 600 mm x 400 mm reducer. This meter will be supplied by the City, however, the Developer should install a 2100 mm diameter manhole at this location with a pipe extending through the manhole. A spool piece 750 mm in length with two couplings should be provided within the manhole.

6. The 50 mm combination air relief and vacuum valve at STA 0+310 on collector road *North* does not appear to be sufficient for the 400 mm water distribution main. We recommend that the developer consider a direct bury AMI air valve for this application.

7. Considering that the 400 mm water main will be a distribution main with hydrants and service stubs connected to it, water main valves should not exceed a maximum spacing of 180 m. The valve spacing is exceeded in the following sections of the water distribution main:

Collector Road *North*

1. STA 0 - 020 to STA 0+220

2. STA 0 + 415 to STA 0+710

3. STA 0 +710 to 1+000

Future Local Road

1. STA 0 + 785 to 0 + 550

2. STA 0+ 550 to 0 + 325

The developer should revise their valve spacing such that the maximum spacing of 180 m is not exceeded along the above sections.

8. Emergency Access, the construction of an emergency access route from Ruth Ave to the new proposed commercial development off the Trans-Canada Highway, east of the Cochrane Pond overpass is to be constructed. The construction of the access route is acceptable by the SJRFD provided the route:

i) Is a temporary measure during the development stage of the project
ii) Has a minimum paved surface of 4m width and 1.5 meter gravel shoulders (details must be provided in plan & profile)
iii) Be designed to support the expected loads imposed by firefighting equipment
iv) Dedicated one way, west bound.
v) Gated access for both ends to restrict traffic.
vi) Gates would be locked in such a manner as to be accessible by emergency personnel to be cut by bolt cutter
vii) "Emergency Vehicle Use Only" signs to be erected
viii) shall be maintained and clear of snow year round by the area developer

Should it be decided that construction vehicles be permitted to access the road, the road shall be constructed for the purpose of two traffic as per NFPA 1141 Means of Access 5.2.3 "roadways shall have a minimum clear width of 12ft (3.7m) for each lane of travel, excluding shoulders and parking.

9. Until the water reservoir, water pump station and associated transmission mains have been constructed and tested by the Developer and accepted by the City of St. John's, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

10. Until the sanitary trunk sewer has been constructed and tested by the Developer (from the Industrial Park to the connection in Southlands Boulevard, along with the flow monitoring station) and accepted by the City of St. John's, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

11. Until all work associated with the construction of the interchange (Contract 2) from the Trans-Canada Highway has been completed and accepted by the City, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

12. Until all storm infrastructure is constructed and accepted by the City of St. John's, no Building Permits will be issued for Stage 1 of the Industrial Subdivision.

13. The 100-year floodplain for the watercourse tributary to Paddy's Pond must be delineated

and all necessary upgrades completed for existing/proposed stream crossings before building permits will be issued for Stage 1 of the Industrial Subdivision.

14. It is the applicant's responsibility to contact Canada Post regarding the installation of mailbox(es) and the delivery of mail and associated fees; contact person at Canada Post is Dave Francais 758-1001 ext. 2026. Failure to contact Canada Post may result in no mailbox installation or mail delivery service. The City of St. John's accepts no responsibility for the applicant's failure to contact Canada Post regarding these matters or failure to pay any required fee for these services.

15. All street stubs for future streets must have Jersey Barriers placed in order to prevent though traffic. Barriers must be placed at the street line of the major street and must have proper reflective signs.

16. Catchbasin leads to be constructed with PVC as per Section 222.02 of the City's Specification book.

17. Accurate as-built drawings must be submitted to the City for record purposes upon completion of the Work.

In addition to the above the following fees/securities are required and we'd like to set up a meeting next week to discuss prior to finalizing these.

18. A Subdivision application fee of $200 per lot.

19. A 10% maintenance security for Phase 1 work once the Developer has completed and tested the work and it has been accepted by the City.

20. The Phase 2 Security.

21. A 10-year 10% maintenance security for the water reservoir to be paid after this item has been constructed, tested, and accepted by the City. This would be required before any Building Permits were issued.

22. A 10% maintenance security for the water pump station and associated distribution mains to be paid after this item has been constructed, tested, and accepted by the City. This would be required before any Building Permits were issued.

23. A 10% maintenance security for the trunk sanitary sewer to be paid after this item has been constructed, tested, and accepted by the City. This would be required before any Building Permits were issued.

You should ensure that all necessary precautions are in place to prevent siltation of downstream watercourses and wetlands.

Dave Wadden, M.Eng., P.Eng.
Manager, Development - Engineering
Planning, Development & Engineering
City of St. John's
Phone: (709)-576-8260
Fax: (709)-576-8625
e-mail: dwadden@stjohns.ca

SCHEDULE K

PINNACLE ENGINEERING LIMITED
Civil Engineering & Project Management

40 Aberdeen Avenue, Suite 202, St. John's, NL A1A 5T3

T. 709.754.2114 • F. 709.738.0707

1 August 2014

PN 10003

Ms. Andrea Roberts
Dept. of Planning, Development and Engineering
City of St. John's
P.O. Box 908
St. John's, NL A1C 5M2

Dear Ms. Roberts,

Re: Glencrest CP02 – TCH Access
(City File No. DEV1400066)

Further to your Mr. Dave Wadden's email of 23 July 2014 we provide the following response (using the same numbering system as referenced in the email):

1. Please see attached copies of approval letters from DFO, DOEC and DTW.

2. As requested the flap gate valve has been removed and a temporary hydrant has been added.

3. A valve has been added as requested.

4. The number of bends has not changed, however the degree of deflection of the bends has been reduced.

5. A water meter chamber is now provided. Based on correspondence with the City the spool piece is now 550 mm long to accommodate a 300 mm water meter. As well we have added a bypass around the chamber for the future installation/maintenance of the water meter.

6 & 7. Understood. As requested, we submitted our preliminary construction cost estimates to Mr. Wadden on 30 July 2014.

If you require any clarification or additional information please advise.

Sincerely,

Trevor Moore, P. Eng.
Project Engineer

TM/ah
Enclosures
Via courier

cc: Justin Ladha, KMK Capital Inc. (letter only)
Keith Noseworthy, KMK Capital Inc. (letter only)

PINNACLE ENGINEERING LIMITED
Civil Engineering & Project Management

40 Aberdeen Avenue, Suite 202, St. John's, NL A1A 5T3

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1 August 2014

PN 10003

Ms. Andrea Roberts
Dept. of Planning, Development and Engineering
City of St. John's
P.O. Box 908
St. John's, NL A1C 5M2

Dear Ms. Roberts

Re: Glencrest CP03 – Stage 1 Industrial
(City File No. DEV1300060)

Further to your Mr. Dave Wadden's email of 23 July 2014 we provide the following response (using the same numbering system as referenced in the email):

1. A subdivision plan with NL Power easements will be provided under separate cover.
2. Please see attached copies of approval letters from DFO and DOEC
3. Understood.
4. As requested the flap gate valve has been removed and a temporary hydrant has been added.
5. A water meter chamber is now provided. Based on correspondence with the City the spool piece is now 550mm long to accommodate a 300mm water meter. As well we have added a bypass around the chamber for the future installation/maintenance of the water meter.
6. We have revised the air release valve to be a 75mm ARI valve.
7. The valve and hydrant spacing is now in line with City requirements.
8. The emergency access road is a temporary measure. The paved surface is 4.0m wide and will be constructed to the same standard as any City street. The access road will also be a dedicated one way road. Gates will be provided on both ends along with Emergency Vehicles Use Only signs. The access road will be maintained and clear of snow at the Developers cost.
9. Understood.
10. Understood.

11. Understood.

12. Understood.

13. Please see 100yr. floodplain for Stream 'A' to Paddy's Pond. The following information is attached.

    - XP SWMM Model
    - Computations
    - Drainage Area Plan (Figure 10003 – F422)
    - 100yr. Floodplain Plan (Figure 10003 – F440)
    - Shape files of floodplain, buffer and Drainage Area

14. Understood.

15. Understood.

16. Understood.

17. Understood.

18-23. Understood. As requested, we submitted our preliminary construction cost estimates to Mr. Wadden on 30 July 2014.

Also enclosed please find new sanitary drainage area plans and computations for Full build out and Stage 1.

- Figure 10003 – F362 Rev. C (Full Build Out)
- Full Build Out Computations Rev. C
- Figure 10003 – F366 Rev. A (Stage 1)
- Stage 1 Computations Rev. C

Please note the reason for this revision to the sanitary is due to a change in how/when the land will be developed. It is thought that land around the Golf course would be developed sooner which requires lift stations so the plan is to service the majority of the land across South brook to Manhole 7032S.

If you require any clarification or additional information please advise.

Sincerely,

Trevor Moore, P. Eng.
Project Engineer

TM/ah
Enclosures
Via courier

cc: Justin Ladha, KMK Capital Inc. (letter only)
Keith Noseworthy, KMK Capital Inc. (letter only)

SCHEDULE L

March 29, 2016

REVISED

Justin Ladha
KMK Capital Inc.
40 Aberdeen Avenue, Suite 202
St. John's, NL A1A 5T3

Dear Mr. Ladha:

Re: Planning, Development & Engineering File No. DEV1300060
Proposed Galway / Glencrest - Contract 03 - Industrial Park
Applicant: Pinnacle Engineering
15 Duffett's Road- Ward 5
Comprehensive Development Area- Southlands (CDA- Southlands) Zone

Please be advised that the above-referenced application was approved by the undersigned for the City of St. John's on **March 22, 2016**, and will appear on the agenda of the Regular Meeting of Council on **March 28, 2016,** for the information of Council.

Also, please note the following Development requirements:

1. A Subdivision Plan which is acceptable to the City must be provided containing all the required information, including Newfoundland Power easements.

2. No building permits will be issued for this development until the new water pumping station, the storage reservoir and associated watermains have been constructed, commissioned and accepted by the City.

3. The developer is responsible for sediment and erosion control for the interim of the CP03 construction. The developer must ensure that sediment and erosion control measures are put in place during the CP03 construction and ensure that no sediment enters into the streams or roadside ditch construction.

4. A full Phase 1 Acceptance Package, including accurate as-built drawings, must be submitted to the City for review and acceptance before the City will accept ownership of any of the municipal infrastructure. Once Phase 1 work has been accepted by the City then we will take ownership of the underground infrastructure and require the submission of a Phase 1 Maintenance Security. The Phase 2 Security is due now but as per previous discussions we've agreed that the Developer can submit this when the Phase 1 Maintenance Security is provided.

If you have not already done so, you should now make application and submit all required plans and information to Access St. John's (first floor, City Hall) for processing and permits. As well, you need to make sure all other required approvals are in place and any applicable fees paid prior to the commencement of any development on the site. Please allow adequate time for processing of your application by the appropriate City staff.

You should take note that the St. John's Development Regulations (the "*Development Regulations*") provide that any person may appeal the decision of the Development Officer to approve the application to the St. John's Local Board of Appeal (the "*Appeal Board*"), provided that **an appeal is filed with the Secretary of the Appeal Board within fourteen (14) days of the date the Development Officer's decision appears in the agenda for a Regular Meeting of the St. John's Municipal Council.** The Development Regulations provide that where an appeal is filed, the Development concerned shall not proceed pending a decision of the appeal and the subsequent issue of all required permits.

If you have any questions pertaining to your application, please do not hesitate to contact the undersigned at (709) 576-8380, fax: (709) 576-8625, or by e-mail at amurray@stjohns.ca.

Yours truly,

Ashley Murray

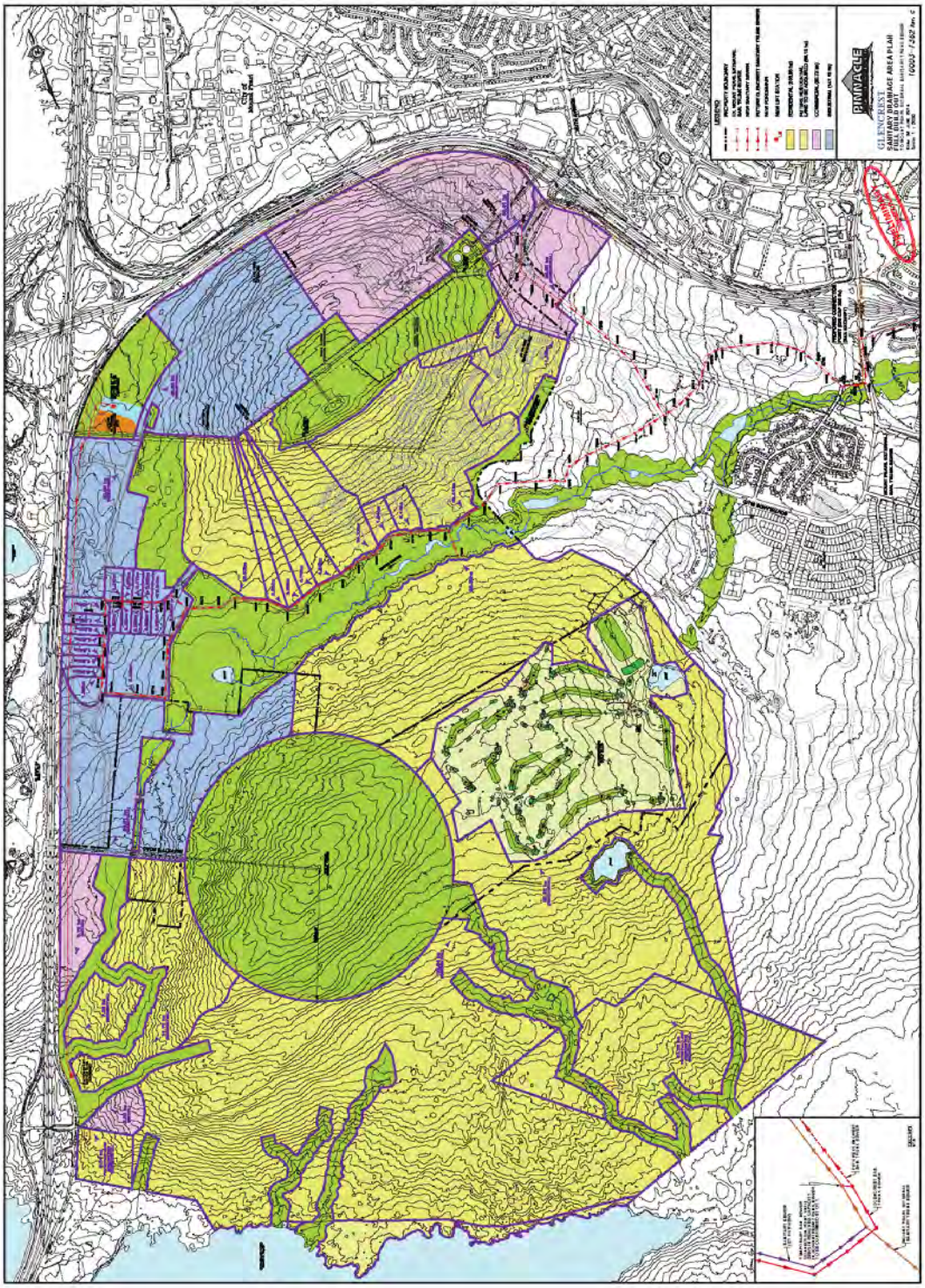
Ashley Murray
Assistant Development Officer
Department of Planning, Development and Engineering

AAM/dlm

pc Dave Wadden, M.Eng., P.Eng., Manager of Development Engineering
Gerard Doran, CET, Development Supervisor
Gareth Griffiths, Manager of Assessment
Lynn Cooper, Office Services Supervisor (Assessment)
Greg Keating, Manager of LIS
Michelle Devine, Administrative Coordinator
Keith Noseworthy, KMK Capital Inc.
Andy Carew, Dewcor

Schedule E

Master Servicing Design Brief - excerpt
Sanitary Drainage Area Plan – Full Build Out
Dated June 28, 2014



Schedule F

Letter from Sikumiut Environmental Ltd. (SEM) and Boreal Environmental
Independent Wetland Assessment Review
Dated August 31, 2018

Independent Wetland Assessment Review

Prepared For:
10718 NFLD. Inc.
P.O. Box 1919, Station 'C'
St. John's, NL
A1C 5R4

Prepared By:
Sikumiut Environmental Management Ltd.
2nd Floor 79 Mews Place
St. John's, NL
A1B 4N2

And

Boreal Environmental

August 31, 2018

Upon completing a review of the reports for the Glencrest-Galway development, it was found that Stantec had employed a rigorous wetland assessment protocol which exceeded all requirements by the province of Newfoundland and Labrador and the City of St. John's.

There are few examples of incorporating Protected Natural Areas (PNA) into development in Altantic Canada. This innovative approach to development, also referred to as Sustainable Community Design or Conservation Design, reduces the impact on the environment while balancing the needs of the community for housing and amenities.

Wetland Delineation and Functional Analysis

Wetlands were identified and mapped based on the techniques outlined in the US Army Corps of Engineers Wetlands Delineation Manual(Environmental Technical Services Co. 1995). This is the standard methodology used throughout North America wetland delineation and is consistent with methods used in other Atlantic Canadian jurisdictions, namely, Nova Scotia andNew Brunswick. However, these provinces have specific regulatory requirements with respect to wetland protection which Newfoundland and Labrador currently does not have in place. Nova Scotia currently has the most stringent regulatory requirements in Atlantic Canada in terms of wetland delineation and functional analysis. All wetlands greater than 100 m^2in size require delineation and characterization. As stated, in the Stantec's Wetland delineation and Functional Analysis report (PN 10003) they appear to use the NS standard as their reference when determining the size threshold for wetland delineation and functional analysis.

The wetland functional assessment of delineated wetlands was conducted using both empiricalfield data and desktop analyses to assess wetland ecological functions described in the Wetland Evaluation Guide (Bond et al. [1992]). This was a commonly used method for assessing wetland functions in Maritimes (NS and NB) until recently. Since 2016, wetland consultants in Atlantic Canada have been encouraged to use the Wetland Ecosystem Service Protocol – Atlantic Canada or WESP-AC (mandated in NS) which was developed and calibrated using empirical data from a variety of wetland types for each province. However, both of these wetland functional assessment methods are acceptable for assessing the function of wetlands.

Protected Natural Areas Plan (PNA)

Habitat fragmentation is caused from the destruction of large contiguous patches of forested landscapes. In Newfoundland and Labrador, forested landscapes include a complex of different habitats including various types of wetland, riparian areas, forest and barrens. Habitat fragmentation results from the inability of small disconnected habitat fragments to support viable populations of plant and animal species which can lead to their extirpation (i.e., local extinction). For instance, if contiguous habitat fragmented and converted to a subdivision the remaining forest fragments and the plants and animals that reside in them become isolated. The size of isolated habitat fragments determines how fast it will lose species. In general, smaller isolated

habitat fragments tend to lose plant and animal species faster than larger less isolated habitat fragments.

Edge effects from surrounding developed areas can alter the conditions within outer areas of a habitat fragment and reduce the amount of interior habitat (i.e., un-fragment habitat). Natural transitional areas or buffers between habitats lessen the impact of development on species that require large contiguous patches of interior forest.

The PNA plan outlines measures that will mitigate the effects of habitat fragmentation from development by preserving contiguous patches of habitat. Buffering of riparian and wetland create corridors for the migration of plants and animals and allow for the filtering of runoff from adjacent developed lands. The creation of stormwater runoff ponds at peripheral areas of the delineated wetland will help to preserve natural drainage patterns and overtime create open water habitat.

Examples of Developments Incorporating PNA's

There are examples of Protected Natural Areas (PNA), called Sustainable Community Design or Conservation Design in other jurisdictions, that have been incorporated development projects successfully in the New Brunswick and Nova Scotia. Le Village En Haut Du Ruisseau in Dieppe, NB and Seven Lakes in Porters Lake, NS are both examples where this development concept was implemented.

Example 1:

Le Village En Haut Du Ruisseau

Le Village En Haut Du Ruisseau incorporated the Sustainable Community Design (SCD) concept into their development and were able to address most environmental, social and economic challenges that developers face.

The developers also successfully implemented mitigations similar to those proposed for the Glencrest – Galway project using best management practices for stormwater management (constructed wetlands, swales, natural percolation).

Additional benefits realized from this approach to development included;

- Increased revenues for the developer;
- Increased tax revenues for the City of Dieppe, and;
- Reduced annual operation costs for the City.

Example 2

Seven Lakes

Seven Lakes is located in Porters Lake, NS near Halifax and is the largest development of its kind in Atlantic Canada to employ conservation design principles.

As stated on their website the Seven Lakes Project was able to;

- Reserve over 60% of the existing habitat and significant natural features;
- Protect water sources, and;
- Allow access to surrounding natural landscapes.

Mitigations

The proposed mitigation strategies outlined in the Stantec Wetland delineation and Functional Analysis Report and PNA Plan are comprehensive and incorporate strategies used in other jurisdictions with respect to impact avoidance and minimization. The scope of the mitigation strategy outlined by Stantec considers a full range of ecosystem functions. Mitigations including the;

- Creation of stormwater retention ponds to lessen the potential changes in wetland hydrology;

- Buffering wetlands and riparian areas to reduce the edge effect and create corridors for the movement of plants and animals between habitats;

- Creation of natural upland habitat reserves to preserve the integrity of the entire ecosystem, and;

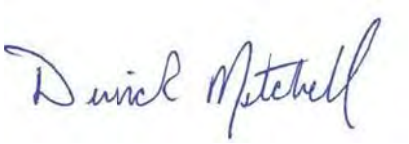
- Creation of trial and bike paths for people to enjoy natural areas.

These all serve to increase biodiversity and increase the resilience of the ecosystem to stressors associated with development. Stantec and KMK Capital & Pinnacle Engineering Limited have strived to maintain the integrity of the ecosystems through careful planning and design.

References

Bond, W.K., K.W. Cox, T. Heberlein, E.W. Manning, D.R. Witty and D.A. Young. 1992. “Wetland Evaluation Guide: Final Report of the Wetlands are not Wastelands Project.” *Sustaining Wetland Issues Paper 1992-1*.North American Wetlands Conservation Council (Canada).Ottawa, ON 121 p.

Signature



Derrick Mitchell, B.Sc.F, R.P.F.
Wetland Specialist
August 31, 2018

Resume

Derrick Mitchell, *B.Sc.F., R.P.F*
T| (506) 651-1346
derrick@borealenvironmental.com

Professional Affiliations

Association of Registered Professional Foresters of New Brunswick
New Brunswick Wetland Delineators Association
Recognized Wetland Delineator New Brunswick Department of Environment and Local Government
Qualified Wetland Delineator Nova Scotia Department of Environment

Formal Education

2003 Bachelor of Science in Forestry and Environmental Management - University of New Brunswick, Fredericton, NB

Continuing Education

2006 Wetland Delineation Certification Course, Humboldt Field Research Institute (Stueben, Me)
2008 Sedge and Grass identification workshop UNB Department of Biology (Fredericton, NB)
2008 Watercourse Alteration Certification Course, Maritime College of Forest Technology (Fredericton, NB)
2009 Willow and Aquatic plant identification workshop UNB Department of Biology (Fredericton, NB)
2010 Water Management and Wetland Restoration Training Course, University of Guelph (Kemptville, ON)
2011 Electro-fishing online training and field practicum (Fredericton, NB)
2014 Seabird observer workshop (Dartmouth, NS)
2016 Wetland Ecosystem System Protocol Atlantic Canada (WESPAC) workshop (Fredericton, NB)

Conferences

2009 NBEIA Wetlands Forum (Fredericton, NB)
2010 NBEIA Wetlands Forum (Moncton, NB)
2010 Atlantic Land Reclamation conference (Halifax, NS)
2011 Advances in Ecological Restoration (CFB Gagetown, Oromocto, NB)
2012 Nova Scotia Wetland Forum (Halifax, NS)
2013 Atlantic Land Reclamation Conference (Sackville, NS)
2015 Atlantic Land Reclamation Conference (Fredericton, NB)

Volunteer Activities

City of Saint John Planning and Advisory Committee (Committee member)
Canadian Land Reclamation Association (Board member)
Hammond River Angling Association (Past President)
New Brunswick Wetland Delineators Association (Vice chair)

Publications

Betts, M.G., **Mitchell, D.,** Diamond, A.W. and Bety, J. Uneven rates of landscape change as a source of bias in roadside wildlife surveys. Journal of Wildlife Management. 2007

Summary of Qualifications

Mr. Mitchell is a terrestrial ecologist, registered professional forester (R.P.F) and principal of Boreal Environmental. With 16 years of experience working in the environmental industry, his expertise includes; environmental permitting, environmental compliance, habitat mapping, remote sensing/photo interpretation, ecological restoration, natural resource management and Geographic Information Systems (GIS).

Mr. Mitchell has 10 years of experience delineating wetlands throughout Atlantic Canada. He is a recognized wetland delineator and vice chair of the Wetland Delineators Association in New Brunswick and listed as a qualified/recognized wetland professional in New Brunswick and Nova Scotia. He received formal wetland delineation training in 2006 at the Humboldt Field Research Institute in Stueben, Me. He has worked on many large scale industrial projects and developments including; pipelines, transmission line corridors, highways, mining projects in New Brunswick, Newfoundland and Labrador and Nova Scotia.

Beyond his focus on wetland related projects, Mr. Mitchell has a broad range of experience in conducting biophysical surveys and analysis including; watercourse assessments, avifauna surveys, species at risk assessments, and geospatial analysis for various commercial and residential developments throughout the Atlantic provinces. His clients include; NB Department of Transportation and Infrastructure, Fredericton International Airport Authority, Saint John Industrial Parks, Defense Construction Canada, Gulf Operators, OSCO Construction Group, Ducks Unlimited, Dexter Construction, Maritime Hydroseed, Gemtec Limited, Stantec, WSP, McCallum Environmental, CBCL, Dillon Consulting, EXP Services, GHD, Integrated Informatics, Strum Environmental, Sikumiut Environmental and Roy Consultants.

Project Work

Current Projects

Gold Mining Project - Gemtec - plant and wildlife species at risk assessment and wetland delineation/functional assessment (Goldboro, NS).

Past Projects

Bat Species at Risk assessment - CBCL Limited - Inspection of buildings scheduled for demolition on the Gagetown military base for use by bat species at risk (Gagetown, NB 2016).

Bat echolocation analysis - McCallum Environmental Ltd. - Identification of bat species through echolocation analysis. Analysis and report conducted in support of Environmental Assessment for several proposed wind farms in Alberta (AB 2016).

Wetland Compensation Plan - Fredericton International Airport Authority - Wetland delineation/functional assessment, species at risk assessment. Wetland Compensation Plan development (Fredericton, NB 2016)

Route 11 Wetland Monitoring Project - New Brunswick Department of Transportation and Infrastructure (NBDTI) - Wetland, rare plant monitoring. Comparative analysis of hydrological and vegetative conditions at periodic intervals (Tracadie, NB).

Gold Mining Project - McCallum Environmental - Wetland delineation/functional assessment, species at risk assessment (Moose River, NS 2015).

Gold Mining Project - McCallum Environmental - Wetland delineation/functional assessment, species at risk assessment (Beaver Dam, NS 2015).

Forest Lakes Country Club - McCallum Environmental - Wetland delineation/functional assessment, species at risk assessment, (Touquoy, NS 2013).

Energy East Pipeline Project (NB) - Stantec - Rare plant, wetland delineation, functional assessment, species at risk assessments (plants, birds, amphibians/reptiles) and wetland inventory geodatabase development (NB 2015).

Caraquet Bypass Route 11 - NBDTI - Migratory bird nesting survey and reporting focusing on common nighthawk (SARA listed species) (Caraquet, NB 2015).

Wetland Predictive Model Validation Project (NB) - LiDAR based wetland predictive model validation partnership with University of New Brunswick Forestry Dept., Cities of New Brunswick Association, and New Brunswick Department of Environment and Local Government (NB 2015).

Port Wallace, NS Environmental Constraints Analysis - WSP - Forest ecosystem classification, wetland delineation and rare plant survey (Port Wallace, NS 2014).

Route 11 Wetland Monitoring Project - Roy Consultants - Wetland and rare plant monitoring. Comparative analysis of hydrological and vegetative conditions at periodic intervals (Tracadie, NB 2013).

Gold Mining Project - McCallum Environmental - Wetland delineation/functional assessments, species at risk assessment, breeding bird and bat hibernacula surveys (Goldenville, NS 2013).

Labrador West Transmission Line Project - Integrated Informatics - Ecological Land Classification (ELC). Habitat mapping using PurVIEW (3D geodatabase mapping extension) and high resolution stereo imagery to interpret vegetation community types along a 276 km transmission line route. Developed GIS database for interpreted upland and wetland community types (NL 2013).

Evaluation of Wetland Restoration Potential - Armco/Ramar - Developed LiDAR based wetland predictive model that incorporated vegetation and landform parameters. Predictive model used to prioritize potential wetland restoration opportunities for the Sackville River watershed. Partnership with McCallum Environmental (Bedford, NS 2013).

Hammond River Restoration Project (Scoodic Brook) - Hammond River Angling Association - Supervised the re-alignment and buffer re-vegetation of a 200 meter section of the Hammond River. Regulatory compliance monitoring included water quality monitoring (i.e., TSS sampling), maintaining and installing erosion and sedimentation control/prevention structures (Upham, NB 2012).

Hazen Brook Restoration Project - Hammond River Angling Association - Restoration plan, restoration supervision, and environmental compliance monitoring (Saint John, NB 2012).

Natural Resources Management Plan - Defense Construction Canada (DCC) - species at risk assessment, wetland delineation, forest characterization, habitat assessment and associated reporting. (Canadian Forces Arms Depot Bedford, NS 2012).

Sustainable Development Strategic Science (SDSS) Woodland Caribou Project - Sikumiut Environmental Management/Integrated Informatics - Satellite imagery (i.e., Landsat, SPOT 5) and high resolution aerial photography to interpret vegetation communities for the entire island of Newfoundland (NL, 2012).

Bat echolocation analysis - Strum Environmental - Identification of bat species through echolocation analysis. Analysis and reporting conducted in support of Environmental Impact Assessment registration for several proposed wind farm developments in Nova Scotia (February 2012).

Bat echolocation analysis - McCallum Environmental Ltd. - Identification of bat species through echolocation analysis. Analysis and report conducted in support of Environmental Impact Assessment registration for a proposed wind farm in central Nova Scotia (February 2012).

New Canaan Breeding Bird Monitoring - McCallum Environmental Ltd. - Breeding bird survey proposed wind farm in New Canaan, NS (May to July 2012).

Iron Ore Canada Mining Project - Integrated Informatics – Used Landsat, SPOT 5, and high resolution aerial photography to interpret vegetation communities (NL, 2012).

CFB Gagetown Land Reclamation Project - Defense Construction Canada - Surface water hydrology mapping and erosion control/prevention planning (Oromocto, NB 2012).

Damage Control Division Fire training School Wind Energy Project - Defense Construction Canada - Passage migration and over-wintering bird surveys and associated reporting. Habitat mapping and geo-database development (Halifax, NS 2012).

14 Wing Greenwood Wetland Study - Defense Construction Canada - Wetland delineation, functional analysis, species at risk assessment, and breeding bird survey (Greenwood, NS 2011).

Route 1 Gateway Project - Dexter Construction - Migratory bird nesting surveys and associated reporting (Saint John, NB 2011).

Conservation Design Project - Saint John Industrial Parks - Environmental constraints mapping, wetland delineation, watercourse mapping, forest inventory, and site selection (Saint John, NB 2011).

Wetland Compensation Projects - Canaport^{TM} LNG$_{LP}$ - Project manager and technical lead for wetland compensation projects responsible for all aspects of the restoration process. Design criteria, remediation sewage sludge, environmental compliance monitoring, soil and water quality monitoring, erosion sedimentation control/prevention, re-vegetation species selection, environmental compliance reporting, and post restoration monitoring. (Saint John, NB 2009 - 2011).

Summerside Wind Farm Project - City of Summerside - Migratory bird surveys, bird/bat carcass monitoring, searcher bias trails and associated reporting (2010).

Water treatment facility site selection project - City of Saint John - Wetland delineation, functional analysis, watercourse mapping and habitat assessment (2010).

Route 1 Gateway Project - Dexter Construction - Breeding bird and species at risk assessment (Saint John, NB 2010**)**.

Eider Rock Project - Irving Oil Ltd. - Technical lead for wetland field assessments, watershed level wetland functional analysis, watercourse mapping, species at risk assessment, habitat assessments and author of the terrestrial habitat chapter of the Project Eider Rock EIA (Saint John, NB 2007 – 2009).

Uranium Mine Project- Aurora Energy Resources - Ecological Land Classification (ELC) for a proposed uranium mine. Conducted supplementary breeding bird surveys (Postville, NL 2008).

Lameque transmission line and wind farm - Acciona - Technical lead for wetland assessments, watershed level wetland, Species at Risk assessments, watershed level wetland functional analysis and associated reporting. (Lameque, NB 2008).

Route 11 Wetland Monitoring Project - New Brunswick Department of Transportation - Designed and implemented wetland monitoring plan (Tracadie, NB 2008).

Lower Churchill Falls Hydro-electric Dam Project - Nalcor - Technical lead for ELC assessment. Conducted

supplementary breeding bird surveys (Goose Bay, NL 2007).

Brunswick Pipeline Project - Emera - Technical lead for wetland assessments, watershed level wetland functional analysis and author of terrestrial habitat chapter for the Brunswick Pipeline EIA (Saint John, NB 2007).

Route 7 Bypass Project - New Brunswick Department of Transportation - Technical lead for wetland assessments, watershed level wetland functional analysis and author of the wetland VEC for the EIA (Welsford, NB 2007).

Route 1 Gateway Project - New Brunswick Department of Transportation - Technical lead for wetland assessments and co-author of the wetland VEC for the EIA (New Brunswick, 2006).

Kent Hills Transmission Line and Wind Farm - TransAlta - Technical lead for wetland delineation, watershed level wetland functional analysis and migratory bird surveys (Kent Hills, NB 2006).

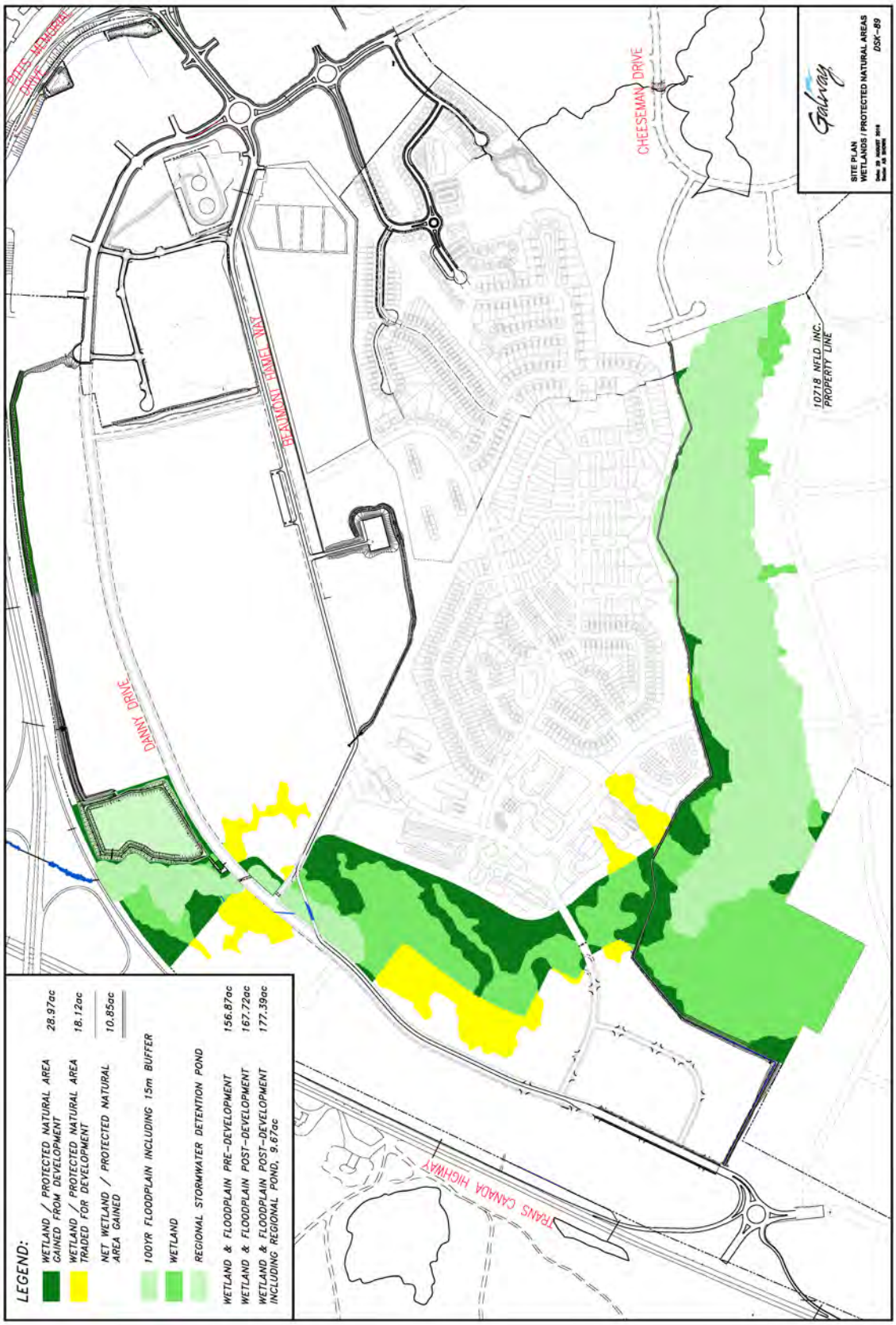
References

Greg Quinn
New Brunswick Department of Transportation and Infrastructure
greg.quinn@gnb.ca
(506) 461-0443

Brian Irving
City of Saint John
General Manager of Real estate services
brian.irving@saintjohn.ca
(506) 658-4418

Robert McCallum
McCallum Environmental
robert@mccallumenvironmental.com
(902) 292-0514

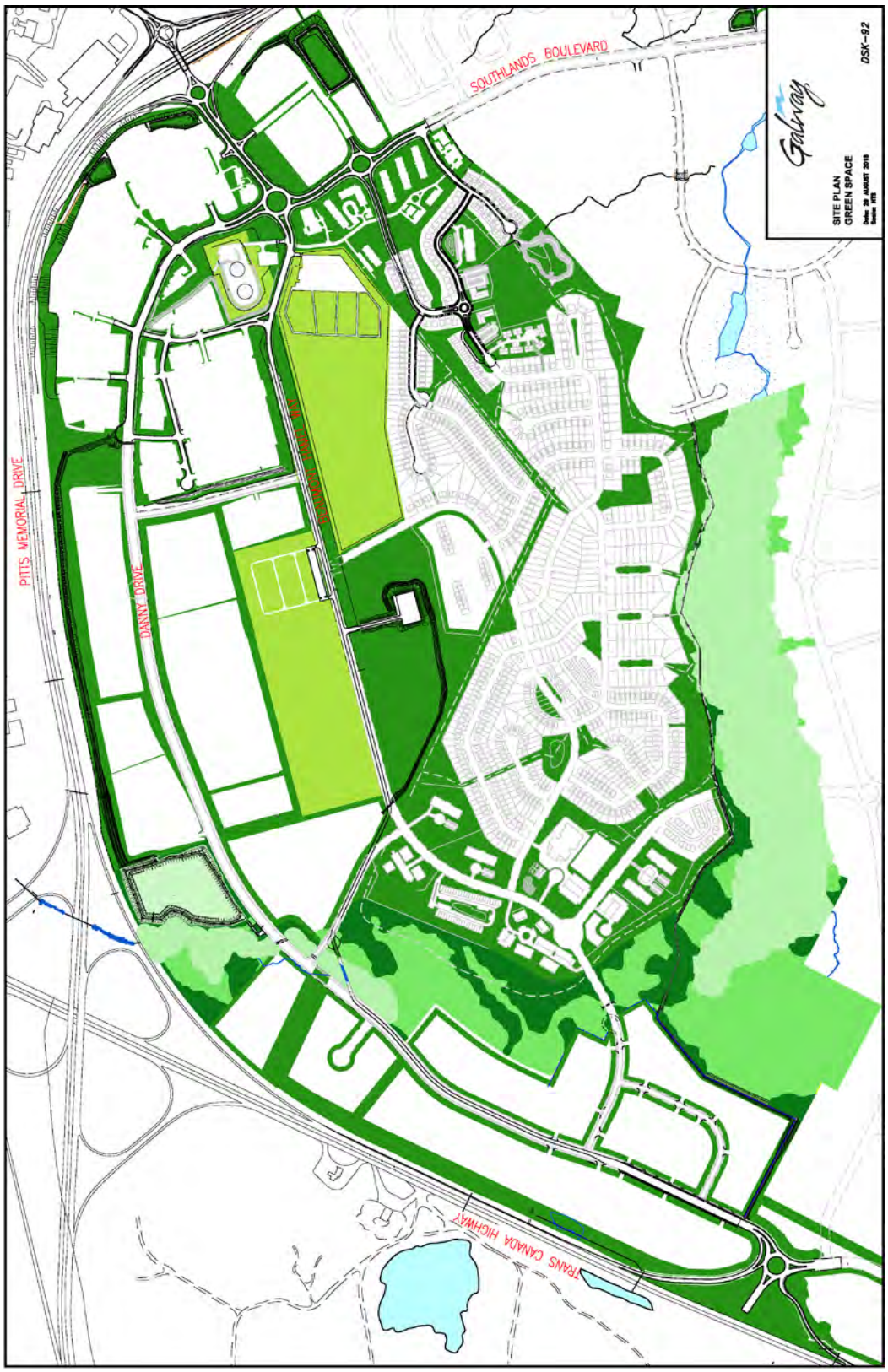
Schedule G
Net increase of 11 acres of Protected Natural Areas



Schedule H

Galway Green Space

Protected natural areas, wetlands, floodplains, cemeteries, parklands, trails, landscaped roadside medians and boulevards, residential rear lot tree retention and professionally landscaped areas



Ducks Unlimited Canada

City of St. John's
P.O. Box 908,
St. John's, NL
A1C 5M2

August 30,2018

Re: Galway Wetlands Protection

Ducks Unlimited Canada would like to commend the City of St. John's in taking the initiative to protect the significant wetlands within the Galway Development. The fact that the City is recognizing the risks of development around these areas and incorporating them into its inventory of wetlands demonstrates leadership with a renewed commitment to environmental planning.

Ducks Unlimited Canada has been very aware and interested in the Galway development for the past five years. It is important due to its size and the critical location at the headwaters of a major stem of the Waterford River system. Loss of wetlands in this area will influence everything that happens downstream.

It is also noteworthy that other substantial developments have occurred throughout the Waterford River Valley thereby exacerbating the cumulative effects. Area downstream of the Galway Development include considerable industrial, residential and park areas that are already being impacted by extreme runoffs during ever more frequent major rain events. Recent research by the University of Waterloo has found that leaving wetlands intact can reduce financial costs to municipalities by 38% from severe flooding events.

We note in the documentation made available through this public engagement process that a 15-metre buffer has been identified for protection. Ducks Unlimited consider this to be "an absolute minimum" where many jurisdictions have adopted 30-metre buffers to better accommodate a range of topography conditions, particularly in highly developed areas. In addition to protecting the existing wetland within the Galway development, the planners should incorporate the use of "naturalized storm-water retention ponds". These are being introduced in many new residential developments across Canada as a means of integrating the benefits of wetlands (cleaning the water, erosion mitigation, flood storage, carbon storage, wildlife habitat, and recreational use) into urban neighbourhoods. Developers have found that these building lots adjacent to the wetland ponds are the most desirable.

Ducks Unlimited Canada has a permanent, staffed office in St. John's with expertise available to support the City and developers in efforts to undertake responsible projects that will minimize the potential damage to important wetlands and waterways. It is located at 28 Cochrane Street, St. John's and can be reached at (709) 237-3825 or d_fequet@ducks.ca.

Sincerely,

Rick Comerford,
Senior NL Policy Advisor, Ducks Unlimited Canada
Ducks Unlimited Canada, 28 Cochran Street, St. John's, NL, A1C 3L3

Karen Chafe

From: CityClerk
Sent: Thursday, August 30, 2018 12:25 PM
To: Andrea Roberts; Ann-Marie Cashin; Ashley Murray; Dave Wadden; Gerard Doran; Jason Sinyard; Ken O'Brien; Lindsay Lyghtle Brushett; Planning
Cc: Karen Chafe
Subject: FW: Galway Wetlands Amendment
Attachments: DUC CSJ Signed.pdf

FYI

Elaine Henley

Elaine Henley
City Clerk
t. 576-8202
c. 691-0451

From: Richard Comerford <rcomerfordnl@gmail.com>
Sent: Thursday, August 30, 2018 11:13 AM
To: CityClerk <cityclerk@stjohns.ca>
Cc: Geoffrey Harding <g_harding@ducks.ca>; Adam Campbell <a_campbell@ducks.ca>; Danielle Fequet <d_fequet@ducks.ca>
Subject: Galway Wetlands Amendment

Please find attached a submission from Ducks Unlimited Canada with respect to the to the St. John's Development Regulations to include the Galway Wetland in the list of protected wetlands.

We are pleased to make this part of the public record.

Please confirm that this has been received and that it is in the proper form. If required, we will deliver an original to City Hall.

Thank You

Rick Comerford
(on behalf of Ducks Unlimited Canada)

(709) 745-1277
(709) 691-5957

September 3rd, 2018

Office of the City Clerk
City of St. John's,
P.O. Box 908
St. John's, NL, A1C 5M2

Re: Galway Wetland Protection, Galway Living

It has been brought to our attention, in a letter received on August 15th , 2018, that the City of St. John's is considering an amendment to the St. John's Development Regulations to establish a Galway Wetland area and to add them to the protected wetland list, per section 11.2.3 of the Development Regulations.

The purpose of this letter is not to engage in a debate on whether or not the wetland existed in some shape or form prior to the rezoning approvals, but rather, to request that it be excluded from the Galway wetland mapping. This exclusion request is based on the overall significance of the low-grade sloped bog in relation to the watershed now that the trunk sanitary sewer was approved and installed in 2016 (Figure 1).

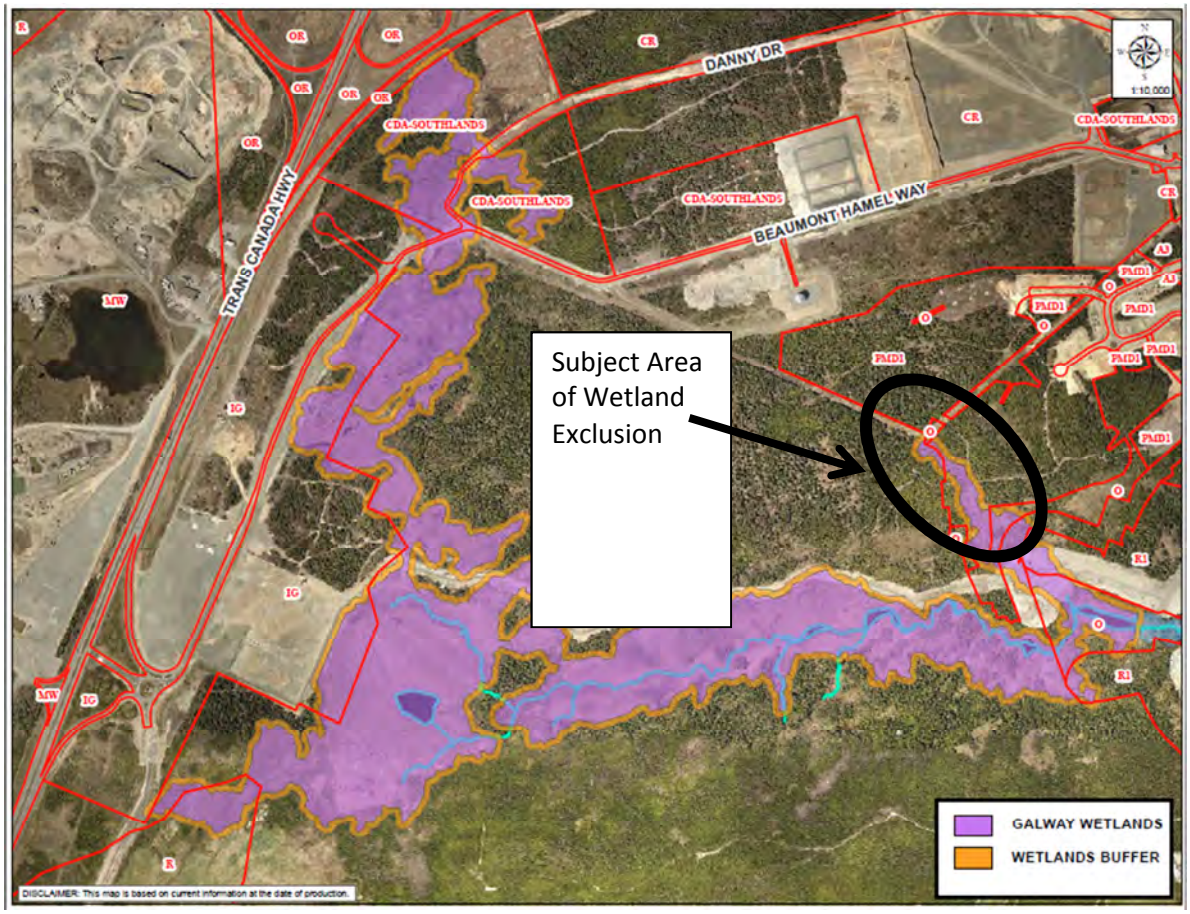


Figure 1. Wetland Mapping per City of St. John's

Galway Living formally known as Galway CP-11 was presented to the Planning and Development Committee on July 2, 2015. The Rezoning to PMD-1 was approved by Council on September 8, 2015. (See Schedule B) It should be noted that the presence of any wetlands within the approved rezoning area was not raised by Municipal Staff or Council. Decisions on land-use with regards to development areas, preserved open space, parks and storm water management areas were established (Figure 2).

Figure 2. Galway Land Use Plan

The Sanitary Trunk Sewer running parallel to South Brook known as CP-03& CP-08 was accepted by the City of St. John's in March of 2016. Adjacent land-owners in Southlands have also completed extensive infilling in the area adjacent to the sanitary trunk sewer. (See Schedule A)

Galway Living's sustainability initiatives:

- Integrated storm water management that uses a combination of water conservation, water retention, flood management and pollution control strategies. This is evidenced by the construction of a naturalized storm water detention area in stage 1. The primary goal of these non-fenced aesthetically pleasing naturalized storm water management facilities is to balance pre-post storm water quantities while enhancing the watershed with the removal of nutrients like Total Phosphorus, Nitrates and Total Suspended solids. A

secondary benefit to this type of storm water facility is to replicate the existing hydrologic cycle prior to development, the recharge of the aquifer coupled with the use native plantings ensure that the low the maintenance facility is a success into the future.

- Community solutions include the landscaping within the road right-of-way and the planting of street trees. Outside the public realm, Galway Living requires that each home owner plant front-yard native trees. Native plants provide a host of aesthetic, social, economic and health benefits that are key to Galway Living's sustainability initiatives. Through the collective action of leaves and the anchoring and absorbing effects of roots, street trees and other native plantings contribute to soil stabilization, cleaner water and the recharge of groundwater supply.

- The preservation of existing trees at the rear of each lot further differentiates the Galway Living master plan. The application and use of native plant materials are not just an environmentally preferred alternative to the wholesale use of non-native plants or fences commonly used in residential landscaping, they are typically hardier and better adapted to thrive in this region. Consequently, native plants require less water, fertilizer and pesticides. Eliminating the need to fertilize or apply pesticides helps protect our groundwater, nearby ponds and waterways. Native plants have the added advantage of providing important wildlife habitat for a host of birds and other wildlife species.

- Rear yard tree retention provides nesting sites for birds and may support a wide range of insects that are an important food source for birds and other wildlife. Trees that bear berries are also a direct source of food for many bird species in the region. In an urban setting, linear green-corridors of native habitat are among the most important, connecting otherwise isolated areas to each other and to rural surroundings. Trees and other vegetation along waterways and adjacent wetlands are particularly important to wildlife in this respect.

All of this translates into a healthy, beautiful landscape that also low maintenance for the city of St. John's. The goal of this development is to not only plan and design a world-class residential community that is responsible, sustainable and functional, but to inspire homeowners in the community with the hope that they may learn from their decisions and develop a greater appreciation for the environment and the sensitive watershed in which it is built within.

The protected natural areas master plan below in Figure 3 represents 24.5Acres of land that will be preserved in perpetuity within the Galway Living master plan. The protected areas are a combination of public open spaces/parks and private tree retention areas within the community. Further to this each of the open space planned park areas will be connected by a series of paved trails and ancillary walking paths.

Figure 3 Protected Natural Area Plan:

It is our hope that the city of St. John's acknowledges the sustainability initiatives and environment best practices in place within Galway Living as exemplified by what has been constructed in stage 1 and 2 of the community thus far.

We formally request that the 1.8 hectares of sloped bog as identified in Figure 1 be excluded from the Galway Wetland amendment being referred to council on September 10th, 2018.

Yours truly,

Scott MacCallum

Scott MacCallum
Galway Residential Development Partnership Limited

Schedule A

15m WETLAND BUFFER

EXISTING SLOPED BOG (17,936m² ON RESIDENTIAL LANDS)

ROAD 8

ROAD 9

FUTURE DEVELOPMENT (PMD–1)

BLOCK TH-1

KINSALE WALK

EXISTING NATURALIZED DETENTION AREA

stormpond Parc

EX PROPERTY BOUNDARY

ROAD 6

EX PROPERTY BOUNDARY

FUTURE OPEN SPACE (O)

APPROX. LIMITS OF DISTURBANCE FROM EXISTING TRUNK SANITARY SEWER

GLENCR
TRUNK S
CP08 PH

FUTURE SANITARY CONNECTION

PARKSERVICE

WETLANDS AS DELINEATED BY STANTEC IN 2013

EX SANITARY TRUNK SEWER

FAIRVIEW INVESTMENTS LTD

GALWAY RESIDENTIAL

EX SOUTH BROOK FLOODPLAIN BY PINNACLE ENGINEERING

FUTURE NATURALIZED DETENTION AREA

SCHEDULE A

DATE

AUG 30, 2018

SCALE

1: 2000

N

Galway

Schedule B

November 22, 2015

KMK Capital Inc.
c/o Mr. Keith Noseworthy, PTech
40 Aberdeen Avenue
St. John's NL A1A 5T3

Dear Mr. Noseworthy:

Re: St. John's Development Regulations Amendment Number 616, 2015
Proposed Rezoning of land to the Planned Mixed Development -1 (PMD-1) and Open Space (O) Zones – REZ1400022
725 Southlands Boulevard – Galway Development

At the Regular Meeting of Council held on September 8, 2015, Council adopted St. John's Development Regulations Amendment Number 616, 2015, with regards to 725 Southlands Boulevard – Galway Development. The amendment would have the effect of rezoning land from the Comprehensive Development Area – Southlands and Residential Low Density (R1) Zones to the Planned Mixed Development -1 (PMD-1) and Open Space (O) Zones for the purpose of allowing the development of a master planning community, which is part of the Galway development.

The amendment has now received Provincial registration from the Department of Municipal and Intergovernmental Affairs. The amendment came into legal effect on Friday, October 16, 2015, the date on which the notice of the Provincial registration for the amendment was printed in The Newfoundland and Labrador Gazette. A copy of the registered amendment is enclosed for your file.

Please note that Council's approval of the amendment does not yet constitute final development approval. Should you have any further questions please do not hesitate to contact our department.

Yours truly,

Lindsay Lyghtle Brushett, MCIP
Planner III
Department of Planning, Development & Engineering

LLB/dlm

Enclosure

cc. Craig Hippern, DEWCORP
Michael Hanusiak, Clayton Development Ltd.

G:\Planning and Development\Planning\2015\Correspondence\725 Southlands Blvd Galway PMD1ltr Oct 22 2015(llb).docx

RESOLUTION
ST. JOHN'S DEVELOPMENT REGULATIONS
AMENDMENT NUMBER 616, 2015

WHEREAS the City of St. John's wishes to allow the development of a residential, mixed-use neighbourhood, which is part of the Galway development at 725 Southlands Boulevard.

BE IT THEREFORE RESOLVED that the City of St. John's hereby adopts the following text amendments to the St. John's Development Regulations in accordance with the provisions of the Urban and Rural Planning Act:

1. **Amend Section 2 Definitions by repealing the following definitions and substituting the following:**

   APARTMENT BUILDING means a Multiple Dwelling but does not include Townhousing, Stacked Townhouses, and Infill Housing.

   TOWNHOUSING means a Multiple Dwelling where the Building does not exceed a height of three (3) Storeys, and where each Dwelling Unit is separated vertically from an adjoining unit by a common wall and situated on a separate Lot.

2. **Amend Section 2 Definitions by adding the following:**

   HEALTH AND WELLNESS CENTRE means an establishment providing health, fitness, and recreation activities, such as, but not limited to basketball, boxing, dancing, floor hockey, gymnastics, martial arts, weightlifting, yoga, or other forms of physical exercise. This use may also include the incidental sale of health and fitness merchandise.

   STACKED TOWNHOUSE means a Multiple Dwelling on a Lot, with four (4) Dwelling Units, where two (2) Dwelling Units are located on the top floor and two (2) Dwelling Units are located on the bottom floor, each separated from the other.

   TOWNHOUSE CLUSTER means a Multiple Dwelling on a Lot, where each Dwelling Unit is separated vertically from an adjoining unit by a common wall.

3. **Add Section 10.52 Planned Mixed Development - 1 (PMD-1) Zone by adding the following:**

10.52 Planned Mixed Development Zone -1 (PMD – 1)
Galway Master Planned Community
(Subject to Section 5.1.4 Development Above the 190 Metre Contour)

10.52.1 Permitted Uses

Residential:
Accessory Building (Subject to Section 8.3.6)
Apartment Building
Home Office (Subject to Section 7.9)
Home Occupation (Subject to Section 7.8)
Dwelling Unit in the second and/or higher Storeys of a Building

Semi-Detached Dwelling
Single Detached Dwelling
Stacked Townhouse
Townhousing
Townhouse Cluster

Commercial:
Bakery
Bank (Subject to Section 7.30)
Clinic
Convenience Store
Daycare Centre (Subject to Section 7.6)
Dry Cleaning Establishment
Eating Establishment (Subject to Section 7.21 and Section 7.30)
Health and Wellness Centre
Office
Parking Area
Private School
Retail Store
Take-Out Food Service (Subject to Section 7.30)
Service Shop
Veterinary Clinic

Other:
Private Park
Public Use
Public Utility

10.52.2 Discretionary Uses (Subject to Section 5.8)
Club
Institution
Lounge (Subject to Section 7.21)
Place of Amusement

10.52.3 Zone Requirements:
(Subject to Section 8.7 Snow Storage)

The following requirements shall apply:

(1) Single Detached Dwelling

(a) Lot Area (minimum)	335 m^2
(b) Lot Frontage (minimum)	11m
(c) Building Line (minimum)	7.5m
(d) Rear Yard (minimum)	6m
(e) Side Yard (minimum)	1.8m 1.5m where attached garage has no second storey or habitable room
(f) Side Yard on flanking road (minimum)	6m
(g) Building Height (maximum)	12.2m
(h) Lot Coverage (maximum)	45%

(2) Semi-Detached Dwelling

(a) Lot Area (minimum)	164 m^2 per dwelling unit
(b) Lot Frontage (minimum)	6m per dwelling unit
(c) Building Line (minimum)	7.5m
(d) Rear Yard (minimum)	6m
(e) Side Yard (minimum)	1.8m 0m common lot line
(f) Side Yard on flanking road (minimum)	6m
(g) Building Height (maximum)	12.2m
(h) Lot Coverage (maximum)	45%

(3) Townhousing

(a) Lot Area (minimum)	164 m^2 per dwelling unit
(b) Lot Frontage (minimum)	6m per dwelling unit
(c) Building Line (minimum)	7.5m
(d) Rear Yard (minimum)	6m
(e) Side Yard (minimum)	One of 1.8m
(f) Side Yard on flanking road (minimum)	6m
(g) Building Height (maximum)	12.2m
(h) Lot Coverage (maximum)	45%

(4) Townhouse Cluster

(a) Lot Area (minimum)	554 m^2
(b) Lot Frontage (minimum)	18.2m
(c) Building Line (minimum)	7.5m
(d) Rear Yard as oriented from the Public Street (minimum)	6m
(e) Side Yard as oriented from the Public Street (minimum)	4.5m
(f) Side Yard for End Unit (minimum)	1.8m
(g) Building Height (maximum)	12.2m
(h) Lot Coverage (maximum)	45%

(5) Stacked Townhouse

(a) Lot Area (minimum)	182 m^2 per building
(b) Lot Frontage (minimum)	12m per building
(c) Building Line (minimum)	7.5m
(d) Rear Yard (minimum)	6m
(e) Side Yard (minimum)	2.4m
(f) Side Yard on flanking road (minimum)	6m
(g) Building Height (maximum)	12.2m
(h) Lot Coverage (maximum)	45%

(6) Apartment Building

(a) Lot Area (minimum)	554 m^2
(b) Lot Frontage (minimum)	18.2m
(c) Building Line (minimum)	4.5m
(d) Rear Yard (minimum)	6m
(e) Side Yard (minimum)	1metre per storey
(f) Building Height (maximum)	7 storeys
(g) Lot Coverage (maximum)	50%
(h) Density	60 Dwelling Units per building

(7) Commercial Use

(b) Lot Area (minimum)	277m^2
(a) Lot Frontage (minimum)	9m
(c) Building Line (minimum)	0m
(d) Rear Yard (minimum)	4.5m
(e) Side Yard (minimum)	4.5m
(f) Side Yard on flanking road (minimum)	4.5m
(g) Lot Coverage (maximum)	45%
(h) Building Height (maximum)	2 storeys

10.52.4 Off-Street Parking Requirements

Notwithstanding Section 9 the following off-street parking requirements shall apply:

Type of Nature of Building	Minimum Required Parking
Commercial	1 space per 23m^2 of Net Floor Area
Residential – Apartment Building	1.5 spaces per Dwelling Unit
Residential – Single Detached Dwelling, Semi-Detached Dwelling, Townhousing	2 spaces per Dwelling Unit (attached Private Garage may count as 1 space)
Residential – Stacked Townhouse	1 space per Dwelling Unit

10.52.5 Landscaping Requirements

One tree shall be planted not less than every 18m (60ft)(maximum) on both side of all Streets. Exact tree location within the Street cross section shall be determined by the City prior to final development approval being issued.

Landscaping and Screening shall be provided as identified on the attached schedules and in accordance with Section 8.5 Landscaping and Screening.

10.52.6 Schedules Attached (Appendix PMD-1)

The following documents shall form part of the Zone Requirements and Development Regulations for the Planned Mixed Development -1 Zone.

A – Design Plan
B – Land Use Plan
C – Galway Road Cross Sections / Transportation Plan
D – Parkland & Pedestrian Trail Plan

BE IT ALSO RESOLVED that the City of St. John's hereby adopts the following map amendment to the St. John's Development Regulations:

Rezone land at 725 Southlands Boulevard [Parcel ID# 401371] from the Comprehensive Development Area – Southlands (CDA Southlands) Zone and the Residential Low Density (R1) Zone to the Planned Mixed Development-1 (PMD-1) Zone and the Open Space (O) Zone as shown on Map Z-1A attached.

BE IT FURTHER RESOLVED that the City of St. John's requests the Minister of Municipal and Intergovernmental Affairs to register the proposed amendment in accordance with the requirements of the Urban and Rural Planning Act, 2000.

IN WITNESS THEREOF the Seal of the City of St. John's has been hereunto affixed and this Resolution has been signed by the Mayor and the City Clerk on behalf of Council this 2 day of September, **2015.**

Mayor

City Clerk

September 8, 2015
Council Adoption

LINDSAY LYGHTLE BRUSHETT CANADIAN INSTITUTE OF PLANNERS INSTITUT CANADIEN DES URBANISTES

MCIP

I hereby certify that this Amendment has been prepared in accordance with the Urban and Rural Planning Act, 2000.

Development Regulations/Amendment

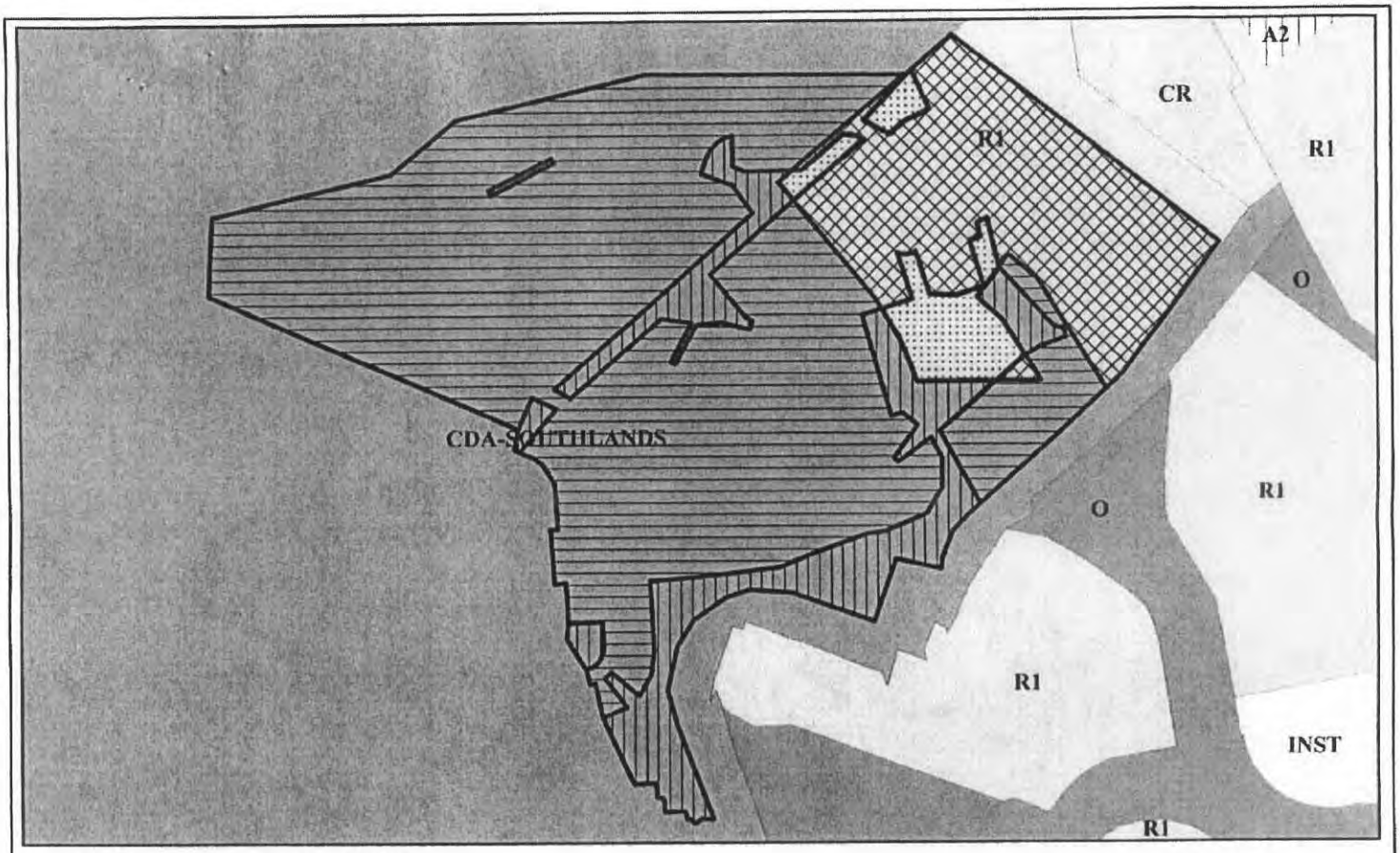
REGISTERED

Number 4400-2015-325

Date October 8, 2015

Signature

Provincial Registration



CITY OF ST. JOHN'S
DEVELOPMENT REGULATIONS
Amendment No. 616, 2015
[Map Z-1A]

2015 08 12 SCALE: 1:7500
CITY OF ST. JOHN'S
DEPARTMENT OF PLANNING,
DEVELOPMENT & ENGINEERING

AREA PROPOSED TO BE REZONED FROM RESIDENTIAL LOW DENSITY (R1) LAND USE ZONE TO PLANNED MIXED DEVELOPMENT-1 (PMD-1) LAND USE ZONE

AREA PROPOSED TO BE REZONED FROM COMPREHENSIVE DEVELOPMENT AREA-SOUTHALND (CDA-SOUTHLANDS) LAND USE ZONE TO PLANNED MIXED DEVELOPMENT-1 (PMD-1) LAND USE ZONE

AREA PROPOSED TO BE REZONED FROM COMPREHENSIVE DEVELOPMENT AREA-SOUTHLANDS (CDA-SOUTHLANDS) LAND USE ZONE TO OPEN SPACE (O) LAND USE ZONE

AREA PROPOSED TO BE REZONED FROM RESIDENTIAL LOW DENSITY (R1) LAND USE ZONE TO OPEN SPACE (O) LAND USE ZONE

GALWAY DEVELOPMENT - PID #401371

I hereby certify that this amendment has been prepared in accordance with the Urban and Rural Planning Act.

LINDSAY LYGHTLE BRUSHETT
CANADIAN INSTITUTE OF PLANNERS
INSTITUT CANADIEN DES URBANISTES
MCIP

M.C.I.P. signature and seal

Mayor

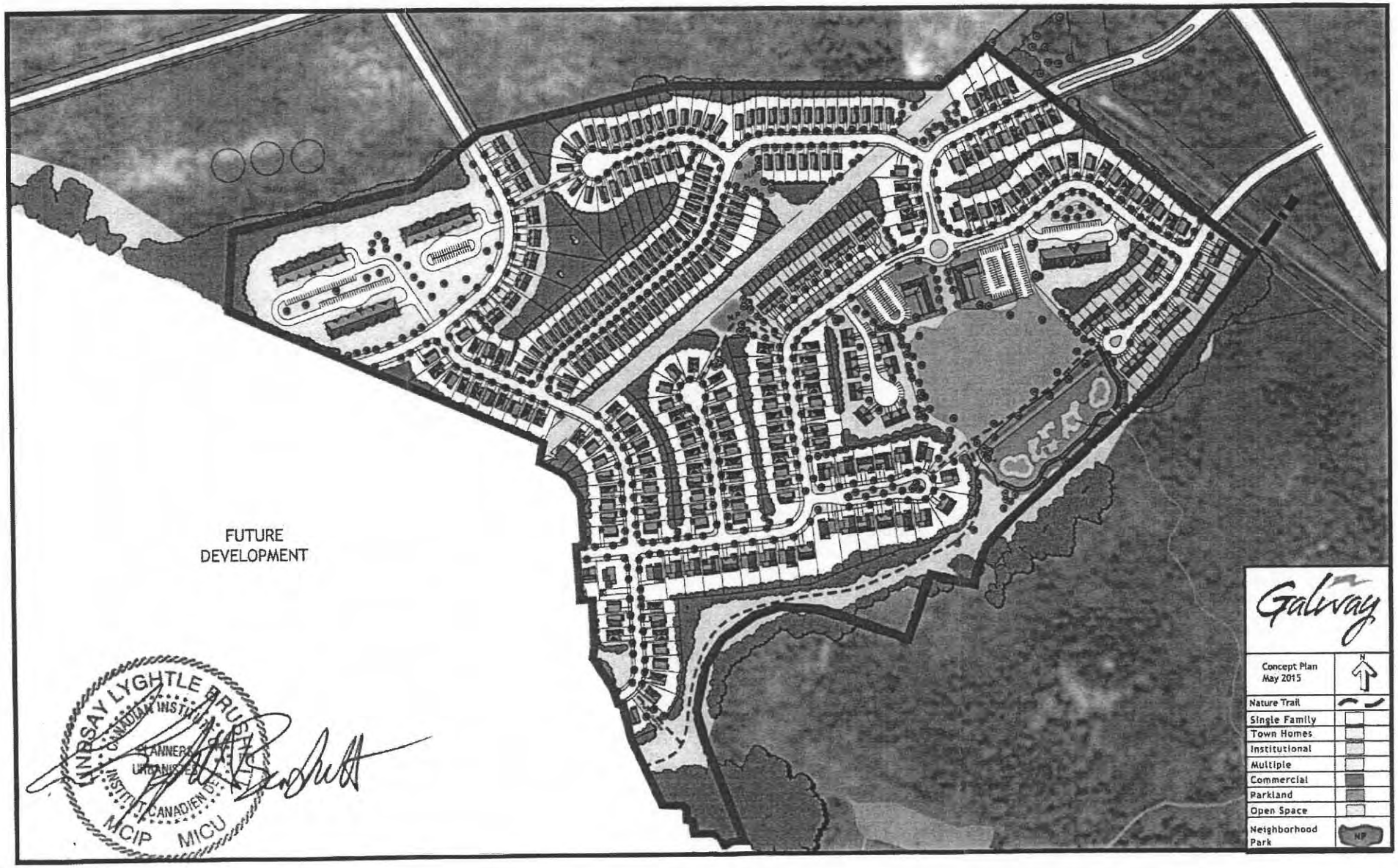
City Clerk

September 8, 2015
Council Adoption

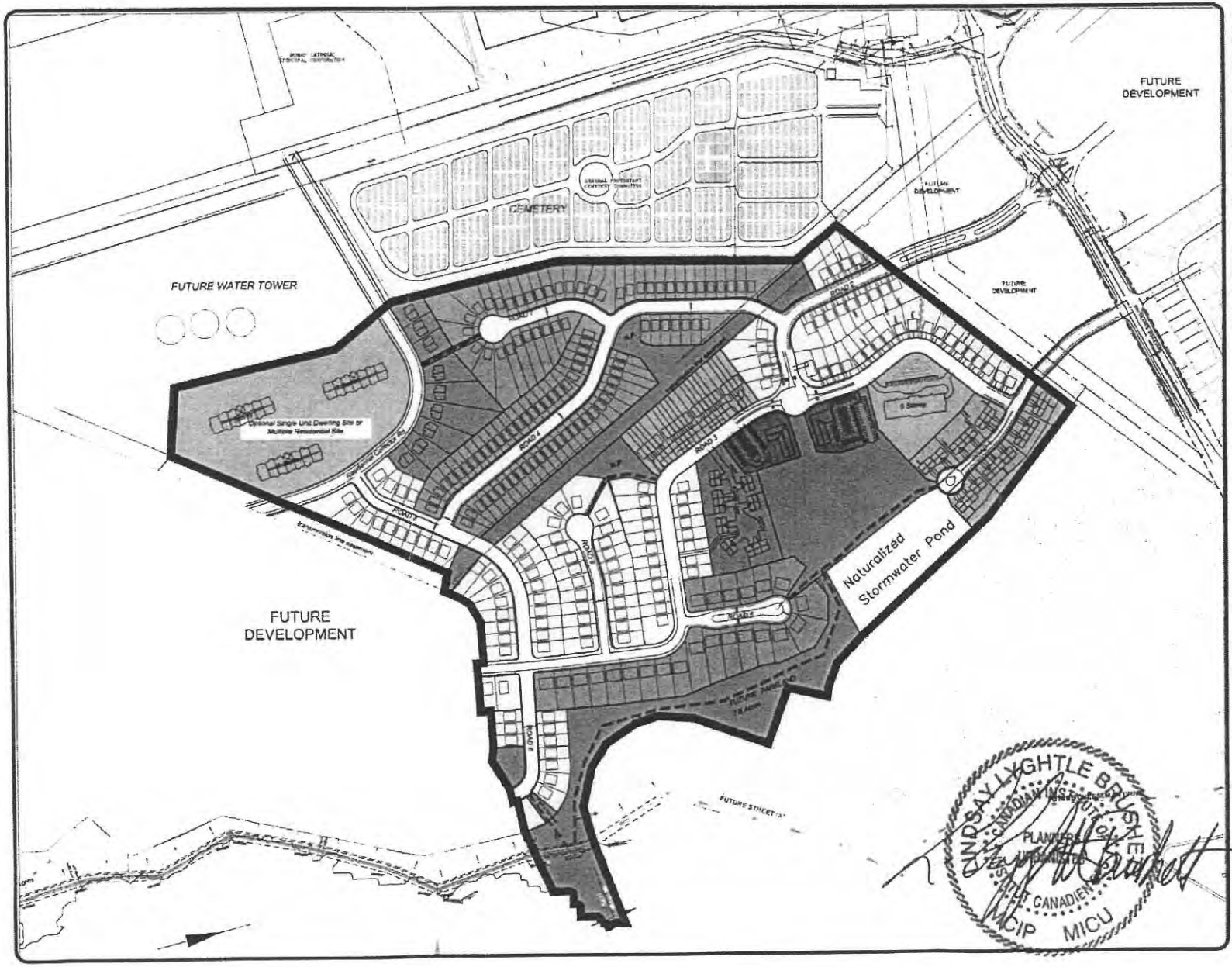
Development Regulations/Amendment
REGISTERED
Number 4400-2015-325
Date October 8, 2015
Signature

Provincial Registration

Schedule "A"


FUTURE
DEVELOPMENT
Galway
Concept Plan
May 2015
N
Nature Trail
Single Family
Town Homes
Institutional
Multiple
Commercial
Parkland
Open Space
Neighborhood Park
NP

Schedule "B"



N

- SINGLE UNIT DWELLINGS 36'–50' FRONTAGE
- SINGLE UNIT DWELLINGS 50'–60' FRONTAGE
- SINGLE UNIT DWELLINGS >60' FRONTAGE
- TOWNHOUSE DWELLINGS 22' MIN FRONTAGE FREEHOLD
- TOWNHOUSE CLUSTER CONDOMINIUM / RENTAL
- STACKED TOWNHOUSES
- MULTIPLE RESIDENTIAL
- PARKLAND
- MIXED–USE DEVELOPMENT COMMERCIAL / RESIDENTIAL

N.P. NEIGHBOURHOOD PARK

TRAIL

NOT TO SCALE

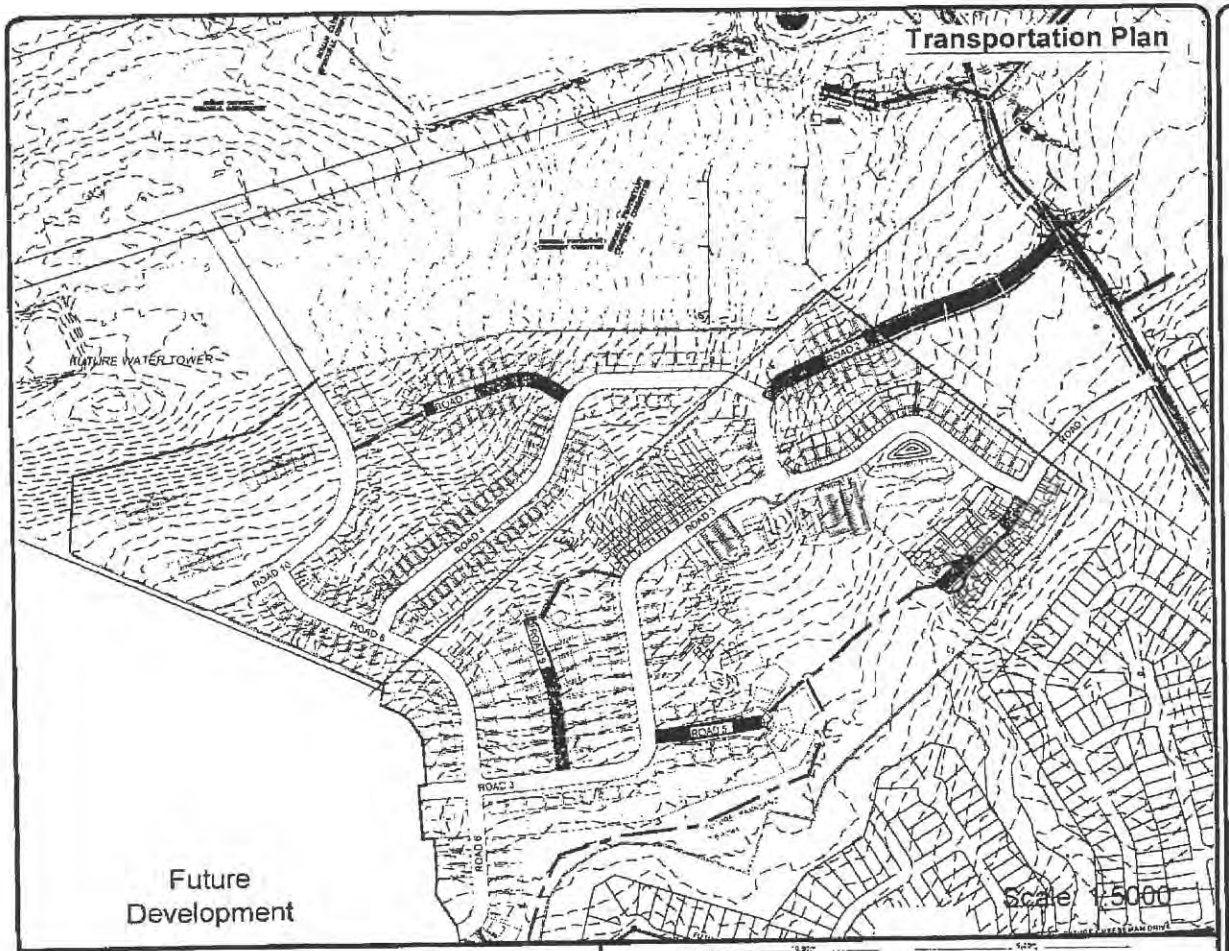
June 26, 2015

PROJECT

GALWAY
LAND USE PLAN

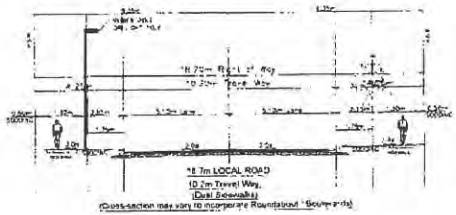
LINDSAY LYGHTLE BRUSHETT
CANADIAN INSTITUTE OF PLANNERS
INSTITUT CANADIEN DES URBANISTES
MCIP MICU

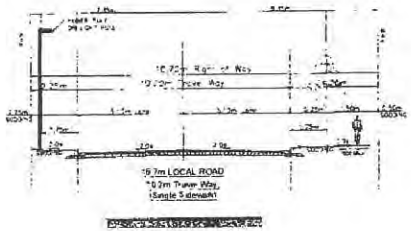
Schedule "C"

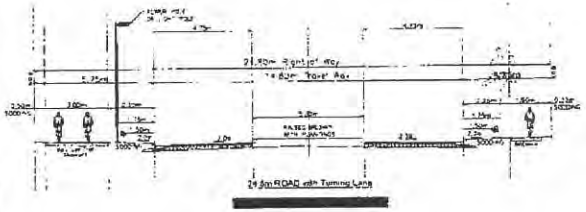


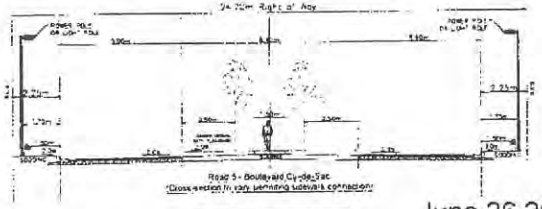
Note: Location of street trees within ROW to be determined

GALWAY ROAD CROSS SECTIONS



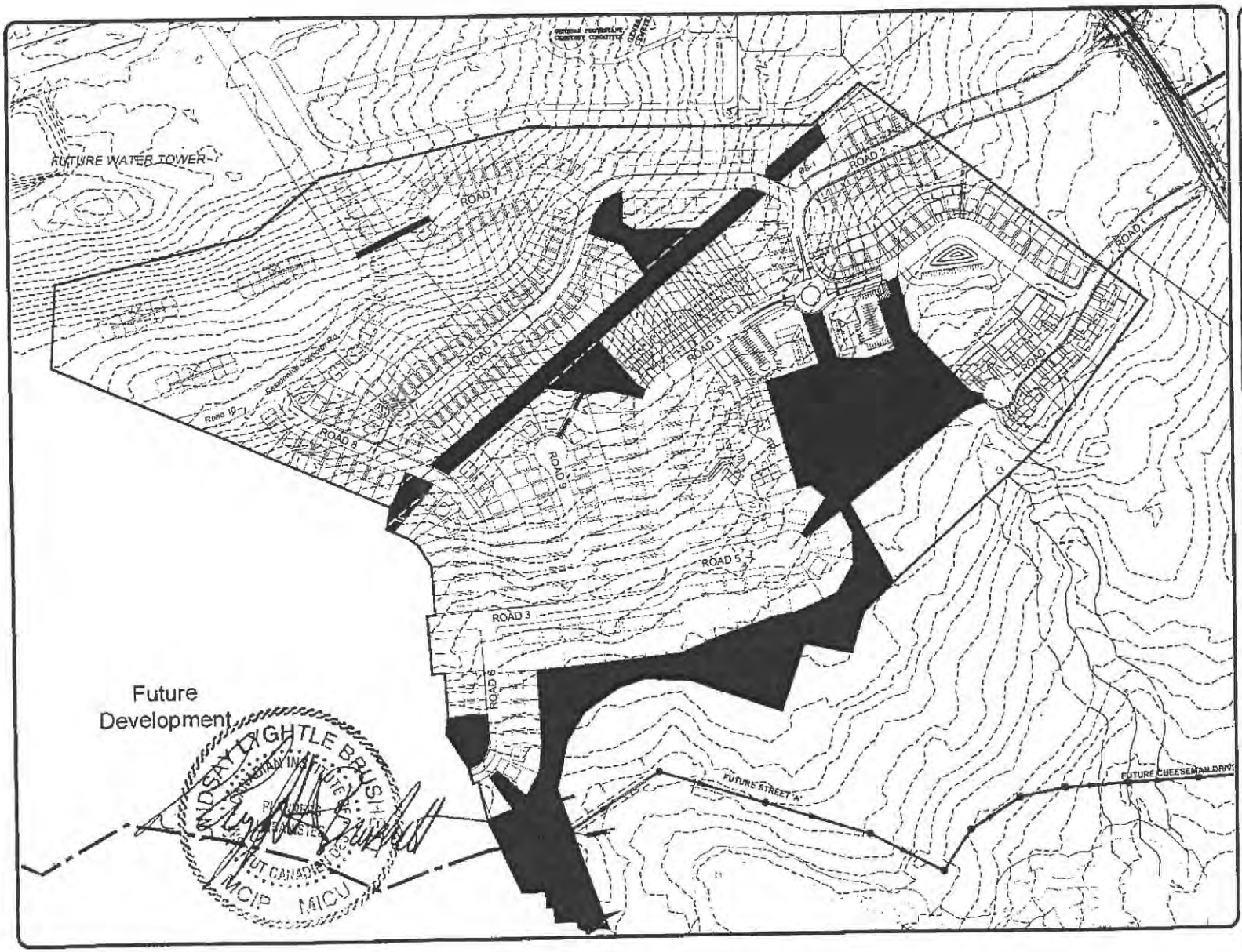






June 26 2015

Schedule "D"



Parkland
&
Pedestrian
Trail Plan

Parkland

Multi-use Trail
(3m wide
Crusher-dust)

Pedestrian
Connection
(2m wide asphalt)

North

N.T.S.

June, 2015

Office of the City Clerk
City of St. John's
P.O.Box 908
St.John's, NL.
A1C 5M2

P.O.Box 541
St.John's, NL.
A1S 1G6

Sept. 4, 2018

Dear Sirs:

Re: Proposed Amendment – Galway Wetlands

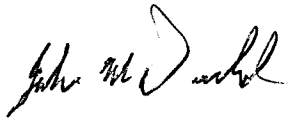
Attached is a copy of my letter dated August 15,2018 which was sent to the chief municipal planner and was copied to Mayor Breen, the City solicitor, the City manager and all City councilors. You will see from this that I have a significant interest in the proposed amendment to the City Development Regulations as they relate to the "Galway Wetlands".

It was not until August 24, 2018 that I was provided with a copy of the 2013 report of Stantec which apparently the City's Department of Planning is relying upon to suggest to Council the boundaries for the proposed Galway wetlands. I would note that the Stantec report was commissioned by the proponent, not by the City, and is not therefore a report by an independent party. It is apparent also from a cursory review of the report that it was done without regard to my property interests.

The Stantec report is a lengthy, technical report and is not one I can respond to without technical assistance of my own. It is therefore requested that the time for written submissions (and Council's decision) regarding the proposed amendment be postponed so that I can have the Stantec report reviewed by independent experts . Only in this way can I make a full and reasoned response to the proposed amendment. The postponement I am requesting is necessary if the City's process is to be a fair one, considering the interests of all those affected by this proposed amendment.

Yours truly,

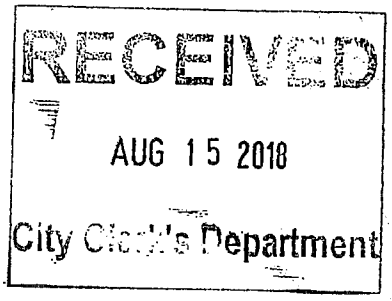
John A. McDonald



c.c. Mayor Danny Breen
c.c . Ms. Linda Bishop, Q.C., City Solicitor
c.c. Mr. Ken O'Brien, Chief Municipal Planner
c.c. City Manager
c.c. All City Councilors

City of St.John's
P.O. Box 908
St.John's, NL.
A1C 5M2

August 15,2018



Attention: Mr. Ken O'Brien, chief municipal planner
Dept. of Planning, Engineering and Regulatory Services

Dear Sirs:

Re: Amendment – Galway Wetlands

I am writing concerning the public notice issued by the City of St.John's on August 9,2018 as it relates to " an amendment to the City of St.John's Development Regulations to set out the boundaries of the Galway wetland and to add the Galway wetland to the list of proposed wetlands" ("the proposed amendment").

Through my company, McDonald Stables Ltd., I own a substantial parcel of land (in excess of 100 acres) the boundaries of which are contiguous to those of the Galway development but which is in no way part of that development.

I have three concerns relating to the proposed amendment. First, the boundaries of the proposed wetland may include a portion of my land. Second, if a portion of my land is included in the boundaries of the proposed wetland, that land may not , in fact, be "wetland" as the term is defined in the St.John's Development Regulations. Third, if a portion of my land is included in the boundaries of the proposed wetland, access to the remainder of my land may be lost completely.

With respect to access, my land can currently be accessed through Duffett's Road. However, it is my understanding that Duffett's Road is slated for closure. In that event the only access to and from my land will be via the Galway development. If the boundaries of the propose wetland were to block access to my land via the Galway development it would render the value of my land worthless. This, in my view, would be tantamount to expropriation without compensation.

The above-mentioned public notice stated that interested parties could view information regarding the proposed amendment at the Planning Department at the City Hall Annex. When I attended there for that purpose on August 14 there was no staff member available to meet with me or to show me anything regarding the proposed amendment.

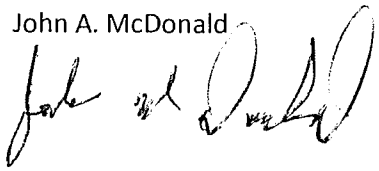
In order to make a fully-informed submission regarding the proposed amendment I will need copies of the following materials:
1.Mapping showing the precise boundaries of the proposed wetland area; and
2.All reports, studies or other documents (whether commissioned by the City or by a third party) which were considered by City staff in formulating the proposed boundaries for the " Galway wetland".

As submissions to Council must be received in the City Clerk's office by 9:30 am on September 4th.,I will need to receive the above materials by Monday, August 20th.. When they are ready to be picked up I can be reached at 743-0283.

I trust this matter will receive the urgent attention it requires.

Yours Truly,

John A. McDonald

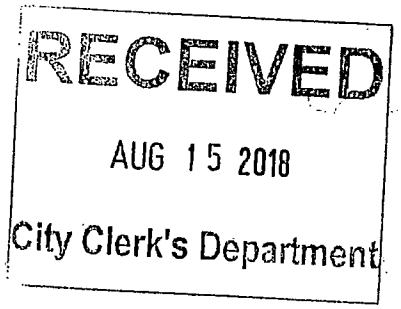


c.c. Mayor Danny Breen

c.c. Ms. Linda Bishop Q.C., City Solicitor

c.c. All City Councillors

c.c. City Manager



Maureen Harvey

From: Newsom, Kaylene [redacted]
Sent: Sunday, September 2, 2018 11:11 AM
To: CityClerk
Subject: Galway Wetland

Hello,

In response to the Galway Wetland ammendment, the area around this wetland should be extended further then what the city has decided upon.

Regards,
Kaylene
[redacted] Terra Nova RD
A1B 1G1
St. John's, Newfoundland

Maureen Harvey

From: Maria Lear [redacted]
Sent: Tuesday, September 4, 2018 9:41 AM
To: CityClerk
Subject: Amendment Number 684, 2018

Good morning,

I am writing in support of the inclusion of the Galway wetland into the list of protected wetlands as part of an amendment to the *St. John's Development Regulations, Urban and Rural Planning Act, 2000.*

Inclusion of this wetland is important to the overall health of the environment as well as mitigation towards flooding, increased water run-off & over-capacity of surrounding and downstream watersheds created by the severe upland vegetation clearance above the 190m contour. I am aware & supportive of the municipal policy regarding stormwater detention (*2013 Stormwater Detention Policy*) & believe this strategy was used within the new development. However, I feel that the increased measure of protecting the natural wetland should be added as well. I also refer to the 2012 municipal document *Development of Lands Above the 190 Metre Contour* by City Commissioner Christopher Sharpe which delves into these issues at length.

Best,
Maria Lear
St. John's, NL

Appendix C

Wetland Delineation and Functional Assessment Study, Glencrest Development /Wetland (Open Space) Delineation (PN 10003)

Prepared for:
10718 Newfoundland Inc. c/o
Pinnacle Engineering Limited
Suite 202, 40 Aberdeen Ave.
St. John's, NL A1A 5T3

Prepared by:
Stantec Consulting Ltd.
607 Torbay Road
St. John's, NL A1A 4Y6
Tel: (709) 576-1458
Fax: (709) 576-2126

File No: 121511177

Final Report

December 11, 2013

Table of Contents

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

10718 Newfoundland Inc. is proposing to construct a mix of residential, commercial and light-industrial developments in St. John's, Newfoundland and Labrador. The Project, located east of the Trans-Canada Highway (TCH) (Outer Ring Road) and south of Pitts Memorial Drive, is within the City of St. John's and in an area of the city referred to as Southlands (hereafter referred to as Glencrest) (Figure 1-1). The area is currently zoned Productive Forest (PF), Open Space Reserve (OR) and Open Space (O) Rural Zone and changes to the current land development regulations will be required before the area can be re-designated and a concept plan for the entire area can proceed. A Preliminary Concept Plan for the Glencrest Development ("the Project") (January 2013) proposes the following land uses: residential, commercial, industrial and open space; to be served by a network of arterial, collector and local roads. Residential and commercial properties would be accessed via a new collector road running from Ruth Avenue Extension and connecting to a future extension of Southlands Boulevard. Access to the industrial lands would be achieved via the TCH. The overall area will cover approximately 883 hectares (2,182 acres) (Appendix B - Glencrest Site Plan).

Construction activities related to the proposed Project have the potential to affect the natural environment, including both terrestrial upland and wetland habitats. Stantec Consulting Ltd. (Stantec) was retained by Pinnacle Engineering Limited on behalf of their client 10718 Newfoundland Inc. to conduct a Wetland Delineation and Function Assessment of the subject property ("the Property"), delineating and investigating the extents of specified wetland areas in an effort to limit the likelihood of interactions with biological resources (i.e., individual species, their habitats, and areas of habitat connectivity) that may be present on site. The primary intent of this assessment was to: describe, evaluate and quantify onsite environmental resources pertaining to wetlands that may exist and that must be considered, and planned for, prior to construction of the Project; and review, interpret and report on these data in support of an application for development under the City of St. John's Development Regulations (1994) and in accordance with the Development Control Process. Recognition of these resources at an early stage of development provides the opportunity to avoid or mitigate undesirable environmental effects through the consideration of alternative means, as required, to meet construction needs. This approach helps reduce the risks that may be inherent in an uncertain planning process, and helps ensure that time and resources are not expended unnecessarily. Delivered in accordance with applicable environmental, safety and other pertinent laws and regulations, it is anticipated that careful planning prior to construction will result in the control of both predictable and preventable environmental effects to wetlands.

1.1 Application Contact Information

Name of the Proponent: 10718 Newfoundland Inc. c/o Pinnacle Engineering Limited

Postal Address: Suite 202, 40 Aberdeen Ave, St. John's, NL, A1A 5T3

Telelephone: (709) 754-2114

Figure 1-1 Overview of Project Area

1.2 Project Scope

The Project is not expected to require an environmental assessment under the Environmental Protection Act, SNL 2002 cE-14.2 and the *Environmental Assessment Regulations*, 2003 or the Canadian Environmental Assessment Act (2012). However, the natural environment will be affected, including an area dominated primarily by natural vegetation. Natural vegetation may include both native and introduced species. Uplands are characterized by an expanse of coniferous forests, intermixed with barrens at higher elevations. Wetlands and riparian habitats dominate in lowland areas. Land use practices typical of the surrounding areas, including agriculture, urbanization, rural residential development and domestic cutting, have in part altered natural vegetation and influenced terrestrial, wetland and aquatic ecosystems in the area.

In Newfoundland and Labrador, wetlands are protected by the *Water Resources Act* [SNL 2002, c. W-4.01] and the Policy for Development in Wetlands (the "Policy"). As outlined in the Policy, the potential to alter wetlands, including direct and indirect effects, requires written permission of the Minister of Environment and Conservation in accordance with the Act.

This Wetland Delineation and Functional Assessment was conducted and is being presented as due diligence during Project design planning by Pinnacle Engineering Limited and 10718 Newfoundland Inc. It is intended to support and/or supplement the decision-making process associated with the Project such that the potential environmental effects to the natural environment (including wetlands), significance of those effects and general protective and mitigative measures may be considered during concept planning. Incorporating wetlands into the planning process can help minimize effects to wetlands and identify priority wetlands to be conserved. During the planning process, wetlands were inventoried, assessed and ranked as a means of selecting priority wetlands for conservation. This was achieved through an initial desktop inventory of wetlands based on available mapping, followed by a detailed field assessment to verify the location of the wetland (wetland delineation), function and condition. Factors to consider when choosing wetland conservation sites include: aligning functions provided by the wetland to intended or existing community goals; location in the watershed; size and connection to landscape features; land ownership; and vulnerability to future development.

Delineated wetlands within the area of the Property account for approximately 79 ha of the 883 ha (overall area size) development.

1.3 Project Objectives

The purpose of the wetland classification is to determine what types of wetlands are in the area and which wetlands are going to be affected by the Project. Specific objectives of the assessment are to:

- identify and classify existing wetlands according to the Canadian Wetland Classification System (National Wetlands Working Group (NWWG) 1997);
- describe the biological environment, including soils, vegetation (in addition to potential rare vascular plant species) and wildlife / wildlife habitat;
- provide an assessment of key wetland functions and an estimate of the contributing area based on wetland classification;
- consider the natural environment within the broader landscape, including ecological linkages to natural systems in proximity to the Project site;
- identify key components of the natural environment that may present environmental constraints or management issues; and
- outline a set of general recommendations that will be incorporated into the planning, design and decision-making processes and that maximizes the protection of the identified natural environment, including identification of measures to avoid, mitigate and compensate for the potentially adverse environmental effects of the Project.

The findings presented herein will provide valuable information regarding the character and distribution of wetlands and is intended to support and/or supplement the decision-making process associated with the re-zoning application. This assessment will be used collectively to support and inform council and city planning managers, as well as to guide design and planning for the Project.

This report follows the requirements for an Environmental Analysis Report as specified in Section 5 - Development Control Procedures of the City of St. John's Development Regulations (1994) and in accordance with Terms of Reference identified by the City of St. John's (D. Wadden, pers. comm.).

The report is organized as follows:

Section 1.0 describes the proposed Project in general terms;

- Section 2.0 describes the federal and provincial environmental legislation and regulations as they may affect planning and design of the proposed Project;
- Section 3.0 describes the methodology used to perform the assessment;
- Section 4.0 describes the local environment surrounding the wetlands;
- Section 5.0 provides a detailed description of the wetland and its hydrological, ecological and social functions;

- Section 6.0 identifies the environmental constraints to development at the Project site based on the featured identified in Section 5.0 and the regulatory framework identified in Sections 2.0; and

- Section 7.0 describes the general effect related to subsequent development of the Project site (i.e., the proposed wetland alterations), potential effects to the wetland and its functions, and opportunities to mitigate and compensate for the Project effects.

While this report was prepared in an objective and rigorous manner, this type of assessment is not intended, nor is it able to provide, a completely comprehensive review of past or present site conditions.

1.4 Project Location and Surrounding Landuse

The Project, located east of the TCH and south of Pitts Memorial Drive, and entirely within the City of St. John's (Figure 1-1; Appendix A). These lands are above the 190 m elevation contour, the traditional limit for municipal water and sewage services in St. John's, however, design work is underway to extend services to the Project area.

At present, the Project area is covered with a mix of native upland and lowland vegetation where the predominant landuse is recreational. Within the general vicinity of the Glencrest wetlands are: two new cemeteries; two water towers that are part of the St. John's regional water system; nearby phases of the expanding Southlands residential development - low to medium density residential (R1) properties containing single family and semi-detached dwellings; an air navigation tower and associated buffer; Duffett's farm – former agricultural lands off Duffett's Road (access via the TCH); a paintball recreation business; and Cochrane Pond Park campground. In general, the amount of activity increases down-gradient of the site as the surrounding area is becoming increasingly developed for residential (Southlands Development), commercial, light-industrial (Donavan's Industrial Park), industrial (heavy civil) and agricultural uses.

Site Name:	Glencrest Development
Civic/Street Address:	Southlands Boulevard / Ruth Avenue Extension
Community:	St. John's
Ward:	1
1:150 000 Topographic Map #:	001N10

1.5 Study Team

The Wetland Delineation and Function Assessment was conducted by a team of Stantec's professional terrestrial ecologists and wetland scientists experienced in wetland classification, characterization and delineation (Table 1.1). All team members have in-depth knowledge and experience in their fields of expertise and a broad general knowledge of the work conducted by other experts in related fields. Brief biographical statements, highlighting project roles and responsibilities and relevant education and employment experience, are provided below.

Table 1.1 Study Team – Wetland Delineation and Function Assessment

Role	Personnel
Project Manager and Field Lead	Sean Bennett
Field Team	Sean Bennett
	Anna Buchheit
Data Analysis and Report Preparation	Anna Buchheit; Sean Bennett
Scientific Review	Elizabeth Kennedy
Editorial Review	Ellen Tracy
Information Management / GIS	Heather Ward

Sean Bennett, B.Sc., P.Biol., R.P.F., is a Professional Biologist (ASPB) and Professional Forester (CAPF) in Stantec's St. John's, Newfoundland and Labrador, office, with over 14 years of experience in the area of environmental consulting. A technical professional with focus on the assessment and characterization of terrestrial ecosystems, Mr. Bennett has provided expertise and coordinated projects throughout Canada in accordance with applicable federal and provincial (Yukon, North West Territories, Nunavut, British Columbia, Alberta, Saskatchewan and Newfoundland and Labrador) regulatory requirements. Proficient in botanical / vegetation inventories (including taxonomy and species identification), soil classification (Canadian System of Soil Classification), and the application of Ecological Land Classification principles, he has conducted baseline environmental studies evaluating a variety of habitats to identify site-specific constraints (i.e., environmentally sensitive areas) and developing appropriate mitigative measures for proposed developments. Mr. Bennett served in the capacity of Study Manager and is the principle author of the report.

Anna Buchheit, B.Sc., GIS Dip., is an environmental scientist and GIS technician with the Information Management team in Stantec's St. John's office. Her background is in Environmental Science, and she has three years of field experience working in remote locations throughout Canada. She has collected data for an ecological monitoring program in balsam fir forests under stress from high moose populations, as well as performing wildlife surveys for an environmental impact assessment on the Nelson River in Manitoba. Other wilderness related experience includes identification of bird songs, mammal track / scat signs and plant species.

Since joining Stantec in December 2011 as a GIS Technician, Annamarie has contributed to a variety of projects including Nalcor's HVDC project, NOIA's Oil and Gas East Coast Map and Alderon's Kamistiatusset project. Currently, she is providing GIS support for the Century Iron Ore Joyce Lake Project. Her work on these projects has involved a variety of tasks such as data organization, data analysis, and data management, as well as cartographic support and quality control.

Heather Ward, MSc. Candidate, is a GIS Analyst with the Information Management team in Stantec's St. John's office. She is currently an MSc candidate completing her Master in Geography with a focus in Remote Sensing at Memorial University. Her experience comes from a combination of private sector work in Remote Sensing and GIS and work related to her Master of Science program. Mrs. Ward has considerable experience with remote sensing, geo-statistical and spatial analysis as well as cartography. Mrs. Ward also teaches GIS sciences at Memorial University.

Elizabeth Kennedy M.Sc., P.Geo, PWS is a wetland scientist with over 11 years of consulting experience, specializing in wetland assessment, restoration and creation. Elizabeth graduated from the University of Waterloo after completing a master's degree in hydrogeology, focusing on restored and created wetland design and its effects on carbon sequestration. In her current role at Stantec Consulting Ltd. in Dartmouth, Elizabeth provides a range of expertise including wetland creation and restoration, wetland alteration permitting, wetland hydrological and biogeochemical functional assessment, and mitigation planning. Elizabeth has recently taken on the role of Team Lead for Biophysical and Ecological Sciences, NS. Elizabeth is also a sessional instructor at Dalhousie University, Halifax, teaching "The Science of Wetland Ecosystems" to senior and graduate students.

2.0 Wetlands, Wetland Values and Function and Regulatory Context

2.1 Wetlands

Wetlands are defined by the National Wetlands Working Group (NWWG1997) as "*land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment*." Wetlands are categorized into two groups: organic wetlands (i.e., peatlands); and mineral wetlands (i.e., non-peat-forming wetlands). Organic wetlands, or peatlands containing more than 40 cm depth of accumulated organic matter, are subdivided into bogs, fens and some swamps. Mineral wetlands, or non-peat forming wetlands having less than 40 cm of accumulated organic matter, are usually found in areas where excess water collects and are sub-divided into three groups: shallow open water, marsh and other swamps. Each of these wetlands is formed by a combination of geomorphic, hydrologic, edaphic, climatic, or biological factors. Wetlands are an integral component of the boreal ecosystems that stretch across northern Canada, and are abundant throughout Newfoundland and Labrador.

2.2 Wetland Values

In many regions of North America and elsewhere, wetlands have been increasingly subject to conversion to anthropogenic land-use types for the purposes of agriculture, urbanization, industrial development and recreation. They have traditionally been regarded as unexploited wastelands and obstacles to development and production, and their perceived value has depended primarily on their potential for conversion to more "productive" uses. However, knowledge of wetland functions and values has grown considerably in the last two decades. In addition to their obvious value to biological diversity, wetlands are now credited with supporting coastal and estuarine fishery resources, protecting shorelines from erosive wave action and watersheds from flood surges and contributing to improved water quality in watersheds, among other functions. Further benefits of functional wetlands include their utility as outdoor educational exhibits and laboratories, value for recreational pursuits and harvesting potential for items such as berries, wild game and peat (i.e., peat moss and fuel peat).

2.3 Wetland Function

Wetland function may be defined as "*the natural processes and derivation of "benefits" and values associated with wetland ecosystems, including economic production (e.g., peat, agricultural crops, wild rice, peatland forest production), fish and wildlife habitat, organic carbon storage, water supply and purification (groundwater recharge, flood control, maintenance of flow regimes, shoreline erosion buffering), and soil and water conservation, as well as tourism, heritage, recreational, educational, scientific, and aesthetic opportunities*"

(Government of Canada 1991). This definition does not distinguish between the processes that wetlands perform and the value that society places on them for ecological, economic and social reasons. However, such a distinction is often made by others, with wetland "functions" being the natural physical, biological and chemical processes that occur in the development and maintenance of wetlands, and "values" being the benefits that these functions provide to people or the environment (Smith et al. 1995; Novitzi et al. 1997).

2.4 Regulatory Context

2.4.1 City of St. John's

2.4.1.1 St. John's Municipal Plan

The St. John's Municipal Plan (the "Plan") is a comprehensive policy document on land use, physical design and development passed in 2003, and forms the legal basis and strategic policy framework for directing the physical, economic and social development of the City of St. John's. The conservation and protection of natural areas and environmentally sensitive lands are addressed in the Plan under strategies for Resource and Environmental Areas, and include priorities for the "*preservation and enhancement of the natural environment and open spaces" and "protection of the natural environment*".

2.4.1.2 Development Regulations (1994)

The City of St. John's *Development Regulations (1994)*, through the Development Control Procedures (Section 5), directs administration to plan for ecological systems at the neighbourhood, city and regional scale, as well as to conserve natural areas and requires ecological information to support planning and development applications.

2.4.2 Province of Newfoundland and Labrador

2.4.2.1 Water Resources Act

Newfoundland and Labrador's *Water Resources Act* [SNL 2002, c. W-4.01] is an Act respecting the control and management of water resources in the province. It states:

"The minister may control and determine the use of, or modifications which shall apply to, wetlands, including the drainage, infilling and permanent flooding of wetlands and the addition of wastewater or stormwater discharges to, or the physical, chemical or biological modification of, wetlands where, in the minister's opinion, there may be an impact upon the hydrology of that wetland or its recreational, aesthetic or other natural functions and uses."

Activities requiring Certificates of Approval under the *Water Resources Act* (Government of Newfoundland and Labrador 2002) include:

Certificate of Approval for Any Alteration to a Body of Water - approval is required before undertaking any construction activities within 15 m of the high watermark of a surface water body or activities related to a water body that has the potential to affect the aquatic environment (i.e., flood plains, shorelines and wetlands) (Government of Newfoundland and Labrador 2002, Part II, c. W-4.01 s30). A separate permit is required for each alteration.

Certificate of Approval for Any In-stream Activity (including culvert installation, bridges, and fording of a water course) – approval is required for any in-stream activity, including culvert installation and fording activities, before undertaking the work. This also includes any development within 15 m of the high watermark of a surface water body.

Certificate of Approval for Development Activity in a Protected Public Water Supply Area or Wellhead Protected Public Water Supply Area – approval is required for any activity in a Protected Public Water Supply Area prior to commencement of any work.

Certificate of Approval for Construction Site Drainage – approval is required for any runoff from the project site being discharged to receiving waters.

Additionally, to prevent substantial effects on wetlands, the *Water Resources Act* (Government of Newfoundland and Labrador, Part II, Section 30(2)) and Sections 5(1) and 5(2) of the associated *Environmental Control Water and Sewage Regulations*, 2003 (O.C. 2003-231) identify controls to wastewater and stormwater discharges into a wetland and chemical and biological alterations of a wetland.

2.4.2.2 Policy for Development in Wetlands

Under the Policy, development activities in and affecting wetlands require a permit under Section 48 of the *Water Resources Act* (Government of Newfoundland and Labrador 2002). The objective of the Policy is to permit developments in wetlands that do not adversely affect the water quantity, water quality, hydrologic characteristics or functions, and terrestrial and aquatic habitats of the wetlands (Government of Newfoundland and Labrador 2011a). Under this Policy, all uses and developments of wetlands that result in potentially adverse changes to water quantity or water quality or hydrologic characteristics or functions of the wetlands require the implementation of mitigative measures to be specified in the terms and conditions for the environmental approval. A goal of “no net loss” is not identified. Additionally, the terms and conditions of the environmental approval will specify the restoration measures to be implemented upon cessation of activities or abandonment of facilities on wetland areas (Government of Newfoundland and Labrador 2011a).

2.4.2.3 Wetland Habitat Stewardship Program

There are provincial initiatives that aim to prevent loss of key wetland functions. For example, Newfoundland and Labrador's wetland habitat stewardship program "*works within the context of the Eastern Habitat Joint Venture to secure, enhance and restore important fresh and saltwater wetlands for waterfowl and other wildlife species*" (Government of Newfoundland and Labrador 2011b). This program arranges wetland stewardship agreements with municipalities that manage important wildlife habitat within their planning boundaries and where development pressure is often greatest. Under such agreements, municipalities commit to procuring designated wetlands within their planning boundaries and to implementing "wise use" principles, as outlined within a conservation plan (Government of Newfoundland and Labrador 2011b).

2.4.3 Government of Canada

2.4.3.1 Federal Policy on Wetland Conservation

As an indication of the increasing attention on wetlands, their conservation is federally promoted by the Federal Policy on Wetland Conservation (Government of Canada 1991). This policy has been adopted in order to help meet the objectives of wetland conservation as outlined in the North American Waterfowl Management Plan, Ramsar Convention on Wetlands (Ramsar Convention Secretariat 2006) and the Canadian Biodiversity Strategy (Government of Canada 1995). The objective of this policy is to "*promote the conservation of Canada's wetlands to sustain their ecological and socio-economic function, now and in the future*". This federal government framework strives for the goal of "no net loss" of wetland function, and recommends that the hierarchical sequence of mitigation alternatives (avoidance, minimization and, as a last resort, compensation) be followed. The Federal Wetland Conservation Policy generally applies to projects on federal lands, projects receiving federal funding, or projects subject to federal approvals.

2.4.4 Additional Federal Acts

Additionally, development activities in and around wetlands are indirectly regulated at the federal level through the *Species at Risk Act* (SARA) (Government of Canada 2002, S.C. 2002, c29) if they contain critical habitat for species at risk, the *Migratory Birds Convention Act* (MBCA) [Government of Canada 1994, c.22] if they contain nests of migratory birds, and/or the *Fisheries Act* [Government of Canada 1985, R.S.C., 1985, c.F-14], if the wetland contributes to an existing or potential fish habitat.

2.4.4.1 Species at Risk Act

SARA protects listed wildlife species and their critical habitats on federal lands, but does not apply to lands held by the Province of Newfoundland and Labrador or its private citizens unless "*the laws of Newfoundland and Labrador do not effectively protect the species or the*

residences of its individuals". In this case, the Minister may issue an order in council to protect federally listed species that occur on provincial or private lands.

2.4.4.2 Migratory Bird Convention Act

The MBCA is federal legislation based on an international treaty signed by Canada and the United States of America that aims to protect migratory birds from indiscriminate harvesting and destruction on all lands within Canada (and the United States).

Under the MBCA, efforts should be made to provide for and protect habitat necessary for the conservation of migratory birds, and to conserve habitats that are essential to migratory bird populations, such as nesting and wintering grounds, and migratory corridors. Under section 6(a) of the *General Prohibitions of the Migratory Birds Regulations* (C.R.C., c. 1035), it is an offence to "*disturb, destroy or take a nest, egg, or nest shelter*" of a migratory bird.

Additionally, section 35(1) stipulates that "*no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds*".

2.4.4.3 Fisheries Act

The federal *Fisheries Act* states "no *person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish and fish habitat*" (Section 35(1)) (Fisheries and Oceans Canada (DFO) (Government of Canada 1985). Only under the authorization of the federal Minister of Fisheries and Oceans under Section 35(2) are exceptions made to Section 35(1).

Under the *Fisheries Act*, fish are defined as; "*Parts of fish, shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine mammals, and the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine mammals*" (Sections 2 a, b and c), and fish habitat is defined as; "*Spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life process*" (Section 34). Fish habitat is therefore considered to encompass "*freshwater, estuarine and marine environments that directly or indirectly support fish stocks or fish populations that sustain, or have the potential to sustain, subsistence, commercial or recreational fishing activities*" (Government of Canada 1985). Fish habitats may also include habitats that could sustain a new fishery in the future and/or those that do not directly support fish but provide nutrient, food supplies and water quality to areas downstream that do support fish (Government of Canada 1985).

3.0 METHODOLOGY

3.1 Wetland Delineation and Classification

Under the *Fisheries Act*, fish are defined as; "*Parts of fish, shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine mammals, and the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine mammals*" (Sections 2 a, b and c), and fish habitat is defined as; "*Spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life process*" (Section 34). Fish habitat is therefore considered to encompass "*freshwater, estuarine and marine environments that directly or indirectly support fish stocks or fish populations that sustain, or have the potential to sustain, subsistence, commercial or recreational fishing activities*" (Government of Canada 1985). Fish habitats may also include habitats that could sustain a new fishery in the future and/or those that do not directly support fish but provide nutrient, food supplies and water quality to areas downstream that do support fish (Government of Canada 1985).

Wetlands within the assessed area of the Project were identified and classified using a combination of field surveys and desktop analyses.

Prior to field surveys, areas with a high probability of wetland occurrence were identified using existing aerial photography. Additional information was gained through topographic maps, bedrock and surficial geology maps, recent digital aerial photography (City of St. John's Map Centre [City of St. John's 2013]) and land use maps. The results from these inventories are presented in Section 5.0.

Field surveys of target wetlands were conducted intermittently throughout the growing season between June 7 and July 12, 2013; with additional surveys completed on November 14 and 15, 2013. On site, wetlands within the assessed area were identified and mapped based on the principles prescribed in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Technical Services Co. 1995) using hydrology, soil and vegetation as wetland indicators both inside and outside wetland boundaries. US Army Corps of Engineers wetland protocols are considered the standard used throughout North America.

The first step in the wetland delineation process was to determine whether normal conditions were present at each of the pre-determined[1] target wetland locations. Each of these areas was then examined for evidence of natural or human induced alteration of hydrology, soils and/or vegetation. These initial investigations were then followed by preliminary field investigations at representative sampling points and finally, the characterization of soils, hydrology, vegetation and wildlife use across each wetland location.

[1] General locations of target wetlands for assessment were identified by Pinnacle Engineering Ltd in advance of field surveys.

The presence of primary hydrologic indicators (e.g., drainage patterns, inundation, watermarks) or secondary hydrologic indicators (i.e., intermittent flooding, water stained leaves) were determined using visual observations of the target wetlands and surrounding areas.

The presence of hydric soil indicators was determined by hand digging, augering or probing of deep soil test pits and an evaluation of varied soil attributes associated with these locations.

The presence of wetland vegetation was also determined by identifying the dominant plant species in each vegetative stratum (i.e., tree layer, shrub / sapling layer, herbaceous layer, moss layer) and evaluating their indicator status. In the absence of a provincial listing for Newfoundland and Labrador, wetland indicator status (i.e., obligate - OBL, facultative wetland – FACW, facultative – FAC, facultative upland – FACU, or upland – UPL) for all dominant plant species identified was determined using Nova Scotia Wetland Indicator Status ranks, considered appropriate for use in this region. For each wetland, wetland vegetation criterion was deemed to have been met if greater than 50 percent of the dominant plants encountered within the assessed wetland had an indicator status of OBL, FACW and/or FAC.

Information on the type and character of the wetlands represented within the assessed area were also collected during field surveys, including data on wetland class and habitat. Wetland classes reflect information on their origin (e.g., hydrological regime) and character (e.g., dominant vegetation type) and were identified using designations provided by the Canadian Wetland Classification System (NWWG, 1997). The Canadian Wetland Classification System is a hierarchical system used to classify wetlands into classes, forms and types (NWWG 1997). Each of the classes of wetlands (e.g., bogs, fens, marshes, shallow water wetlands and swamps) is distinguished on the basis of a number of ecological features, including their origin (e.g., hydrological regime) and character (e.g., dominant vegetation type). They may be subdivided into wetland forms on the basis of surface morphology of the wetland (e.g., slope, raised, flat), position in the landscape (e.g., valley, delta, basin), surface features (e.g., ridges, nets, ribs, mounds) and proximity to water bodies and tidal effects (e.g., lacustrine, riverine). Wetland types were identified by combining information on wetland class (e.g., “marsh”) with the dominant physiognomic vegetation (e.g., “forb”, “graminoid”, “shrub”, “treed”). Due to the hierarchical nature of this system, wetlands may be classified at multiple levels and comprised of multiple wetland types, forms, classes, or habitats. As such, this information, when combined, constitutes wetland types (e.g., “graminoid string fen”, “shrub slope bog”).

Much of the assessed wetland area associated with the Project was part of a large interconnected complex and descriptions were taken when a change in wetland class and/or habitat was observed. Targeted wetland areas within the Property boundaries that were not identified within the proposed Scope of Work were not surveyed / assessed for the purposes of wetland identification, delineation and/or characterization (Appendix A).

The edge of wetlands that were greater than 100 m^2 was traversed and geo-referenced during field surveys using the Trimble® Nomad® outdoor handheld data collection and survey (with

sub-meter accuracy) device. Survey flagging tape (pink) was also placed along their edges approximately 10 m apart (for rough field location; flags typically biodegrade in 24 to 36 months). Supplemental wetland delineation of wetland types associated with each of the surveyed wetlands was also conducted using the results of in-field surveys.

Photographs were taken at each target wetland and other representative locations throughout the site. Photographs are included in Appendix C.

3.2 Wetland Functional Assessment

A functional assessment of the assessed wetlands within the Project area was conducted using a multi-tiered approach (Bond et al. [1992]) that incorporated both field surveys and data collected during desktop analyses to assess wetland ecological functions. On-site surveys of assessed wetlands collected a variety of information, including a description of hydrology, substrate (soil) type, vegetation and any evidence of effects to the wetland as a result of anthropogenic activities. Data were used to evaluate the importance of wetlands for providing a suite of key hydrogeomorphological and wildlife-related functions, including surface water detention, sediment and other particulate retention, stream flow maintenance, groundwater recharge, carbon sequestration and storage, shoreline stabilization, habitat for wildlife (including fish, waterfowl and other water birds and species of conservation concern) and socio-economic values. The functional categories provide a structure for assessing the value of wetlands and for identifying potential environmental effects and/or changes resulting from interactions with the proposed Project.

4.0 Description of Existing Environment

This section provides an overview of the existing environment (e.g., atmospheric, physical, biological) for the Project area, in addition to methodologies used to obtain this information, where applicable. Specific and detailed descriptions of existing conditions for each of these disciplines require detailed field investigations and are outside the scope of this assessment.

4.1 Atmospheric Environment

The Project is located in St. John's, on the east coast of Newfoundland, in the Maritime Barrens eco-region, which includes most of Newfoundland's east coast, central barrens and south coast. The climate of this eco-region is strongly influenced by the Northwest Atlantic Ocean and is susceptible to long periods of fog. It is characterized by cool summers and short, moderate winters (Newfoundland and Labrador Department of Tourism, Culture and Recreation 2004). The average daily temperature in St. John's ranges from a high of 15.5 °C in August to -5.4°C in February (Table 4.1). Average precipitation ranges from 161.9 mm in October to 89.4 mm in July (Table 4.1).

Table 4.1 Canadian Climate Normals for 'St. John's A' between 1971 and 2000

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Average Temperature (°C)	-4.8	-5.4	-2.5	1.6	6.2	10.9	15.4	15.5	11.8	6.9	2.6	-2.2
Average Precipitation (mm)	150.0	125.2	130.8	121.8	100.9	101.9	89.4	108.1	130.9	161.9	144.0	148.8
Average Snowfall (cm)	79.9	66.5	52.3	25.7	6.1	1.3	0.0	0.0	0.0	2.9	26.3	61.3
Average Wind Speed (km/h)	27.6	26.5	26.1	22.5	21.1	21.2	20.7	19.8	20.7	22.7	24.5	26.6
Average Wind Direction	W	W	SW	SW	SW	SW	SW	SW	SW	SW	W	W
Source: Environment Canada 2010												

Air quality in the Project footprint is a typical suburban environment. Noise and emissions are produced by vehicles on nearby highways, roadways, industrial, commercial and residential developments.

4.2 Physical Environment

This section presents information on components of the terrestrial environment. It includes data gathered from both desktop and field investigations of the Project area on geology, physiography, hydrography and hydrogeology

4.2.1 Geology and Physiography

The Project is located on the Island of Newfoundland, at the eastern tip of the Avalon Peninsula, and within the municipal boundaries for the City of St. John's. Headwater streams in the area are predominantly influenced by the surficial and bedrock geology of the area, with much of the Waterford River basin overlying the geology of the Conception group and characterized by the Drook, Mistaken Point and Fermuse Formations. The largest portion of these headwater areas, particularly those associated with South Brook, are underlain by the Drook Formation, consisting of clastic sedimentary rocks with minor limestone formed in the Proterozoic III to Ordovician Period, approximately 1 billion to 570 million years ago (Agriculture Canada 1981). A second type of bedrock within this formation is described as Protorozoic III-marine and deltaic clastic sedimentary rocks. The areas surficial geology is dominated by ground moraine, typically overlain by a thin blanket of till. Areas of thin (less than 1.5 m thick), discontinuous till veneer exists in areas where bedrock is exposed. Shallow bedrock is fractured and exposed in areas, and soils and surficial geology are frequently confining and acidic. In general, shallow bedrock and boulder-rich terrain with little or no surficial materials result in conditions are highly favorable to the formation of small wetlands (organic deposits) along drainage channels and in topographical depressions. The majority of the surficial geology is made up of ablation drift (approximately 67 percent), with approximately 15 percent undifferentiated till, 13 percent drift poor and 5 percent glaciofluvial sediments (Newfoundland and Labrador Department of Environment and Conservation (NLDEC) 2013).

With the exception of the urban parts of the region, the topography of the land upon which the Project is to be constructed is typical of formerly glaciated settings on the Province's east coast. Topography is hummocky to rolling and considered relatively rugged. Slopes are regular and can vary between 2 and 25 percent.

4.2.2 Hydrology and Hydrogeology

4.2.2.1 Groundwater

Known uses of groundwater within the Project site are presently the subject of ongoing geotechnical investigations and are not known at this time.

4.2.2.2 Surface Water Hydrology

In part, developable lands within the Project area lie at an elevation above the 190 m contour and yet almost entirely within the South Brook catchment area of the Waterford River basin, a

major watershed within the City of St. John's. The Waterford River basin, located in the western section of the City (Figure 1-1), is responsible for draining an area of approximately 61 km2 (Arsenault et al. 1985).

Within the Project area flows a portion of South Brook, the largest tributary to the Waterford River. South Brook is a slow-flowing watercourse that bisects the site and is associated with the large wetland drainage complex of the Property. From its headwaters (located within the Project area), South Brook flows in a predominantly easterly direction through natural, agricultural and residential areas in the west end of St. John's, along Pitts Memorial Drive and finally into the Waterford River in the area of Bowring Park. Several areas of open water are present along the watercourse. The most prominent of these areas was observed to have a width of approximately 5 to 10 m and a depth greater than 2 m (labeled "Unnamed Pond" in Figure 5-1; Appendix C, Photograph 1 & 2). These features, in association with the availability of aquatic macrophytes, have the potential to provide high-value habitat for waterfowl. However, the majority of the watercourse has a wet width of approximately 2 to 3 m and a depth of 0.5 m. The substrate of the South Brook channel is variable and within the assessed area, is primarily comprised of well-decomposed organics and fine-textured mineral soils.

Also located within the Project area is a small unnamed watercourse (labeled "Unnamed Brook" in Figure 5-1; Appendix C, Photograph 3) flowing north in the direction of the "cloverleaf" at TCH and Pitts Memorial Drive. This watercourse is also associated with the large wetland complex that drains much of the area. Although varied throughout its extent, this small permanent watercourse typically had a wet width of 1 to 2 m and a depth of less than 0.5 m. Flow from this system follows a meandering route through the City of Mount Pearl at Donovan's Industrial Park and into the Power's Pond area, before entering the Waterford River and into the City of St. John's further downstream. Several other watercourses with headwaters originating in the Town of Paradise at Bremigan's Pond and Brazil Pond are also present within the general vicinity.

Similarly, a small stream at the far end of the Property drains southwest in the direction of Paddy's Pond (Appendix C, Photograph 4). It was observed to have a well-flowing channel approximately 0.5 to 5.0 m wide and 0.25 m to 0.75 m deep and was primarily associated with upland forest habitat over typically rocky substrates, with cobbles and boulders comprising much of its channel. Southwest of Duffett's Road the stream cuts through a swath of marsh habitat overlying organic substrate (labeled "Graminoid Marsh" in Figure 5.1) before cutting downslope through additional areas of upland forest, and across the TCH (Figure 5-1; Appendix C, Photograph 5) before entering Paddy's Pond.

Additionally, several small tributaries with inflows draining from surface runoff upslope, or into several of the aforementioned perennial watercourses, were also observed. During site visits, these tributaries were observed to have low to moderate flows, widths varying from 0.25 to 0.5 m, and depths ranging from several centimetres to approximately 30 cm. Although wetlands are common along their extent, these tributaries primarily cut through upland forest habitat.

4.2.3 Upland Habitats

The Project is located within the Maritime Barrens Ecoregion. This watershed has an area of about 20 km², of which approximately 12 km² are located within the Southeastern Barrens Subregion and approximately 8 km² are located in the Northeastern Barrens Subregion.

In this subregion the landscape is dominated by heathlands and the forest only occurs in small areas that have escaped fire, both natural and anthropogenic. The topography is generally undulating with shallow heavily compacted till and numerous large erratics. Although the majority of forests within the subregion have been historically altered or destroyed by fires and domestic cutting practices, remnant stands of dense and stunted, patchy coniferous forests are common, as are extensive barren areas and bedrock outcroppings. Where forests exist, natural upland forest cover is generally dominated by low-growing coniferous stands of balsam fir (*Abies balsamea*), black spruce (*Picea mariana*) and white spruce (*Picea glauca*). Forested land is found predominantly in the western section of the basin in upland areas in proximity to the headwaters of South Brook and its tributaries. Unfavorable soil conditions across much of the landscape have produced small Black Spruce-Feathermoss forests with stunted growth. Poorly drained transitional sites support open to dense stands of black spruce and stunted balsam fir. Abundant sheep laurel (*Kalmia angustifolia*), rhodora (*Rhododendron canadaense*), bunchberry (*Cornus canadensis*), Labrador-tea (*Rhododendron groenlandicum*), low-bush blueberry (*Vaccinium angustifolium*), peat mosses (Sphagnum spp.), sweet gale (*Myrica gale*) and other shrubs form the ground cover.

Lowlands with low-nutrient organic soils are characterized by a cover of sphagnum mosses, lichens (*Cladina* spp.) and an abundance of sheep-laurel, pale laurel (*Kalmia polifolia*), black crowberry (*Empetrum nigrum*), Labrador-tea and cloudberry (*Rubus chamaemorus*). Black spruce and tamarack may also be abundant.

5.0 WETLANDS

5.1 Wetland Location, Size and Type

Wetland(s) were delineated to assess their size and location (Figure 5-1). On-site field surveys performed in June and November 2013 verified that the majority of wetland area on the Property is comprised of an extensive drainage complex. The wetland complex associated with watercourses, water bodies, and drainageways in the area has been field delineated, accounting for an area 79 ha in size and approximately 9 percent of the total area (883 ha) of the Property. In addition to this feature, numerous other small wetland areas and drainageways were also prominent on the Property. Wetlands are considered ubiquitous in the region and the presence of these features reflects poor surface drainage due to the shallow soils within the area and the impermeable underlying bedrock. Although many of these features lack surficial connectivity to other wetlands or water features, others are hydrologically connected via subterranean flows. Of these more discrete wetlands, approximately half were identified as being less than 100 m2 in size and thus not investigated further. The estimate of the proportion the Property comprised of wetland habitat is likely to be in the range of 10 to 15 percent as not all areas of the Property were thoroughly surveyed, and because some areas currently identified as “open water” or “riparian” are likely to be wetland habitat. Further details regarding areas which were subject to detailed field investigation are described in Sections 5.2 to 5.7.

Figure 5-1 Assessed Wetlands Located on the Glencrest Property

5.2 Ecological Character of Wetland

The ecological character of wetlands encompassed within or whose boundaries extend beyond that of the Property was assessed by Stantec in a survey of hydrology, soils, vegetation (vascular plants) and wildlife and used to identify wetland boundaries in the field. Wetlands were prominent throughout the Property where they formed a mosaic with upland habitats (Figure 5-1). Results of the 2013 field surveys indicate that target wetlands comprise 79 ha, accounting for approximately 9 percent of the total area of the Property. However, the estimate of the proportion the Property comprised of wetland habitat is likely to be higher (in the range of 10 to 15 percent) because not all areas of the Property were thoroughly surveyed, and also because some areas currently identified as "open water" are likely to be wetland habitat.

5.2.1 Soils

Soil investigations were used to define and delineate the aerial extent of the wetland in relation to the surrounding upland environment. Soil investigations consisted of both deep and shallow soil inspection sites performed in juxtaposition with data collection for the Wetland Delineation and Function Assessment. Soil inspection sites involved small excavations with the use of spade shovels, hand augers and soil probes to the specified depth for both shallow and deep inspections. Deep soil inspections were intended to assess soil properties and classify soils according to the Canadian System of Soil Classification - Third Edition (Soil Classification Working Group 1998) and The Manual for Describing Soils in the Field (Agriculture Canada 1983). At each deep soil inspection site, the location was recorded using a GPS, in addition to photographs taken to record general site conditions and soil horizon differentiation, where possible. Shallow soil inspection sites were used to verify the litter layer (comprised of the L, F and H horizons), organic and/or topsoil thicknesses and horizon sequencing, as well as depth to subsoil.

Wetlands typically occupy depressions or level ground where water is stagnant or where there is a high water table impeding drainage and allowing for organic matter accumulation. The raised bog has mostly organic soil with slowly decomposing peat moss. Thirteen soil inspection pits were dug or probed across the wetland, the majority of which encountered soils composed largely of organic materials near the surface. The site is poorly drained and has a very poor to poor nutrient regime. It is an "edaphic climax" that is maintained by the water tables. Soil texture is primarily fibric and mesic. The organic layer is usually greater than 40 cm thick (average 1.6 m across the site, although much deeper (>2.5 m) in association with Wetland 1 - domed bog; Appendix C, Photograph 6); with organic surface layers or, occasionally, peatymor humus forms (in transitional areas). Parent material is organic matter, and the moisture regime is primarily hygric or subhydric.

High seasonal water tables are an important condition within the assessed wetland areas, with depressional areas often seasonally flooded or at least with water tables reaching very near the soil surface. Peat accumulations are an indication of long-term high water table conditions at the site. The predominant soil types associated with these conditions in the Project area were

organic soils, greater than 60 cm depth, and represented by Terric and Typic Mesisols. Soils composed of organic material in an intermediate stage of decomposition and between 40 to 160 cm and 160+ cm of moderately decomposed peat, respectively. In acidic conditions, the breakdown of organic matter is slow, and twigs, needles, leaves and other detritus accumulate as a thick mat on the soil surface. An extreme expression of this is the domed peat bog, where the only source of moisture and nutrients for the biota (mostly sphagnum mosses) is precipitation. All the soil inspection sites encountered a layer of organic soil often with a layer gravelly till beneath, which varied in depth from 0.20 to 2.80 m across the site, with the deepest areas near the centre of the domed bog (Appendix C, Photograph 7).

Podzolic soils (Humo Ferric Podzols) or gleyed variants of the Podzolic (Gleyed Humo Ferric Podzols) order, Gleysolic soils (Orthic Humic Gleysols) and Regosolic soils (Humic Regosols) occupying transitional areas and lower slope positions are also present where mineral soils are close to surface. This was evidenced at the site of the riparian marsh, where a layer of organic soil was underlain by clay or silty clay loam soils with a perched water table above it.

5.2.2 Dominant Vegetation

Several habitat types, with specific plant communities, which occur within the overall wetland boundary, were described by noting the dominants in each of three main vegetation classes (trees, shrubs and ground vegetation). Plant species observed were recorded as well as the locations of any rare or possible suspected rare species. Habitat surveys were timed to coincide with the optimum seasonal for plant growth in an effort to permit the accurate identification of all species encountered. Generally with habitat surveys, a spring / early summer vegetation survey and a later summer / early fall survey are ideal for best locating and allowing for identification of flora taxa present in a given area. Many taxa, such as the very diverse sedges (Carex spp.), typically must be in a mature flowering or seeding condition to be accurately identified.

5.2.2.1 Upland Habitats

Upland habitats of the Property are primarily forested and form a mosaic of coniferous forests intersected by wetlands. Prominent tree cover within well-drained areas include balsam fir, black spruce, white spruce and minor components of paper birch (*Betula papyrifera*). Imperfectly drained areas are predominantly comprised of black spruce, American larch, and to a lesser extent balsam fir. The understory vegetation of the upland forests varies depending on local edaphic properties. Characteristic understory species within mesic and imperfectly drained areas include the herbs bunchberry, northern starflower (*Trientalis borealis*) and cinnamon ferns (*Osmunda cinnamomea*), bryophytes red-stemmed feathermoss (*Pleurozium schreberi*), stair-step moss (*Hylocomium splendens*), broom mosses (*Dicranum* spp.) and braided mosses (*Hypnum* spp.). Drier sites are dominated by bracken fern (*Pteridium aquilinum*) and a variety of ericaceous shrubs such as rhodora and lowbush blueberry.

At elevation, patches of heath barrens are present on ridges and other exposed areas with a thin till veneer. These habitats are characterized by a dominance of sheep laurel, Labrador-tea, lowbush blueberry, black crowberry, bunchberry and reindeer lichens (*Cladina* spp.). Stunted trees are sometimes present, as are patches of ericaceous shrubs and exposed bedrock. Some intermittent herbaceous cover is provided by crinkled hairgrass (*Deschampsia flexuosa*) and other species which are tolerant of open, xeric conditions.

5.2.2.2 Lowland Habitats

Across the Property, naturally poor drainage characteristic of the thin, compacted subsoils and shallow bedrock produce conditions considered ideal for the development of extensive areas of wetland. Wetland development across the Property has been extensive, both within the large drainage basin and along the gently sloping terrain that drains from it, providing a variety of wetland types within the overall wetland complex.

Wetland types encountered on-site vary substantially, as do the vegetation communities (i.e., wetland cover types) that comprise them. They include a mosaic of wet meadows / herbaceous (e.g., wet herb), scrub-shrub wetlands (e.g., wet heath) and forested wetlands along a gradient of reducing water availability. Although the wetland complex has numerous vegetation communities that define its ecological character, the overall wetland complex was deemed to support five general habitat types.

Using designations provided by the Canadian Wetland Classification System (NWWG 1997), wetland types considered relevant to the Property include:

- domed / raised bog (ombrotrophic);
- string fen (weakly minerotrophic);
- slope bog (ombrotrophic);
- slope fen (weakly minerotrophic); and
- riparian marsh (minerotrophic).

Some of the delineated wetland areas exhibited only one of these listed vegetation communities while others had all five. The wetland types and approximate size are provided in Table 5.1.

Table 5.1 Approximate Sizes and Types of Wetlands Found on the Site

Wetland ID	Wetland Type	Approximate Wetland Area (ha)
1	Domed bog	12.0
2	Slope Fen	17.7
3	(3a) String Fen – Ladder	7.9
	(3b) String Fen – Atlantic Ribbed Fen	6.6
4	(4a) Slope Bog - Shrub	6.6
	(4b) Slope Bog - Treed	21.3
5	Riparian Marsh	5.8
6	Stream Fen	0.6
Total		**78.5**

The wetland complex appears to have been historically isolated from substantial anthropogenic disturbances (e.g., provincial and municipal transportation networks [roadways] and residential, commercial and light-industrial developments), is considered relatively intact and reflective of natural conditions.

Bog Wetland Class

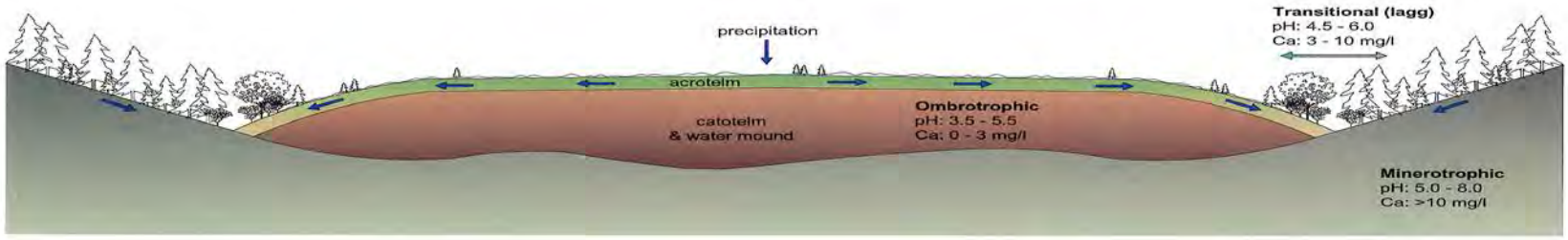
Bogs are peat wetlands which are raised or level with the surrounding terrain and are unaffected by runoff waters or groundwater from the surrounding mineral soils (NWWG 1997). Water levels are generally at or slightly below the surface of the bog. Because they receive their nutrient and water input from atmospheric deposition, they are characteristically nutrient-poor and have a low pH. They typically have a well-developed peat layer comprised of peatmoss and the woody remains of shrubs.

All bogs in the Project area are dominated by large hummock forming mosses, predominantly *Sphagnum* spp. and other water-loving, oligotrophic plants, including a covering of ericaceous low shrubs and herbs. These sphagnum bogs develop in areas of reliable water. On top of the moss layer there is substantial variation in vegetation composition within the bog complex, including a mosaic of emergent wetlands, wet meadows / herbaceous (e.g., wet herb), scrub-shrub wetlands (e.g., dry and wet heath) and forested wetlands.

The following bog forms, observed on-site, exhibit vegetative characteristics consistent with that above, but are differentiated by structural and topographic differences.

Domed Bog: A particularly interesting feature associated with the Property is that of an ombrotrophic, domed (raised) bog (Figure 5-1; Appendix C, Photograph 6), refered to as Wetland #1. These are wetlands are typically quite large and have the characteristic feature of a convex surface (Wells and Pollet 1983) whose center may be several meters higher than the

edges (NWWG 1997). Domed bogs receive surface water from the surrounding upslope areas and their hydrology is considered central to many of the assessed wetlands in the Project area. Domed bogs are rain-fed peatland ecosystems that develop primarily in areas with topographic depressions, where drainage may be impeded by a high groundwater table, or by low permeability of the underlying substrate (e.g., shallow bedrock, morainal till). The resulting constant water-logging, decreased oxygen availability and thus anaerobic conditions impede the decomposition of plant material, leading to an accumulation of peat and the ombrotrophic conditions generally associated with the raised central portion of the domed bog. Continued accumulation of peat elevates the bog surface above groundwater levels to form a gently curving (2 percent) dome, from which the term 'domed' bog is derived. The key distinction between domed bog and those areas characterized as fen (described below) is the source of moisture; domed bogs receive all water inputs from precipitation and not groundwater that typically supplies the fen. Peat depths can vary considerably but can exceed 12 m. Fen development is dependent on the continual movement of nutrient enriched seepage water through the site. In Newfoundland and Labrador, peat depth in fens generally does not exceed 2 to 3 m (Wells and Pollett 1983).



Reference: http://www.burnsbog.ca/science.html

Figure 5-2 Typical Domed Bog Profile (cross-section)

Although low in overall diversity, domed bogs support many specialised plant assemblages, and are often dominated by deep layers of *Sphagnum* mosses (*Sphagnum fuscum*), which isolate the other members of the community from the influence of nutrient-rich groundwater or runoff. Due to an abundance of hummock-forming *Sphagnum* mosses these sites often posess a pronounced hummock-hollow microtopography. Ericaceous shrubs, sedges, and stunted, scattered black spruce are the most characteristic vascular plants. Among the ericaceous shrubs the most important species are leatherleaf (*Chamaedaphne calyculata*), Labrador tea, bog laurel (*Kalmia polifolia*), bog rosemary (*Andromeda polifolia* var. *latifolia*), and small bog cranberry (*Vaccinium oxycoccos*). Sedges with a tolerance for these ombrotrophic peatlands include the carices *Carex oligosperma*, *C. pauciflora*, and the cotton-grasses *Eriophorum angustifolium* and *E. vaginatum*. Pitcher plant (*Sarracenia purpurea*) and round-leaved sundew (*Drosera rotundifolia*) are among the few other vascular plants frequently found in this open bog community. Raised hummocks associated with mesic organic soils also support other bryophytes including *Cladonia* lichens. Aquatic plant communities may also occur within the larger open bog, particularly where bodies of shallow, open water (i.e., small ponds or pools) occur. Characteristic species include buckbean (*Menyanthes trifoliata*), mare's-tail (*Hippuris vulgaris*), and pondweeds (*Potamogeton* spp.). Rooted, floating-leaved, aquatic macrophytes, including yellow pond lilly (*Nuphar variegata*) are also present.

At the edge of a domed bog is a transition zone, called the “lagg”, where the bog meets the surrounding mineral-rich uplands (Figure 5-1; Appendix C, Photograph 8). Characteristic surface microtopography in this area generally consists of a patterned mosaic of linear hollows (pools or flarks) and intervening low peat ridges (strings) arranged perpendicular to the direction of groundwater flow and created in part by the existing vegetation types. The water in the minerotrophic lagg zone is a mix of the bog and adjacent mineral-rich waters, and so the chemistry of the lagg water is transitional between the low pH, low-nutrient water of the bog and the high pH, mineral-enriched water of the mineral soil outside the bog, resulting in conditions best characterized by that of the string (ladder) fen wetland type. This provides a range of hydrological regimes which support different species assemblages at the microsite level.

Domed bogs occupy 12.0 ha, which represents 15 percent of the total assessed wetlands in the Project area.

Slope Bog: These bogs typically form in sloping terrain (typically >5^0 slope) in areas of typically high rainfall. The surface of the bog is generally level with the surrounding terrain and receives minimal enrichment from the surrounding mineral soil. They receive water exclusively from precipitation (NWWG 1997). Since precipitation does not contain dissolved minerals and is mildly acidic, and that the mineral soil is unavailable to plants due to peat thickness, bogs develop into very acidic and poor habitats. The substrate is made up of organic matter more than 1 m thick and the water table is at or slightly below the bog surface. Plant diversity is quite low in the plots surveyed. Within the Project area, this category of wetland may be distinguished by their floristic

and/or physiognomic characteristics, with both treed and shrub bog habitats prominent. They occupy 27.9 ha, which represents 36 percent of the total assessed wetlands in the Project area.

In the treed bog wetland type (Figure 5-1; Appendix C, Photograph 9), referred to as Wetland #3, the canopy consists primarily of black spruce and to a lesser degree tamarack. Although varied, shrub cover within the treed bog wetland type was generally low and comprised predominantly of regenerating tree species black spruce and tamarack; a number of other shrub species, such as green alder (*Alnus viridis*), sweet gale, and mountain holly (*Nemopanthus mucronatus*) were also present. Herbaceous cover is also variable, and may include cinnamon fern, bunchberry and spreading bentgrass (*Agrostis stolonifera*). Peatmoss and feathermoss species formed a prominent layer over the forest floor.

Stunted black spruce and tamaracks are often present. Ericaceous species such as leatherleaf, bog laurel, bog rosemary, common Labrador tea and small bog cranberry are the most abundant species found in the well-represented low shrub layer. The herbaceous layer is scarce and the main species found are bog goldenrod (*Solidago uliginosa*), rough-leaved aster (*Eurybia radula*), cloudberry, three-leaved false Solomon's seal (*Maianthemun trifolium*), three-seed sedge (*Carex trisperma*) and white boreal bog sedge (*C. magellanica* subsp. *irrigua*), hoary sedge (*C. canescens* subsp. *canescens*), and white beakrush (*Rhynchospora alba*). Cinnamon fern is also common in areas with improved drainage. The moss layer is very well developed and is made up of rusty bog-moss (*S. fuscum*), fine bog-moss, red bog-moss and red-stemmed feather-moss on higher ground.

A few small inclusions of aquatic vegetation communities characterized by shallow open water with vegetation also occupy this slope bog habitat (Figure 5-1; Appendix C, Photograph 10). Yellow pond lily (*Nuphar lutea*) and bog buckbean (*Menyanthes trifoliata*) dominate.

Fen Wetland Class

Fens are peatlands that have a fluctuating water table that is either at or slightly below the wetland surface and are rich in dissolved minerals derived from the influence of surrounding mineral soils (NWWG 1997). Groundwater and surface water movement is a common characteristic that distinguishes fens from bogs. In Newfoundland, fens are highly variable in their size, ranging from small forest openings to large expanses on exposed uplands (Wells and Pollet 1983). Fens are commonly associated with or adjacent to other types of wetlands. They are found on poorly-drained sites enriched by minerals seeping through the substrate. The soil is usually made up of well-decomposed organic material that lies on an impermeable layer of fine sand and silt.

Fens, particularly poor fens, occupy the vast majority of wetland area on the Property (Table 5.1). Poor fens are open, very strongly to strongly acidic peatlands with only a limited amount of minerotrophic influence from the surrounding uplands, and very little or no groundwater or lake and stream influence. In these settings, oligotrophic to weakly minerotrophic conditions prevail. Poor fens have a flora that is intermediate between that of fen

and bog. Poor fens are also typically characterized by a graminoid-dominated herbaceous layer of low to moderate diversity. While sedges remain dominant, poor fens typically support a continuous carpet of *Sphagnum* mosses and widely scattered, slightly raised peat ridges or mounds with low ericaceous shrubs and stunted coniferous trees. This vegetation type occupies 32.8 ha, or 42 percent of the total assessed wetlands.

Slope Fen Form: Similar to slope bogs, slope fens form in sloping areas (generally 5 to 30°) with high levels of precipitation. The distinction between the two is that slope fens receive mineral enrichment from surrounding soils. In the Project area, this wetland type is most often encountered in association with gently sloping terrain (<5 percent) (Figure 5-1; Appendix C, Photograph 11).

Characteristic plants associated with the *Sphagnum* mats include a number of ericaceous shrubs and sedges, particularly leatherleaf, rhodora, bog rosemary, small bog cranberry, bog cranberry or partridgeberry (*Vaccinium vitis-idaea*), bog willow (*Salix pedicellaris*), woolly sedge (*Carex lasiocarpa*), few-seeded sedge (*C. oligosperma*), mud sedge (*C. limosa*), bladder sedge (*C. intumescens*), white beak-rush, tussock cotton-grass (*Eriophorum vaginatum*) and tall cotton-grass (*Eriophorum angustifolium*). Other typical species include pitcher plant, buckbean, false asphodel (*Tofieldia glutinosa*), dragon's mouth orchid (*Arethusa bulbosa*), leafy white orchid (*Platanthera dillitata*) and club-spur orchid (*Platanthera clavellata*). Some combination of *Sphagnum fuscum*, *S. flavicomans, S. magellanicum*, *S. papillosum* and *S. rubellum* dominate the moss layer.

Slope fens occupy 17.7 ha, which represents 23 percent of the total assessed wetlands in the Project area.

String Fen Form: String fens, though weakly developed, are somewhat common in the Project area with both Atlantic ribbed fen (referred to as Wetland #2) and ladder fen observed (Figure 5-1; Appendix C, Photograph 12). As described previously (see description of domed bogs), ladder fens typically develop within the margins or laggs of domed or raised bogs where they receive drainage from adjacent upland soils and from the bog and were found in association with the large domed bog at the center of the Property.

Slow groundwater movement through broad gently sloped wetlands forms a series of linear hummocks or ridges, called strings, separated by parallel hollows known as flarks. Strings and flarks are arranged perpendicularly to the flow of water through the peatland and can form a regular pattern of parallel ridges and hollows or an intricate, braided or branching (anastamosing) pattern. Acidic patterned fens occur where groundwater seepage is nutrient-poor. The strings and flarks within these patterned wetlands may have dramatically different vegetation.

Graminoids provide the majority of herbaceous cover and include sedge species deergrass (*Trichophorum cespitosum*), white beak-rush, three-seeded sedge, hoary sedge and tussock cotton-grass. Bog cranberry or partridgeberry, round-leaved sundew, and are common. These

species occur with some frequency or abundance, indicating slightly higher nutrient levels. Sweet gale may be common in low to moderate abundance. Bog rosemary, bog laurel, and leatherleaf are frequent and sometimes abundant, but dwarfed. Other shrubs (e.g., sweet gale) were abundant along the edges of these habitats where the ecotype graded into drier, adjacent community types. Pitcher-plant, rough-leaved aster, bog goldenrod, three-leaf false Solomon's-seal, and other common bog plants may also be present. The moss layer is prominent and dominated by *Sphagnum* and brown mosses (*Campylium stellatum* and *Drepanocladus revolvens*). Some combination of *Sphagnum fuscum*, *S. cuspidatum* and *S. pulchrum* dominate the moss layer. Stunted trees including black spruce and tamarack are scattered on the strings.

String fens occupy 6.6 ha, which represents 8 percent of the total assessed wetlands in the Project area.

Marsh Wetland Class

Marshes are one of the broadest categories of wetlands and in general harbor the greatest biological diversity. They are characterized by shallow water, little or no peat deposition, and mineral soils. One general area supporting riparian stream marsh was identified on the Property (Figure 5-1). Marshes are typically mineral-based wetlands that are periodically inundated by shallow, standing or slow-flowing water and have water levels that fluctuate seasonally. These waters are nutrient-rich, and their levels tend to fluctuate seasonally. High nutrient levels give rise to high vascular plant productivity and high decomposition rates at the end of the growing season. During drier periods, declining water levels may expose areas of matted vegetation or mud flats. The surface waters are typically rich in nutrients. Although their substrate is usually of mineral material, well decomposed peat may occasionally be present. Marshes typically display zones or surface patterns consisting of pools or channels interspersed with patches of emergent vegetation bordering wet meadows and peripheral bands of shrubs or trees (NWWG 1997). The dominant vegetation comprises numerous herbaceous emergent species such as cattails (*Typha* spp.), rushes (*Juncus* spp.), reed grasses (*Calamagrostis* spp.) and sedges (*Carex* spp.); in shallow open water areas, there is occasional submergent and floating leaved species (Wells and Pollet 1983).

Of the wetlands assessed within the Project area, marshes are considered somewhat unique, occupying 5.8 ha, which represents 7 percent of the total assessed wetlands in the Project area (Table 5.1).

Riparian Marsh Form: These marshes occupy the riparian zones of rivers and streams, typically in swales bordering, but not directly attached to, the water body. These receive their hydrologic regime from overland flow of water from adjacent uplands, and from periodic overbank flooding from the stream or river (NWWG 1997).

The riparian marsh wetland type (Figure 5-1; Appendix C, Photograph 13), referred to as Wetland #5, the tree layer is generally absent except at the margin of this type, transitioning to a hygric, tall shrub wetland community.

Although varied, shrub cover within the riparian stream marsh wetland type was scattered shrubs throughout, and comprised predominantly of narrow-leaved meadow-sweet (*Spiraea alba*) and lesser amounts of willows (*Salix* spp.), mountain holly (*Nemopanthus mucronatus*) and speckled alder (*Alnus rugosa*).

The riparian marsh is a graminoid / herb-dominated wetland that typically has 100 percent vegetative cover. These wet meadow habitats, usually dominated by sedges and grasses, are typically the driest of the shallow marshes and often transitional to shrub and wooded swamps adjacent to the marsh. Surface water may be absent during the late summer and abnormally dry periods. Floating-leaved and submerged plants can be present in deeper areas.

The ground layer associated with Wetland 5 was dominated primarily by bluejoint grass (*Calamagrostis canadensis*). In areas of high water characteristic sedges include lake sedge (*C. lacustris*), tussock sedge (*Carex stricta*), nodding sedge (C. *gynandra*), slender sedge (*C. lasiocarpa*) and beaked sedge (*C. rostrata*). Other common grasses include reed canary grass (*Phalaris arundinacea*), Canada manna-grass (*Glyceria canadensis*), fowl manna grass (*G. striata*), Timothy-grass (*Phleum pratense*) and fowl meadow grass (*Poa palustris*). Small-fruited bulrush (*Scirpus microcarpus*) and common cattail are also common graminoids. A wide variety of wetland herbs occur in riparian stream marsh. The following are some of the more common herb species observed: creeping buttercup (*Ranunculus repens*); purplestem aster (*Symphyotrichum puniceum*); swamp thistle (*Cirsium muticum*); marsh willowherb (*Epilobium palustre*); small bedstraw (*Galium trifidum*); wild blue flag (*Iris versicolor*); marsh pea (*Lathyrus palustris*); wild mint (*Mentha arvensis*); common skullcap (*Scutellaria galericulata*); tall meadow rue (*Thalictrum pubescens*); and marsh violet (*Viola cucullata*). Characteristic fern or fern allies include sensitive fern (*Onoclea sensibilis*), common horsetail (*Equisetum arvense*) and water horsetail (*E. fluviatile*). The moss layer is limited.

Ponds

Numerous small ponds or shallow waters were identified in the Project area (Figure 5-1; Appendix C, Photograph 14). These ponds have permanent standing water, but contrary to lakes, their water depth is less than 2 m in mid-summer (NWWG 1997). In the Project area, ponds are often found at the edge of bogs and fens or within their limits. Their flora is usually made up of aquatic plants similar to those found in the most peatlands in the region.

A vascular plant survey revealed the presence of some 90 species of vascular plants and as such, the wetland complex is characterized by a low to moderate plant species richness. Table 5.2. presents a full list of vascular plant species encountered during field investigations of the wetland and also provides information on their rarity status as indicated by NLDEC and the Atlantic Canada Conservation Data Centre (ACCDC). A summary of the ranking systems outlined by the *SARA*, *NLESA* and ACCDC are provided in Appendix C.

Table 5.2 Vascular Plants Observed within Assessed Glencrest Wetlands and Information on their Population Status

Scientific Name	Common Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Habitat Characterization	NS Wetland Indicator Rank
Alnus incana	Speckled Alder	Betulaceae	G5	N5	S4S5	-	Wetland	facw
Alnus viridis	Green Alder	Betulaceae	G5	N5	S5	-		facu
Amelanchier bartramiana	Bartram Shadbush	Rosaceae	G5	NNR	S5	4 - Secure		fac
Andromeda polifolia	Bog Rosemary	Ericaceae	G5	NNR	S5	4 - Secure	Wetland	obl
Arethusa bulbosa	Swamp-Pink	Orchidaceae	G4	N4?	S4S5	4 – Secure	Wetland	obl
Calamagrostis Canadensis	Blue-Joint Reedgrass	Poaceae	G5	N5	S5	-	Wetland	facw
Carex canescens	Hoary Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl
Carex gynocrates	Northern Bog Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl
Carex gynandra	Nodding Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl
Carex intumescens	Bladder Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl
Carex limosa	Mud Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl
Carex michauxiana	Michaux Sedge	Cyperaceae	G5	N5	S3S5	5 - Undetermined	Wetland	obl
Carex nigra	Black Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	facw
Carex oligosperma	Few-Seeded Sedge	Cyperaceae	G5	N5	S5	4 – Secure	Wetland	obl
Carex pauciflora	Few-Flowered Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl
Carex scirpoidea	Bulrush Sedge	Cyperaceae	G5	N5	S3S5	4 – Secure		upl

Wetlands
December 11, 2013

Scientific Name	Common Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Habitat Characterization	NS Wetland Indicator Rank
Carex trisperma	Three-Seed Sedge	Cyperaceae	G5	N5	S5	4 – Secure	Wetland	obl
Carex utriculata	Bear Sedge	Cyperaceae	G5	N5	S4S5	5 - Undetermined	Wetland	obl
Chamaedaphne calyculata	Leatherleaf	Ericaceae	G5	N5	S5	4 – Secure	Wetland	obl
Clintonia borealis	Clinton Lily	Liliaceae	G5	N5	S5	4 – Secure		fac
Coptis trifolia	Goldthread	Ranunculaceae	G5	N5	S5	4 – Secure		fac
Cornus canadensis	Dwarf Dogwood	Cornaceae	G5	N5	S5	4 – Secure		fac
Cornus sericea	Silky Dogwood	Cornaceae	G5	NNR	S5	-	Wetland	facw
Cypripedium acaule	Fairy Slipper	Orchidaceae	G5	N5	S4	-		fac
Drosera rotundifolia	Roundleaf Sundew	Droseraceae	G5	N5	S5	-	Wetland	facw+
Dryopteris cristata	Crested Wood Fern	Dryopteridaceae	G5	N5	S3S4	-	Wetland	facw
Epilobium ciliatum	Hairy Willow-Herb	Onagraceae	G5	NNR	S5	4 – Secure		fac
Empetrum nigrum	Black Crowberry	Empetraceae	G5	NNR	S5	4 – Secure		fac
Equisetum sylvaticum	Woodland Horsetail	Equisetaceae	G5	N5	S5	4 – Secure		fac
Eriocaulon aquaticum	Seven-Angled Pipewort	Eriocaulaceae	G5	N5	S5	5 - Undetermined	Wetland	obl
Eriophorum angustifolium	Cotton-Grass	Cyperaceae	G5T5	NNR	S3S5	4 – Secure	Wetland	obl
Eriophorum vaginatum	Tussock Cotton-Grass	Cyperaceae	G5	N5	S3S5	4 – Secure	Wetland	obl

Wetlands
December 11, 2013

Scientific Name	Common Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Habitat Characterization	NS Wetland Indicator Rank
Fragaria virginiana	Virginia Strawberry	Rosaceae	G5	NNR	S4S5	5 - Undetermined		fac
Galium palustre	Marsh Bedstraw	Rubiaceae	G5	NNR	S4S5	5 - Undetermined	Wetland	facw+
Glyceria canadensis	Canada Manna-Grass	Poaceae	G5	N4N5	S3S5	4 – Secure	Wetland	facw+
Hypericum canadense	Canadian St. John's-Wort	Clusiaceae	G5	NNR	S4S5	5 - Undetermined	Wetland	facw+
Hippuris vulgaris	Common Mare's-Tail	Hippuridaceae	G5	N5	S4S5	4 – Secure	Wetland	obl
Iris versicolor	Blueflag	Iridaceae	G5	N5	S5	4 – Secure	Wetland	facw+
Juncus effusus	Soft Rush	Juncaceae	G5	N5	S5	-	Wetland	facw
Juncus tenuis	Slender Rush	Juncaceae	G5	N5	S3S4	3 - Sensitive		fac
Juncus spp.	A Rush	Juncaceae	na	Na	na	Na	na	na
Juniperus communis	Ground Juniper	Cupressaceae	G5	N5	S4S5	4 – Secure		upl
Kalmia angustifolia	Sheep-Laurel	Ericaceae	G5	NNR	S5	4 – Secure		fac
Kalmia polifolia	Pale Laurel	Ericaceae	G5	NNR	S5	4 – Secure	Wetland	obl
Larix laricina	American Larch	Pinaceae	G5	N5	S5	4 – Secure		fac
Lathyrus palustris	Vetchling Peavine	Fabaceae	G5	NNR	S5	4 – Secure	Wetland	obl
Linnaea borealis	Twinflower	Caprifoliaceae	G5	NNR	S5	-		fac
Lonicera villosa	Mountain Fly-Honeysuckle	Caprifoliaceae	G5	NNR	S5	4 – Secure	Wetland	facw
Luzula parviflora	Small-Flowered Wood-Rush	Juncaceae	G5	N5	S3S4	4 – Secure		fac

Wetlands
December 11, 2013

Scientific Name	Common Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Habitat Characterization	NS Wetland Indicator Rank
Lycopodium annotinum	Stiff Clubmoss	Lycopodiaceae	G5	N5	S5	4 – Secure		fac
Maianthemum canadense	Wild Lily-of-The-Valley	Liliaceae	G5	N5	S5	4 – Secure		fac
Maianthemum trifolium	Three-Leaf Solomon's-Plume	Liliaceae	G5	N5	S5	4 – Secure	Wetland	obl
Menyanthes trifoliate	Bog Buckbean	Menyanthaceae	G5	NNR	S5	4 - Secure	Wetland	obl
Mitella nuda	Naked Bishop's-Cap	Saxifragaceae	G5	NNR	S5	4 – Secure	Wetland	facw
Myrica gale	Sweet Gale	Myricaceae	G5	NNR	S5	4 – Secure	Wetland	obl
Nemopanthus mucronatus	Mountain Holly	Aquifoliaceae	G5	N5	S5	excl -		fac
Nuphar lutea	Yellow Pond-Lily	Nymphaeaceae			SU	-	Wetland	obl
Oclemena nemoralis	Bog Aster	Asteraceae	G5	N5	S5	4 – Secure	Wetland	obl
Onoclea sensibilis	Sensitive Fern	Dryopteridaceae	G5	N5	S4	3 - Sensitive	Wetland	facw
Osmunda cinnamomea	Cinnamon Fern	Osmundaceae	G5	N5	S5	-		fac
Phalaris arundinacea	Reed Canary Grass	Poaceae	G5	N5	SNA	-	Wetland	facw
Picea mariana	Black Spruce	Pinaceae	G5	N5	S5	4 – Secure	Wetland	facw
Platanthera clavellata	Club-Spur Orchid	Orchidaceae	G5	NNR	S5	-	Wetland	facw
Platanthera dilatata	Leafy White Orchis	Orchidaceae	G5T5	N5	S5	4 – Secure	Wetland	facw

Wetlands
December 11, 2013

Scientific Name	Common Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Habitat Characterization	NS Wetland Indicator Rank
Poa palustris	Fowl Bluegrass	Poaceae	G5	N5	SNA	7 - Exotic/Alien		fac
Prunus virginiana	Choke Cherry	Rosaceae	G5	NNR	S4	-		fac
Ranunculus bulbosus	Bulbous Butter-Cup	Ranunculaceae	GNR	NNA	SNA	-		upl
Rhododendron canadense	Rhodora	Ericaceae	G5	NNR	S5	5 - Undetermined		fac
Rhododendron groenlandicum	Common Labrador Tea	Ericaceae	G5	N5	S5	4 – Secure		fac
Ribes triste	Swamp Red Currant	Grossulariaceae	G5	NNR	S4	4 – Secure	Wetland	facw+
Rhynchospora alba	White Beakrush	Cyperaceae	G5	N5	S4S5	4 – Secure	Wetland	obl
Rosa nitida	Shining Rose	Rosaceae	G5	N4N5	S4S5	4 - Secure		fac
Rubus chamaemorus	Cloudberry	Rosaceae	G5	NNR	S5	4 - Secure	Wetland	obl
Rubus pubescens	Dwarf Red Raspberry	Rosaceae	G5	NNR	S5	4 - Secure		fac
Sarracenia purpurea	Northern Pitcher-Plant	Sarraceniaceae	G5	N5	S5	-	Wetland	obl
Scirpus atrocinctus	Black-Girdle Bulrush	Cyperaceae	G5	N5	S3S5	4 - Secure	Wetland	facw
Sibbaldiopsis tridentata	Three-Toothed Cinquefoil	Rosaceae	G5	NNR	S3S5	4 - Secure		upl
Solidago rugosa	Rough-Leaf Goldenrod	Asteraceae	G5	N5	S5	-		fac
Solidago uliginosa	Bog Goldenrod	Asteraceae	G4G5	N5	S5	4 - Secure	Wetland	obl
Spiraea alba	Narrow-Leaved Meadow-Sweet	Rosaceae	G5	N5	S3S5	-		fac

Scientific Name	Common Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Habitat Characterization	NS Wetland Indicator Rank
Symphyotrichum novi-belgii	New Belgium American-Aster	Asteraceae	G5	N3N5	S5	-		fac
Symphyotrichum puniceum	Purplestem Aster	Asteraceae	G5T5	N5	S5	4 - Secure	Wetland	facw
Thalictrum pubescens	Tall Meadow-Rue	Ranunculaceae	G5	NNR	S5	4 - Secure	Wetland	facw
Typha latifolia	Broad-Leaf Cattail	Typhaceae	G5	N5	SNA	-	Wetland	obl
Vaccinium angustifolium	Late Lowbush Blueberry	Ericaceae	G5	N5	S5	4 - Secure		fac
Vaccinium oxycoccos	Small Bog Cranberry	Ericaceae	G5	N5	S5	4 - Secure	Wetland	obl
Vaccinium vitis-idaea	Bog Cranberry	Ericaceae	G5	N5	S5	4 - Secure	Wetland	obl
Vicia tetrasperma	Lentil Vetch	Fabaceae	GNR	NNA	SNA	-		facu
Viola cucullata	Marsh Blue Violet	Violaceae	G4G5	NNR	S4S5	excl -		fac
Viola sp.	a Violet	Violaceae	na	na	na	na	na	na

Note: This is not a complete list of all plant species in the Study Area. It is a list of species that were encountered during field sampling and includes all species mentioned in this report. Species in **bold** (where applicable) have been identified as rare by the ACCDC and may or may not be considered of conservation concern to the Province. "na" = not applicable

5.2.3 Wildlife and Wildlife Habitat

Although this assessment was not intended to include a comprehensive wildlife survey of any wetland visited, observations made incidental to our primary data collection effort, including occurrences of wildlife species, wildlife sign (i.e., tracks, trails, browsing, scat) and habitat features were noted. Wildlife and wildlife habitat identified as part of field investigations are reflective of the dominant land use within and in proximity to the Project. Although the Project lies within the municipal boundaries of the City of St. John's, natural features and landscapes are clearly and recognizably characteristic of the area, appear largely uncompromised and do not display significant visual signs of human modification or manipulation. Native vegetation communities (e.g., forests, wetlands, riparian areas of water bodies / watercourses) are predominantly natural systems considered functional and healthy habitats for wildlife.

Despite the surrounding land uses and disturbances, the wetland does provide habitat, however restricted, for a number of wildlife species. The size of the wetland complex, in conjunction with its connectivity to high-value habitat in adjacent areas or wildlife corridors (i.e., South Brook) does appear to facilitate its use for a number of large and small mammals, as well as various passerines (observed nesting in trees) and songbirds. The wetland also provides seasonally wetted areas and potential breeding habitat for amphibians, particularly green frogs (*Rana clamitans*) that require relatively permanent pools for breeding.

5.2.3.1 Mammals

Mature balsam fir and black spruce forest with shaded, moist understories and a diversity of shrub and forb species may provide ample cover and resources (e.g., forage opportunities) for forest-adapted species (e.g., moose (*Alces alces*) and snowshoe hare (*Lepus americanus*)). Shrub cover and nearby woodlands offer nesting habitat for songbirds, along with the provision of cover for small mammals, ground-nesting songbirds and amphibians (i.e., green frogs).

Site visits of target wetlands assessed in 2013 observed evidence for a number of large and small mammals and/or their sign. They include moose, eastern coyote (*Canis latrans thammos*), red fox (*Vulpes vulpes*), snowshoe hare, red squirrel (*Tamiasciurus* hudsonicus) and meadow vole (*Microtus pennsylvanicus*). Some of these species are year-round residents of existing natural habitats comprising the Property, whereas others are considered nomadic or migratory. Large predators / scavengers, such as the eastern coyote, have a large range that likely extend across or beyond the Property and thus its use of the area is sporadic.

The patchwork of natural habitats in the area along with its location in proximity to large, relatively undisturbed tracts of natural habitat is also particularly well suited to the movement of migrant or dispersing juvenile moose. During on-site surveys, a yearling moose was observed browsing on young balsam fir saplings in the area of Wetland 1. Additionally, significant numbers of moose tracks were observed within the soft organic soils (Figure 5-1; Appendix C, Photographs 15 and 16), along with moose scat (summer) and pellet groups (winter) on the forest and wetland floor, indicated year-round periodic use by these animals.

Similarly, snowshoe hare, their browse, both hard and soft fecal pellets and other sign were also observed.

American red squirrel were observed and heard throughout the property, primarily from within a transitional upland forest habitats at the edge of the assessed wetlands, but may also be expected to use the edges of the wetlands for forage.

None of the species observed are considered to have populations which are uncommon-rare, or otherwise sensitive, within the province.

5.2.3.2 Avifauna

Twenty-three species of birds were observed within or in association with the assessed wetlands. All of these species are characteristic of forested or shrub-dominated habitats (including wetland) and none are restricted to wetland conditions considered limiting in the area. Opportunities for waterfowl or other waterbirds including areas of open water interspersed with emergent vegetation are limited to that of a small pond centered on Wetland #1, in addition that of small areas of open water associated with watercourses traversing the Property.

Bird species observed within the assessed wetlands during the field surveys and information on their rarity status as indicated by NLDEC and the ACCDC are listed in Table 5.3. It should be noted that incidental observations of wildlife noted during the wetland assessment were recorded during the breeding season for most birds in Newfoundland and Labrador, and while surveys are considered thorough, the list of species occurrences is not considered inclusive (Figure 5.3).

Table 5.3 Bird Species Observed within Assessed Glencrest Wetlands and Information on their Population Status

Common Name	Scientific Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Observed Breeding Status
American Black Duck	*Anas rubripes*	Anatidae	G5	N5B,N5N	S5B	4 - Secure	Possible
American Crow	*Corvus brachyrhynchos*	Corvidae	G5	N5B,N5N	S5	Secure	Observed
American Goldfinch	*Spinus tristis*	Fringillidae	G5	N5B,N5N	S4	Secure	Observed
American Robin	*Turdus migratorius*	Turdidae	G5	N5B,N5N	S5B	Secure	Possible
Black-capped Chickadee	*Poecile atricapilla*	Paridae	G5	N5	S5	Secure	Possible
Blackpoll Warbler	*Dendroica striata*	Parulidae	G5	N5B	S5B	Secure	Possible
Black-throated Green Warbler	*Dendroica virens*	Parulidae	G5	N5B	S5B	4 - Secure	Possible
Black-and-white Warbler	*Mniotilta varia*	Parulidae	G5	N5B	S5B	4 - Secure	Observed
Boreal Chickadee	*Poecile hudsonicus*	Paridae	G5	N5	S5	Secure	Possible
Common Yellowthroat	Geothlypis trichas	Parulidae	G5	N5B	S5B	4 - Secure	Possible
Dark-eyed Junco	*Junco hyemalis*	Emberizidae	G5	N5B,N5N	S5B	4 - Secure	Possible
Fox Sparrow	*Passerella iliaca*	Emberizidae	G5	N5B	S5B	4 - Secure	Observed
Gray Jay	*Perisoreus canadensis*	Corvidae	G5	N5	S5	4 - Secure	Possible
Mourning Warbler	*Oporornis philadelphia*	Parulidae	G5	N5B	S5B	4 - Secure	Possible
Northern Flicker	*Colaptes auratus*	Picidae	G5	N5B	S5B	4 - Secure	Possible
Northern Waterthrush	*Seiurus noveboracensis*	Parulidae	G5	N5B	S5B	4 - Secure	Possible
Ruby-crowned Kinglet	*Regulus calendula*	Regulidae	G5	N5B	S5B	4 - Secure	Possible
Ruffed Grouse	*Bonasa umbellus*	Phasianidae	G5	N5	SNA	4 - Secure	Possible
Swainson's Thrush	*Catharus ustulatus*	Turdidae	G5	N5B	S5B	4 - Secure	Possible

Common Name	Scientific Name	Family	G-Rank	N-Rank	S-Rank	General Status Rank	Observed Breeding Status
Swamp Sparrow	*Melospiza georgiana*	Emberizidae	G5	N5B	S5B	4 - Secure	Possible
White-crowned Sparrow	*Zonotrichia leucophrys*	Emberizidae	G5	N5B	S5B	4 - Secure	Possible
White-throated Sparrow	*Zonotrichia albicollis*	Emberizidae	G5	N5B	S5B	4 - Secure	Possible
Wilson's Snipe	*Gallinago delicata*	Scolopacidae	G5	N5B	S5B	4 - Secure	Possible

Results from field surveys indicate that although no "species of conservation concern" are known to inhabit the Glencrest Property, assessed wetlands do provide important breeding habitat and are therefore anticipated to support intermittent use by a number of bird "species of conservation concern", including Olive-sided Flycatcher (*Contopus cooperi*), Red Crossbill (*Loxia curvirostra percna*), Red Knot (*Calidris canutus*) and Rusty Blackbird (*Euphagus carolinus*) and suggests that others may also us the site.

Other bird life, including large numbers of overwintering waterfowl such as Northern Pintail (*Anas acuta*), Mallard (*Anas platyrhynchos*) and American Black Duck (*Anas rubripes*) are known to inhabit Waterford River and its tributaries, gathering in open freshwater habitats and wetlands isolated from nearby water bodies or watercourses. Within the assessed wetlands, a small pond at the centre of Wetland 1, the waters of South Brook, along with other slow-moving open water areas associated with those watercourses observed traversing the Property have potential to provide habitat for a variety of species of waterfowl. While large congregations of waterfowl (i.e., breeding pairs, broods) were not observed during 2013 field surveys, waterfowl, in particular American black duck (pair) were observed within larger, open sections of the watercourse (South Brook). The value of the area as such is a reflection of the availability of slow-moving open water, food offered by the aquatic plant life (e.g., pondweed), and the intact nature of the adjacent fen and wet meadow habitats.

5.2.3.3 Herpetiles

Four species of herpetiles, including green frog, American toad (*Bufo americanus*), mink frog (*Rana septentrionalis*) and wood frog (*Rana sylvatica*), are known to reside on the island portion of Newfoundland and Labrador. Green frogs are considered common occurring across central and eastern portions of the Avalon Peninsula, including St. John's and surrounding area. The remaining species are generally associated with the west coast of the Island of Newfoundland, in an area centred on Corner Brook.

Wetlands, riparian areas and water bodies / watercourses in the general vicinity of the Project provide seasonally wetted areas, and therefore potential breeding habitat for green frogs.

Observed conditions at the time of assessment were sufficient to evaluate potential habitat for herpetiles, with numerous semi-permanent or permanent freshwater habitats of various sizes and vegetation structure occurring within and in vicinity to the Project area. Typical breeding sites for green frogs include almost any type of freshwater habitat including streams, rivers, ponds, lakes, springs and vernal pools with long hydroperiods and artificial impoundments.

Green frogs were observed inhabiting quiet ponds, marshes and riparian habitats. These small open water areas were prevalent throughout the Project area (Appendix C, Photograph 17) and are expected to provide appropriate breeding conditions for green frog, observed with regularity during field surveys.

The Summary of General Status Ranks for Newfoundland and Labrador- Amphibians lists green frog as an exotic species, and as such this species is not consider a species of conservation concern to the Province.

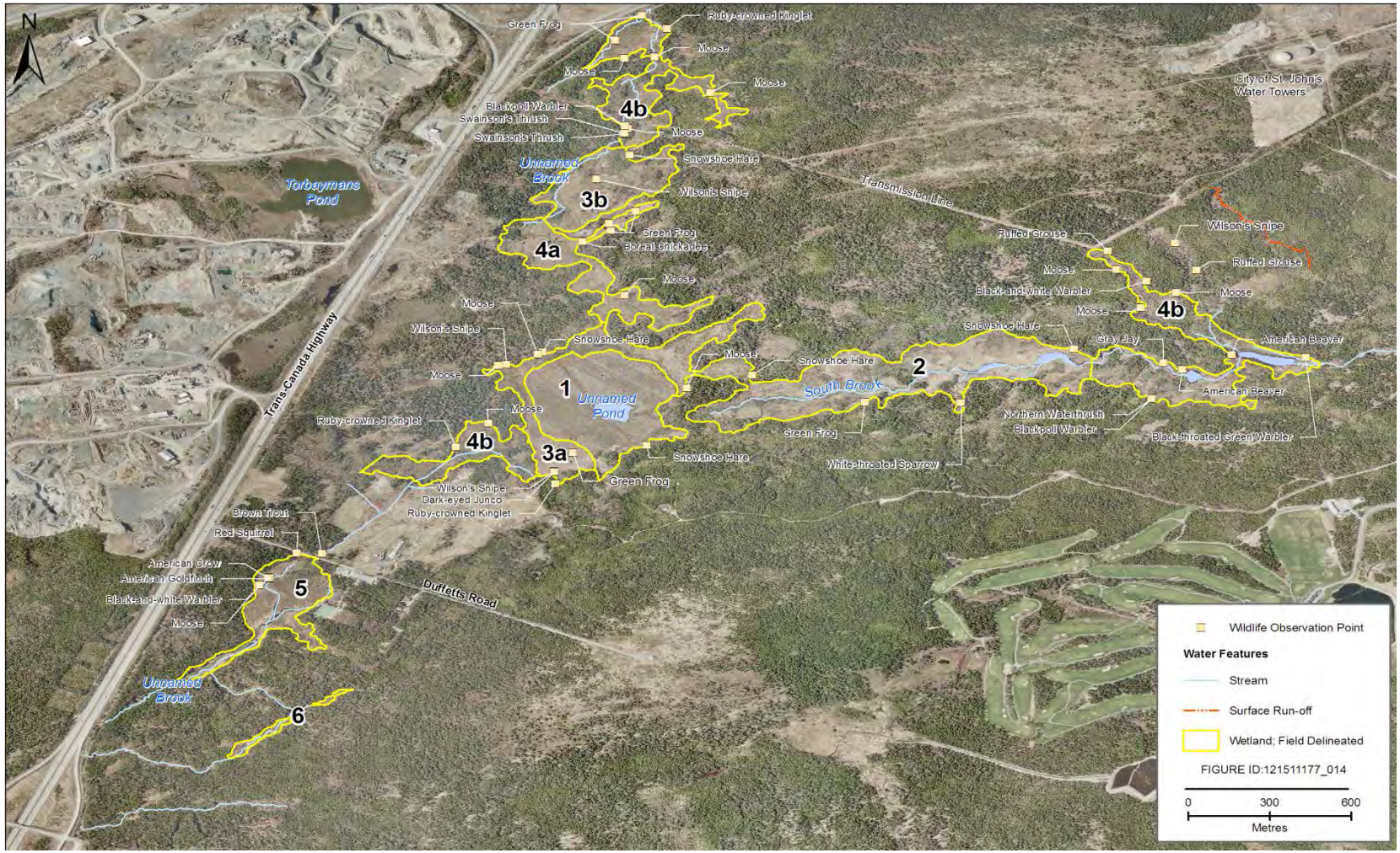


Figure 5-3 Incidental Wildlife Observations within Assessed Wetlands Located on the Property

5.2.4 Fish and Fish Habitat

A number of small streams are located within the Project area, the largest, South Brook, occurring along the eastern side of the propertry, originating at Wetland 1 and flowing in a southeasterly direction before discharging into Waterford River. The Waterford River supports an assemblage of fish species, including: Atlantic salmon (*Salmo salar*), rainbow smelt (*Osmerus mordax*), brook trout (*Salvelinus fontinalis*) and brown trout (*Salmo trutta*). All of the aforementioned species are salmonids, generally considered a sensitive family of fish, and indicative of good water quality in relation to pH, dissolved oxygen and metal (or other contaminant) levels. South Brook and its tributaries being hydraulically connected to the Waterford River may therefore also be inhabited by these species. Other species with potential to be found within upstream reaches of South Brook and/or nearby tributaries to the Waterford River include American eel (*Anguilla rostrata*) and several species of stickleback (*Pungitius* spp.). Man-made obstructions to fish migration (i.e., culverts) associated with roads and trails throughout the system may impede the upstream movement of fishes and aquatic organisms, particularly during periods of low flow.

Although no fish species were observed within South Brook during wetland surveys, historical information along with habitat characteristics associated with water bodies and watercourses, suggest that the area may be suitable for important fish species such as brook trout and brown trout. Habitat characteristics throughout those portions of South Brook located within the assessed area appears to be supportive of important fish species such as salmonids. Numerous pools and variable in-stream cover were observed throughout assessed stream sections. In-stream substrate varied by location, but was generally composed of organics (upstream sections), fines and pebble, with some cobble and boulders in places. Riparian bankside vegetation was a mixture of trees, shrubs and grasses.

While the presence of these species has not been confirmed through recent electrofishing efforts in South Brook, a 2003 electrofishing survey conducted by Jacques Whitford Environment Limited (JWEL 2003) on behalf of the Newfoundland and Labrador Housing Corporation – Southlands Development, immediately downstream of the Project did result in the confirmation of salmonid fish species.

Additionally, a small unnamed tributary stream that drains in a southwesterly direction before crossing the TCH downstream of the Project area and discharging into Paddy's Pond was also observed. As previously described, the headwaters of this watercourse originate at Wetland #1 and as apparent surface drainage from nearby sloping terrain. Despite non-ideal in-stream habitat characteristics within the wetlands and potential obstructions (i.e., culverts) in downstream reaches, brown trout was recorded within this unnamed stream on November 15, 2013 and as such adjacent wetlands may provide moderate nursery habitat for this species.

5.2.4.1 Special Status Species

To determine special status species with potential to occur within or in vicinity to the Project area, the ACCDC (2013) was queried spatially within a 5 km radial buffer surrounding the Project area. Species identified from these data sources were further assessed for their potential to occur within the Project area based upon previously documented element occurrences, their habitat requirements and the quality and extent of any available habitat within the site.

All returned species of wildlife (including resident and migratory birds), as well as plant species, were compared against those listed under SARA by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), as well as those listed under the *Newfoundland and Labrador Endangered Species Act* (ESA).

Of the 21 animal records returned by the ACCDC, five records encompass 3 species that would normally be considered rare. They include Red Crossbills (1 record) and Rusty Blackbird (1 record) - listed as Endangered under both the Newfoundland and Labrador ESA and COSEWIC, along with 3 records for Barn Swallow (*Hirundo rustica*) – listed as Threatened under COSEWIC. The remaining animal records are for species which are not on the provincial ESA or federal COSEWIC lists, and outside of Newfoundland & Labrador, they are not considered globally rare. While the occurrence of the majority of these species has not been confirmed from within the immediate area of the Project, based upon understanding of the typical habitat requirements of each animal and the mobile mature of the majority of the species identified (birds); there is a moderate probability that many of these species will use habitats in the vicinity of the Project.

A single rare plant record was returned by the ACCDC. This plant appressed bog club-moss (*Lycopodiella appressa*) is not found on the provincial ESA or federal COSEWIC lists, and outside of Newfoundland & Labrador, it is not considered globally rare.

Those species considered “Endangered”, “Threatened” or “Special Concern” by COSEWIC and with potential to interact with the Project are highlighted in Table 5.4.

Table 5.4 Species with Special Conservation Status and Likelihood of Occurrence

Scientific Name	Common Name	Status			Primary Habitat	Likelihood of Occurrence in Project Area
		COSEWIC Status	NLESA	S-Rank		
Invertebrates						
None						
Plants						
Lycopodiella appressa	appressed bog club-moss			S2	Anthropogenic (man-made or disturbed habitats), shores of lakes, rivers or streams	**Low**. A single historical record (undated) of appressed bog club-moss was identified within a 5 km radius of the Project. Not detected during field surveys
Birds						
Falco sparverius	American Kestrel	Candidate Medium Priority	-	S2B	Breeds in stands with few trees in riparian areas. Requires adjacent suitable foraging areas such as grasslands, fields, or meadows supporting healthy large insects, small rodents and small bird populations. Kestrels perch on wires or poles, or hover facing into the wind, flapping and adjusting their long tails to stay in place.	**Low**. The Project area and adjacent lands are not suitable nesting or foraging habitat for this species. Uncommon on the Avalon Peninsula (typically observed on the southern shore in the area Cape Race and St. Vincent's). Breeding sites for the American Kestrel have been identified on the west coast of the Province. Not detected during field surveys.

Scientific Name	Common Name	Status			Primary Habitat	Likelihood of Occurrence in Project Area
		COSEWIC Status	NLESA	S-Rank		
Hirundo rustica	Barn Swallow	Threatened	-	S1S2B	Barn Swallows are "specialized" aerial insect eaters and use human-made structures. Preferred habitats include agricultural lands, suburban areas, marshes and lakeshores. They hunt near the ground over open fields and near water.	**Moderate**. The Project area and adjacent lands are considered suitable nesting and foraging habitat for this species. A single known occurrence within 5 km radius of the Project, with an additional 10 records when expended to a 10 km radius. Not detected during field surveys.
Poecile hudsonica	Boreal Chickadee	Candidate Low Priority	-	S5	Boreal Chickadees favour dense stands of mature spruce and fir year-round. The Boreal Chickadee nests in cavities in trees, which both the male and female excavate prior to mating. It may enlarge an existing hole in a tree, but it will also use old woodpecker holes, and has been observed using the earth beneath exposed tree roots for nest sites. Insects and spiders, including their eggs and larvae, make up the majority of the boreal chickadee's diet. Although it will also take seeds, frequenting bird feeders to cope with the harsh boreal environment during winter and other periods of food scarcity.	**Moderate to High**. The Project area and adjacent lands are considered suitable nesting and foraging habitat for this species. Numerous (41) occurrences of Boreal Chickadee have been recorded from 10 km radius of the Project. Boreal Chickadee was also detected during field surveys.

Scientific Name	Common Name	Status			Primary Habitat	Likelihood of Occurrence in Project Area
		COSEWIC Status	NLESA	S-Rank		
Chordeiles minor	Common Nighthawk	Threatened	Threatened	SNA	Breeding habitat of the Common Nighthawk includes open habitats, such as sand dunes, beaches, recently logged areas, recently burned-over areas, forest clearings, short-grass prairies, pastures, open forests, peatbogs, marshes, lakeshores, gravel roads, river banks, rocky outcrops, rock barrens, railways, mine tailings, quarries, urban parks and airports.	**Low.** They are found across Canada, but in Eastern Canada they breed only in the southern part of Labrador. Although the Project area and adjacent lands may contain suitable nesting or foraging habitat for this species, they are considered an uncommon visitor in Newfoundland. Two known occurrences within 10 km radius of the Project. Not detected during field surveys.
Coccothraustes vespertinus	Evening Grosbeak	Candidate High Priority	-	S4BS5N	The preferred habitat of the Evening Grosbeak's is thick coniferous and spruce forests, but it has successfully adapted to mixed deciduous habitats. They will also frequent bird feeders to cope with the harsh boreal environment during winter and other periods of food scarcity.	**Moderate.** The Evening Grosbeak is relatively common to Newfoundland, particularly along the Southern Shore. The Project area and adjacent lands are considered suitable nesting and foraging habitat for this species. Numerous (39) occurrences of Evening Grosbeak have been recorded from within a 10 km radius of the Project. Not detected during field surveys.

Scientific Name	Common Name	Status			Primary Habitat	Likelihood of Occurrence in Project Area
		COSEWIC Status	NLESA	S-Rank		
Catharus minimus	Gray-cheeked Thrush	-	Vulnerable		The Gray-cheeked Thrush inhabits moist coniferous and mixed woodlands, open tundra and riparian thickets . During migration, these thrushes are habitat generalists and occur in virtually every environment. Dominant tree species in Gray-cheeked Thrush habitat include black and white spruce, balsam fir and tamarack	**Moderate.** The Project area and adjacent lands are considered suitable nesting and foraging habitat for this species. They are secretive during the breeding season and nesting pairs are rarely found in high densities. Not detected during field surveys.
Falco peregrinus subsp. *anatum*	Peregrine falcon	Special Concern	Vulnerable	S2M	Peregrine falcons will use almost any habitat type that provides hunting opportunities. Favors areas with accessible open water and high densities of prey species such as ducks and shorebirds. For nesting purposes, Peregrine Falcon prefer habitats with cliffs, but have been known to nest and hunt in cities with tall buildings.	**Low.** Although the Project area and adjacent lands may contain suitable nesting or foraging habitat for this species their use of this habitat is limited. Peregrine Falcons are native to Labrador; winter migrant to Newfoundland. Although there have been numerous occurrences of Peregrine falcons from within 10 km radius of the Project, they are still are considered uncommon within this area of the province. Not detected during field surveys.

Scientific Name	Common Name	Status			Primary Habitat	Likelihood of Occurrence in Project Area
		COSEWIC Status	NLESA	S-Rank		
Loxia curvirostra percna	Red Crossbill	Endangered	Endangered	S2S3	Red Crossbills are extremely specialized for conifer habitats. The most important habitat requirement for Red Crossbills is conifer seed availability. Habitats that provide this on a large-scale include mature black spruce and balsam fir stands. Despite its extreme level of specialization, Red Crossbills does not have a restricted distribution. Conifer stands are necessary habitat for foraging, roosting, and nesting. Foraging sites can be distant from roosting/nesting sites.	**High.** The Red Crossbill is relatively common to Newfoundland, particularly along the Southern Shore. The Project area and adjacent lands are considered suitable nesting and foraging habitat for this species. A single record of Red Crossbill from within a 5 km radius of the Project, along with numerous (35) additional occurrences from within a 10 km radius of the Project. Not detected during field surveys.
Agelaius phoeniceus	Red-winged Blackbird	-	Sensitive	S1S2B	Red-winged Blackbird habitat includes a variety of wetlands including marshes (freshwater and brackish) and swamps. Red-winged Blackbirds are especially fond of habitats with thick growths of cattails and bulrushes, although they will on occasion also use bushes and small trees, likely constructing their nests from woven marsh vegetation and grasses from surrounding fields and forests.	**Moderate.** The Red-winged Blackbird is a very well-established bird species in North America. The Project area and adjacent lands (riparian marsh vegetation at Long Pond) may contain suitable nesting and foraging habitat for this species. A single record of Red-winged Blackbird from within a 5 km radius and seven additional records when expanded to a 10 km radius of the Project. Not detected during field surveys.

Scientific Name	Common Name	Status			Primary Habitat	Likelihood of Occurrence in Project Area
		COSEWIC Status	NLESA	S-Rank		
Euphagus carolinus	Rusty Blackbird	Special Concern	Vulnerable	S3B	Rusty Blackbird are associated with forest wetlands, including slow-moving streams, peat bogs, sedge meadows and ponds, dominated by conifer forest and scrub edges. Even during migration, the blackbird seeks out wet areas to rest and feed . In winter, this species forages in swamps, wet woodlands, and other moist places. Foraging on the ground along the edges of ponds and other wetlands, the Rusty Blackbird will probe the mud and wade into water for aquatic insects and plant matter. An omnivore it will eat just about anything, from seeds, acorns, fleshy fruits, and grasshoppers in the winter to aquatic insects, crustaceans, salamanders, seeds and small fish in the summer.	**Moderate.** The Rusty Blackbird is considered an uncommon (breeder) in Newfoundland. The Project area and adjacent lands are considered suitable nesting and foraging habitat for this species. Four occurrences of Rusty Blackbird have been recorded from within a 10 km radius of the Project, with some of those records from the immediate area of the Project. Not detected during field surveys.
Asio flammeus	Short-eared Owl	Special Concern	Vulnerable	S3B	Short-eared owls in Newfoundland and Labrador have been reported in tundra, coastal barrens, sand dune, field and bog habitats. These habitats are particularly abundant on the west coast and northern peninsula of Newfoundland, and on the coastal barrens and above the treeline in Labrador, although virtually all coastal areas and nearshore islands are suitable habitat (Schmelzer 2005).	**Moderate.** The Short-eared Owl is considered an uncommon (breeder) in Newfoundland. The Project area and adjacent lands are not suitable nesting or foraging habitat for this species. Seven occurrences of Short-eared Owl have been recorded from within a 10 km radius of the Project. Not detected during field surveys.
* - Assessed by COSEWIC but after consultation period not placed on legal list						

The ACCDC - Newfoundland and Labrador office (A. Durocher, pers. comm.) confirms that the above rare species accounts (ACCDC 2013) should be considered current where potential habitat (i.e. natural cover) exists.

The population statuses of all species of flora and fauna encountered during surveys of target wetlands were determined. In particular, evidence for species considered to be "uncommon", "sensitive", or "at risk" within the province, as identified by population rankings provided by the NLDEC – General Status (NLDEC 2010), ACCDC (2010), COSEWIC (2013), and those protected by the Newfoundland and Labrador ESA (Government of Newfoundland and Labrador 2001), were recorded.

No federally or provincially listed endangered, threatened, rare, candidate, sensitive, or special-status species are present on the site. Therefore, construction of the Project would not result in loss of individuals or reduction of existing habitat of a federally or provincially listed endangered, threatened, rare, candidate, sensitive, or a special-status species.

Given the local landuse, rural nature of the natural environment, including forests, woodlands, water bodies / watercourses, the likelihood of special status species occurring within the Project area is considered low to moderate.

During construction, particular attention should be paid to the potential for species of special conservation concern to occupy the Project area, in particular rare avifauna that may use the area for breeding and nesting. Of the species with potential to occur in the Project area, none are species of management concern tracked by the NLDEC, ACCDC, or listed by *SARA* or the Newfoundland and Labrador ESA.

5.3 Other Functions and Values to the Local Community

There was seemingly little evidence-based information or observations of any socio-economic or cultural uses of the wetland, with the exception of some multi-season recreational uses and activities. This includes portions of informal all-terrain vehicle (ATV) and walking trails that intersect the assessed wetlands, in particular that of Wetland 1 (Appendix C, Photograph 18). Similarly, there also exists the potential, due to its proximity to residential areas, that the area may be used during the winter season for cross-country skiing and/or snowmobiling activities.

The wetland complex does not appear to be used to any large degree by the local population for recreation, food gathering or any other substantial economic activity.

The wetland complex is not part of any protected area such as a provincial park, ecological reserve, provincial wildlife management area, or environmentally sensitive area. Overall, the wetland appears to possess limited social and/or cultural value.

5.4 Local Occurrence and Rarity of Ecosystems

The glacially-scoured topography of the local area is known to have a high density of wetlands. The bedrock and thin layer of till over the bedrock typically create poorly drained areas and can confine water to low elevation areas, facilitating wetland formation.

Alteration of the wetland through the construction of the residential development is not anticipated to substantially affect the local occurrence of wetlands. Bogs are widespread in the local environment, and throughout the province of Newfoundland and Labrador; therefore, the Project is not anticipated to affect a rare or uncommon ecosystem.

5.5 Notable Disturbances to Assessed Wetland Areas

There is evidence to suggest that the large raised bog associated with Wetland 1 and that of a smaller wetland northwest of Wetland 1 and adjacent the TCH may have been used at some point in the past for forest research seedling (i.e., conifer plantation) trials. While evidence to substantiate this claim has not been documented through literature reviews, anecdotal information suggest that this was in all likelihood part of a research program initiated by Natural Resources Canada - Canadian Forest Service and/or the provincial Department of Natural Resources in the 1970s or early 1980s (D. Wells, 2013 pers. comm.). Silvicultural practices were aimed at the creation of an improved micro-site, conducive to the successful establishment and subsequent growth of tree seedlings. In the case of Wetland 1, a single-furrow plough (e.g., Bracke scarifier) may have been used to provide effective site preparation (i.e., ditch scarification) of the surface of the peat bog and therefore better micro-sites for the early establishment and growth of lodgepole pine (*Pinus contorta* var. *latifolia*) seedlings (Appendix C, Photograph 19). Based on observations made during the current wetland survey, these efforts were seemingly unsuccessful, as few of the seedlings appear to have survived or are in very poor health.

Additional anthropogenic features encountered on the Property include two residences and associated agricultural facilities at the site of the former Duffett's farm off Duffett's Road and southwest of Wetland 1, and a paintball recreation business also off Duffett's Road and bordering Wetland 5. Other evidence of human usage includes hydro lines in the northern half of the Property, ATV trails adjacent to and intersecting wetlands and scattered occurrences of discarded refuse throughout (e.g., vehicles, old tires, beer cans, etc.).

5.6 Summary of Key Functions and Values of Wetlands

The wetland or wetland complex is moderately important for providing hydrological and biogeochemical functions, owing to its relatively large size. Water quality improvement is not a major function provided by the wetlands on site, although the potential does exist for the wetland to perform this function. Peat accumulation across the wetland complex, in particularly that associated with Wetland 1 - the large domed bog and Wetland 4, suggests that the wetland maintains relatively low oxygen levels that depress decomposition, and therefore, the

ability of aerobic microorganisms to decompose the organic matter, petroleum hydrocarbons and the oxidation precipitation of certain metals is low . However, Wetlands 2, 3 and 5 have somewhat fluctuating water levels, which are in part able to breakdown organic matter, and absorb hydrocarbons and certain metals, therefore contributing to water quality improvement.

Peatlands (particularly bogs and fens), are refered to as "carbon sinks" in that they remove carbon from the atmosphere and store it for long periods of time (50 to 1,000+ years). This function is valued for the role it plays in mitigating and delaying global climate change. Considering the size of the wetland area, this role can be associated with the entire wetland complex.

Wetlands 2, 3 and 5 perform stormwater modification functions, as was observed through evidence of high water level lines and bank flooding of adjacent stream systems that intersect these wetlands, thus providing evidence that the wetlands have a capacity for substantial water retention. These wetlands collectively slow the movement of water during heavy precipitation events. The wetlands also contribute to surface water flow regulation by slowly releasing their stored water during dry periods, thereby augmenting the flow to groundwater supply and watercourses down slope, in particular the Waterford River system. Overall, the values of the assessed wetlands are considered relatively moderate.

The field surveys did not find any rare or threatened plant or animal species. Overall, the wetlands on site are not considered to be valuable in terms of the physical, hydrological and biogeochemical functions provided, due to their small size.

The key environmental, ecological and social functions and values supported by the wetlands are summarized in Table 5.5. The table depicts some of the functions that the wetlands currently perform, most notably the hydrological functioning, which include storm water moderation and storage, and providing additional flow to groundwater and down slope watercourses during periods of low water flow.

For the purpose of this report, the wetland evaluation system as described in the document "*Wetland Evaluation Guide*" (Bond *et al.* 1992) was applied for the determination of wetland significance.

Table 5.5 Summary of Known or Likely Key Functions and Values of the Assessed Wetlands

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Hydrological Values: • **Value of the wetland in contributing to surface and groundwater quantity, including storm water moderation and storage; contribution to augmentation of stream flow during low flow periods; and groundwater infiltration.**					
*Does the wetland contribute to recharge of regional water supply aquifers?	P	L	L		Based on site visits and desktop studies of geology, topography, air photography, predictions of watershed hydrology
*Does the wetland provide flood protection benefits?	P	L	L	Use of naturally-occurring wetlands and small streams for stormwater retention is discouraged. It is currently understood that the City of St. John's are addressing this issue through the incorporation of stormwater retention ponds in many new developments. These constructed ponds or wetlands are designed to hold peak flows and slowly release water back into the watershed	
Does the wetland contribute to usable surface water?	P	NA	NA		
Does the wetland provide erosion control?	P	L	NA		
Does the wetland provide flow augmentation to users through a headwater position in the catchment basin?	Y	L	M	Wetlands play a vital role in controlling floods. Wetlands help to lessen the effects of flooding by absorbing water and reducing the speed at which flood waters flow. Upstream wetlands such as that of the large domed bog can serve to store flood waters temporarily, releasing them slowly downstream over time	

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
*Does the wetland reduce tidal effects?	N	NA	NA	The wetland is not located in a tidally influenced area	
Biogeochemical Values: • **Value of the wetland in contributing to surface and groundwater quality, including potential water quality improvement and carbon storage / sequestration**					
*Does the wetland receive significant pollution of a type amenable to amelioration by wetlands?	N	L	L	Excess nutrient / pollution into the wetland from surrounding landscape is likely insignificant. A single wetland, the riparian marsh, may potentially at some point in the past have been influenced by farm practices associated with the former Duffett's Farm; however, those inputs are assumed to have been negligible and no longer occurring	Based on site visits, professional understanding of wetland systems and site hydrology
Does the wetland provide storage for agricultural runoff?	N	NA	NA	Historic agricultural activity proximal to wetland (Duffett's Farm) is now given over to development	Based on site visits, professional understanding of wetland systems and site hydrology
*Does the wetland provide for containment of toxics contained in surface runoff or through discharge flow?	U	L	L	The wetland complex is located within a rural area. Runoff from nearby, commercial and residential development and transportation infrastructure containing quantities of pollutants associated with vehicles and everyday urban spillage and litter is not anticipated	
Does the wetland provide for sediment flow stabilization?	Y	L	M	Yes. Various inflow / outflows were observed associated with the wetland complex, and the wetland is anticipated to play a role in the removal or stabilization of sediments, metals and organic contaminants.	

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Ecological Values: • **Role of the wetland in contributing to the well-being of important plant and animal values**					
*Are there any rare, threatened or endangered animal or plant species present?	N	NA	NA		Based on site visits, provincial datasets and professional understanding of wetland systems
*Does the wetland contain high quality important habitats for migratory birds?	Y	L	L	There is some breeding and foraging habitat for various common species noted from the wetland, as well as others not noted but likely present	
Does the wetland provide habitat for sport and/or commercial fish?	Y	L	M	Habitat for a number of species of sportfish (salmonids) exists, however, obstructions associated with roads and trails throughout the system may impede fish migration, particularly during periods of low flow. No commercial freshwater fishery exists within the region	
Does the wetland provide important habitat for reptiles and amphibians?	Y	L	L	Wetland includes an abundanceof permanent pools and thus habitat for herpetiles (i.e., green frog)	
Does the wetland provide important habitat for crustaceans?	N	NA	NA	No macro-crustacea were observed or expected	
Does the wetland provide important habitat for mammals?	Y	L	L	The mammals recorded in the wetland and other common native species not noted may have part or all of their individual territories within this wetland but area populations are much more widespread and not dependent on this particular wetland	Based on site visits, provincial datasets and professional understanding of wetland systems

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Does the wetland support an important animal or plant species in unusual abundance?	N	NA	NA		
Does the wetland and its associated vegetation protect natural shorelines?	N	NA	NA		
Is the wetland ranked as a Class I, II, or III wetland by Canada Land Inventory or other accepted evaluation system?	N	NA	NA		
Does the wetland support an extensive ecosystem complex including uplands?	Y	L	L		
Has a regional threshold been reached where the significance of wetland ecosystems for the entire region will be compromised by further degradation?	N	NA	NA		
Is the wetland considered a classic example of its type?	P	L	L	Domed bog and riparian marsh types	
Are there few remaining natural, uneffected wetlands of this type in the region?	N	NA	NA	Peatlands are ubiquitous throughout the region	

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Does the wetland contain, owe its existence to, or is it a part of or ecologically associated with, a geological feature which is an excellent representation of its type?	N	NA	NA		Based on site visits, provincial datasets and professional understanding of wetland systems
Does the wetland form an integral part of an important water drainage system?	Y	H	M	Located within the Waterford River drainage basin, a portion of the headwaters of which occur within the Project area. South Brook is the largest tributary to the Waterford River and believed to be an "integral" part of the system	
Does the wetland display biological diversity that is of interest?	Y	L	L	Peatlands are ubiquitous in northern landscapes, including much of Newfoundland and Labrador. Similarly, wetlands in the Project area are predominantly peatlands (i.e., bogs and fens); however, a small area of mineral wetland associated with riparian marsh habitat is present in association with a small stream flowing into Paddy's Pond. Riparian marshes support plant life that is considered more diverse and more robust than surrounding upland and lowland habitats and therefore may be considered a unique habitat type	
Social / Cultural Values: • **Role of the wetland in contributing to the well-being of important plant and animal values**					
Education and Public Awareness Values					
Is the wetland used for scientific research?	Y	L	L	The domed bog at the center of the wetland complex was once the site of seed trials for lodgepole pine.	Based on site visits

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
* Is the wetland used for educational and interpretation purposes?	N	NA	NA		
Does the wetland exist close to a large urban population?	Y	L	L	The wetland complex is located within the municipal boundaries for the City of St. John's	
Does the wetland receive large numbers of visitors?	N	NA	NA		
Aesthetics					
Is the wetland visible from a provincial / territorial highway, a designated scenic highway / road or a passenger railway?	N	L	L	The Project footprint is visible from the TCH and Pitts Memorial Drive; however, the wetland is buffered by hummocky terrain and mature coniferous forests	Based on site visits
Does the wetland provide a valuable aesthetic or open space function?	L	L	L	All existing wetlands provide green space that is generally more aesthetically pleasing than the alternative human conversions of the natural landscape. Local environmental groups and environmentally inclined individuals may argue for the retention of the basic open aspect of wetland habitat throughout the Property.	
Does the wetland add substantially to the visual diversity of the landscape?	P	L	L		
*Is the wetland an important sightseeing locale?	P	L	L		

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Recreational Values					
Does the wetland provide a base for viewing or photographing large numbers of wildlife?	P	L	M	Wetlands associated with the Property and provide numerous opportunities for general nature, plant and wildlife viewing and photography	Based on site visits
Does the wetland provide opportunities for boating?	N	NA	NA	Although a number of small ponds and rivers exist within the Project area, their size is believed to be restrictive to such activities	
Does the wetland provide winter recreation opportunities?	Y	L	L	Small trail network throughout adjacent upland forests intersecting many of the area wetlands may provide cross-country skiing and snowmobiling opportunities	
Does the wetland provide high quality sport hunting or fishing?	Y	NA	NA	Wetland is located within the City of St. John's and adjacent the city of Mt. Pearl's municipal boundaries, a no hunting zone. Although, there is evidence to suggest that such activities do occur. Limited sport fishing opportunities	
Public Values					
Is the wetland part of the pattern of settlement and rural / urban lifestyle?	Y	L	L	Areas in very close proximity to a number of expanding commercial, residential and agricultural developments where encroachment and infilling of wetland areas has occurred over the recent past	Based on site visits and available information
Is the wetland a designated site of special public interest?	N	NA	NA		
Is the wetland a unique national, provincial or regional resource?	N	NA	NA		

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Are there policies / programs to support conservation / restoration of the wetland?	Y	NA	NA	Identified as Open Space Reserve by the City of St. John's in part due to a report commissioned in 1993 ("Significant Waterways and Wetlands")"	
Does the wetland provide for easy public access?	Y	L	L	The wetland is generally accessible to locals from most sides and to the average hiker / walker or other person from the water towers at Ruth Avenue. However, there are no clear or improved access routes specifically designed to bring one to or through the complex of wetlands which exist there.	
Is the wetland public land?	N	R	M	City of St. John's Open Spaces Reserve	
Cultural Values					
Does the wetland form part of the historical / cultural heritage of a regional population?	N	NA	NA		
*Does the wetland contain archaeological or paleontological resources?	P	NA	NA	Archaeological potential presently unknown. No information available at this time. Information may exist within city or provincial records	
Is the wetland used for cultural events or cultural renewal?	N	NA	NA	No information available at this time	
Does the wetland form part of a native traditional use area?	N	NA	NA	No information available at this time	
Renewable Resource Values					
* Is the wetland used for commercial or subsistence hunting, trapping and fishing?	N	NA	NA	Wetland is or should be in no hunting zone.	

	Are Criteria Present	Level of Criterion Significance	Expected Effect of Project Upon Wetland Values	Relevant Functions	Summary of Information Sources
Does the wetland provide opportunities for non-commercial uses of fish, wildlife, crustaceans and/or water resources?	P	L	L	Limited opportunity for recreational fishery	
Can forest resources of the wetland be harvested?	P	L	L	The forested area of the wetland is neither very large or of substance for commercial operations	
* Are there other commercial uses of the wetland,	N	NA	NA		

Key:

Are Criteria Present?: Y = Yes: confirmed presence; L = Likely: data suggest the presence but the presence is unconfirmed; P = Possibly: location and circumstance suggests presence but no data are available; N = No: not present; U = Unknown

Level of Criterion Significance: N = National; P = Provincial; R = Regional; L = Local; NE = Negligible; NA = Not Applicable.

Expected Effect of Project Upon Wetland Values: H = High; M = Moderate; L = Low; NA = Not Applicable

Trigger Factors: a combination of factors may suggest wetland conservation, Project acceptance anal/or mitigation of the Project if 3 or more critical criteria are marked "yes", criteria are present and/or, over 50% of criteria have national/provincial/ regional significance and/or over one third of expected protect impact is high then, the evaluator should recognize that the wetland has a major significance and/or could be significantly affected by the proposed project.

5.7 SUMMARY OF CRITICAL VALUES

In the wetland evaluation process, some functions are considered more important than others and are identified as critical values marked with an asterisk (*) in the tables. Critical value notation indicates a wetland value whose product, service or function is very important to society or where an important threshold or function may by exceeded, resulting in the loss of the function and value (Bond et al. 1992).

The wetland is considered to be of moderate significance.

6.0 WETLAND CONSERVATION AND MITIGATION MEASURES

6.1 Purpose of the Proposed Project

At the time of writing, the City of St. John's had already been advised of 10718 Newfoundland Inc. intentions with respect to the subject property and is aware that the proposed development will affect or partially affect wetlands zoned Open Spaces. Mitigation is proposed to prevent the potential for direct and indirect effects to remaining and adjacent wetland habitats.

The following assessment and mitigation measures are largely based on effects from the proposed development; however, consideration has also been given to more general effects on wetlands in the Project footprint.

6.2 Construction Timing

Specifics regarding the timing of construction activities have not yet been determined; however, with approval, construction is likely to begin in late 2013 / early 2014.

6.3 Construction Plan

The proposed construction of the light-industrial, commercial and residential development will require, in general, the following activities:

- clearing and grubbing;
- ripping and grading of overburden to achieve grades required for residential community development to create trenches for subsurface services;
- installation of subsurface piped services (water, wastewater and storm);
- extension and installation of culverts;
- infilling and grubbing of wetland habitat, where approved;
- installation of appropriate erosion and sediment control measures;
- surface finishing (concrete pouring, asphalt and re-vegetation);
- residential building construction; and
- rehabilitation / re-vegetation.

6.4 Mitigation Sequence for Decision Making

Depending on the final location of some Project components, potential effects to biological resources, including wetlands, special-status species and wildlife, could occur if those Project components are located within Open Space areas.

The mitigative sequence for decision making is the foundation for achieving wetland conservation in Canada. The sequence – avoidance, minimization, compensation – assists proponents in planning and designing project proposals that will be acceptable to the NLDEC. "Avoidance" is the priority, and requires consideration of project alternatives that would have less adverse effects on the wetland. "Minimization" requires that the project be designed and implemented using techniques, materials and site locations that reduce or remediate the Project effects on the wetland. "Compensation" requires that the residual effects on the wetland functions are compensated for by the enhancement, restoration or creation of wetland ecosystem at an area ratio commensurate with the loss. In the case of the Glencrest development, the process involved the following key stakeholders:

- The City of St. John's,
- Pinnacle Engineering (on behalf of 10718 Newfoundland Inc.); and
- Stantec Consulting.

The NLDEC Water Resource Management Division is responsible for water resources management as per provisions of the Environmental Protection Act and the Water Resources Act. 10718 Newfoundland Inc. intends to discuss the Project; it's interactions with wetlands and appropriateness of mitigation strategies with NLDEC, as is appropriate, prior to final Project siting. In areas where wetland avoidance is not possible, alternative mitigation strategies will be developed, as required, in consultation with NLDEC and other stakeholders (i.e., City of St. John's).

6.5 Options for Avoidance of Wetland Alterations

The proposed development occurs within an area that includes several large wetlands and because of this options to proceed with the development and at the same time entirely avoid effects to area wetland are limited.

6.6 Opportunities for Minimization of Effects to Wetland Function and Values

Wetland buffers provide numerous benefits, including removal of pollutants from runoff, reduction in erosion, temperature moderation, storage of floodwaters, wildlife habitat, increased aesthetic, recreational and property values and the provision of a visual separation between wetlands and developed areas. The benefits provided by application of a wetland buffer will depend on the buffer width. Widths of 20 m (minimum width) to 50 m are recommended to

protect wetland water quality, while widths of 75 to 100 m or more are recommended for wetlands with important wildlife functions (Castelle et al. 1992). Wetland buffer widths can be set for all wetlands, or a developer may choose to set buffer widths based on wetland type or wetland functions performed. The developer may choose to adopt vegetated buffers around wetlands through expanding or adding to requirements for Open Space zoning, adding wetlands to existing stream buffer restrictions, or incorporating wetland buffers into a post-construction stormwater management plan.

Best management practices and guidelines will be followed during construction in order to minimize potential effects to wetland habitat and other environmental features. There are a number of planning and construction strategies intended to minimize potential alteration. Mitigation measures include, but are not limited to, designing the development to manage runoff and minimizing any sedimentation and erosion. This section describes several ways to minimize wetland alteration.

6.4.1 General Mitigation and Wetland Habitat Loss

The proposed development occurs within an area that includes several large wetlands and because of this options to proceed with the development and at the same time entirely avoid effects to area wetland are limited.

In order to minimize effects to wetland habitat during construction of the Project, it is recommended that contractors be made aware of the presence of the wetland and the practices to use when working in or near the wetland, including:

- by identifying the best wetland sites in advance of development, there is an increased chance of permanent protection.
- ensuring that the minimum workspace required for construction is used, thereby reducing the amount of wetland habitat lost. The remainder of the wetland should be restored (if possible) and adjacent areas enhanced for wetland and upland habitat;
- the limits of disturbance need to be clearly marked in the field and on the site plan. Construction area should be marked (i.e., flagged) by qualified personnel to ensure disturbance to remaining wetland habitat is avoided;
- no fuelling of vehicles or equipment within 30 m of the wetland;
- no use of equipment or vehicles in or adjacent to the adjacent wetland;
- no grubbing in adjacent wetland habitat;
- maintaining as much buffer vegetation as practical surrounding the wetland;

- maintaining clean construction sites, free of debris, waste and construction materials that may accumulate in adjacent wetland habitat; and

- frequent communication with the Project manager on construction progress and mitigation success when working near adjacent wetland habitat.

6.6.1 Aquatic Environment

The proposed development occurs within an area that includes several large wetlands and because of this options to proceed with the development and at the same time entirely avoid effects to area wetland are limited.

6.6.1.1 Minimization of Hydrological and Hydrogeological Effects

Clearing and grading of the site during Project construction will affect the general direction of surficial flow of water runoff. Given the location, scale and construction schedule, there exists the potential of substantial adverse effects on local hydrological conditions. Hydrologic conditions in the Project area were investigated through field visits to characterize area wetlands and not in sufficient detail to assess hydrologic effects related to the Project.

A number of surface water bodies and wetlands occur within the Project area. Precautions will be taken to protect adjacent water bodies (South Brook and two unnamed streams) from site runoff and contamination. Stormwater infrastructure will also be installed early in the construction phase to direct any surface runoff and to prevent the runoff from ending up in the nearby water bodies located down-gradient.

In order to maintain a similar hydroperiod in the wetland or wetland complex and minimize the indirect effects of the development, some general guidelines are provided that will help preserve the wetland habitat. It is recommended that:

- natural hydrology of the Project area should be maintained within the natural range of variation, where feasible; indeed construction of the Project will alter the flow of surface and groundwater to / from area water bodies and wetlands;

- culverts, where required, will be designed and installed using Best Available Control Technology (including DFO and NLDEC Water Resources guidelines) to maintain the natural hydrology, prevent ponding or dewatering and prevent the introduction of sediment (deleterious substances) into streams;

- incorporate stormwater Best Management Practices into the development;

- adjacent water bodies / wetlands that are integrated into any storm water management facilities should be naturalized and designed such that natural drainage patterns and wetland hydroperiods are maintained;

- clean, pH-neutral, coarse fill materials are used within the development where possible, particularly in the area of the adjacent wetland;
- machinery and personnel do not enter any portions of the adjacent wetland; and
- the post-construction volume of flow should be approximately the same as the pre-construction volume in the adjacent wetland.

Water resources should be carefully managed through planning and adhering to permitting terms and conditions, where applicable.

6.6.1.2 Erosion and Sedimentation Control

In accordance with best practices and standards, runoff controls will be in place to ensure that water discharge generated during Project activities is managed appropriately. Infrastructure will be designed and engineered so as to manage environmental issues such as site runoff.

Siltation fences and other sediment erosion measures will be installed at the site, where appropriate, to slow the flow of water, allowing any suspended sediments to settle out, preventing sediments from entering the surrounding environment. Alternatively, the prevention of erosion, rather than capture of sediment prior to release into the wetland, can be achieved by minimizing the time, slope and area of exposed soil.

Suggested practices to promote successful erosion and sediment measures when working in or near wetlands, include:

- minimize the amount of existing riparian vegetation that is cleared from the margin of all water bodies. Riparian vegetation can effectively slow runoff, reduce volume by allowing infiltration, remove suspended solids, nutrients and other contaminants from overland stormwater runoff and provide critical habitat for many bird and amphibians species.
- minimizing traffic to avoid tracks and ruts that could channel runoff and promote erosion.
- stockpile soil in designated areas away from any watercourse or water body to ensure runoff from the stockpile does not enter the water body.
- minimize the amount of time erodible soils are exposed and stabilize soils as soon as possible after construction by seeding, spreading mulch, or installing erosion control blankets.

Contractors will notify the construction manager if there are reasons why it is not possible to adhere to site-specific erosion, sediment and runoff control plans prior to diversions from these plans.

6.6.2 Terrestrial Environment

6.6.2.1 Vegetation (including Wetlands)

Site preparation, including clearing and grading of the Project area, will reduce the natural vegetation within the footprint of the Project. Loss of vegetation resources (including wetlands) can result from development of permanent facilities. Additionally, vegetation composition may change as a result of physical alteration and activities associated with preparation of the site. Changes can include short-term losses and long-term increases in species richness, decreases in native plant integrity and/or differences in habitat quality for wildlife.

After construction, disturbed surfaces not required for permanent facilities should be revegetated as appropriate. The use of traditional seed mixes for reclamation purposes should be avoided. Native seeds should be used to the greatest extent possible.

6.6.2.2 Wildlife, Wildlife Management and Timing Restrictions

Wetland buffers provide numerous benefits including wildlife habitat. The application of flexible wetland buffer widths that allow linking wetlands together with high-value upland habitats is encouraged. Large, unbroken habitat areas are valuable for habitat, thus providing for improved habitat value and function of the wetland. In addition these areas provide habitat for many terrestrial and semi-aquatic species.

Large and Small Mammals

The Project area is located in an area of high-value wildlife habitat and potentially part of local wildlife corridor / travel routes, as it is connected to a variety of important habitats. As such, the Project area, particularly the area of the assessed wetland complex, provides wildlife movement opportunities, such as travel routes, wildlife crossings, or wildlife corridors. However, Project construction is not anticipated to affect any terrestrial, riparian, or wetland habitats to such a degree that the chances for long-term survival of a particular wildlife species are diminished.

The Project is located within a relatively large natural area and as such will result in changes to the physical environment. There is potential for heavy equipment required for construction to injure ground-nesting birds and fledglings, damage or destroy nests, or result in fatal collisions with birds, in addition to that of small mammals (e.g., red foxes, red squirrel, voles). Risk of direct or indirect mortality has increased potential to occur in particular during site preparation. Increased mortality could occur directly as a result of vehicle collisions with ground-nesting birds and sensory disturbance from human presence, vehicles, or noise due to increased local traffic. Alternatively, mortality could also occur indirectly as a result of problem wildlife encounters with construction contractors. Inadequate waste disposal has potential to entice wildlife species into areas they would otherwise avoid.

Avifauna

Site preparation in areas of terrestrial, riparian and wetland habitat during the migratory bird breeding season substantially increases the risk of nest destruction. Nests are critical to maintaining sustainable populations of migratory birds. Disturbance or destruction of the nests and eggs of migratory birds is prohibited under the federal *Migratory Bird Regulations*. Perhaps the most important environmental issues related to development of the Project, Stantec recommends that 10718 Newfoundland Inc. consult Environment Canada's website on the management of incidental take of migratory birds available at: http://ec.gc.ca/paom-itmb/Default.asp?lang=En&n=C51C415F-1 and the fact sheet "Planning Ahead to Reduce Risks to Migratory Bird Nests" available at: http://www.ec.gc.ca/paom-itmb/ prior to proceeding.

The following general recommendations are suggested.

- Land clearing activities should be restricted to occur outside the critical breeding and nesting period for songbirds, raptors and waterfowl to avoid disturbing or destroying active nests. Avoid disturbing birds by scheduling clearing activities outside the nesting season (before May 15 or after July 31). It should be noted that the nesting season is not necessarily the same for all species, and not all sites will have nesting birds present during the entire nesting season.

- If land clearing activities must occur during this time, all areas should be systematically searched for active nests by qualified personnel. If nests or young are found then all construction activities should cease until young have fledged.

- Vehicle traffic should remain on existing roads, where feasible, to avoid trampling ground-nesting birds, especially during the nesting season.

- Limit tree and tall shrub removal to the necessary working areas. Vegetation removals associated with clearing, site access and staging must occur outside the key breeding bird period identified by Environment Canada for migratory birds (typically May 15 to July 31 for this area) to ensure compliance with the MBCA and *Migratory Bird Regulations*.

- Active nest surveys by a qualified avian biologist should be undertaken prior to commencement of works to identify and locate active nests of species covered by the MBCA, if clearing of vegetation cannot be avoided during breeding season for migratory birds. This may include the development of a mitigation plan to address any potential impacts on migratory birds and their active nests.

For migratory birds other than raptors or eagles, areas that are surveyed outside the primary nesting season (before May 15 or after July 31), and do not contain active nests, will be considered cleared for removal through the end of the current construction season, not including the primary nesting season. For example: if an area is surveyed and considered clear in March, it will be considered clear until May 1. If an area is surveyed and found clear in

October, it will be considered clear until the following May 1. While the majority of birds do breed during the primary nesting season, others may breed outside of this general timeframe (i.e., early nesting raptors or eagles). After an area is determined to be devoid of active nests between July 31 and May 15, personnel should be cognizant to the potential for active nests to occur, in particular those of early nesting raptors and eagles.

As part of regulatory compliance, avoidance buffers are recommended for nest sites of Newfoundland and Labrador ESA-listed and SARA-listed bird species (buffers vary in size). If during nest surveys, an observation is made of an active, or potential, nest site (i.e., a bird calling, attending a nest, displaying aggressive behaviour) inside or outside the disturbance footprint for a particular at risk bird species, a GPS waypoint will be obtained to mark an avoidance buffer for the potential nest site. In some instances, a site-specific mitigation plan may be developed and discussed with regulators that may or may not include the use of setback buffers.

In forested and non-forested habitats, painted lath with flagging or other suitable marking should be used to mark the buffers with appropriate direction and bearing recorded in the field notes. If an occupied nest is discovered on or adjacent to the disturbance footprint during construction, activities within a minimum of 30 m from the nest should not occur until the site Environmental Coordinator has been notified by the Construction Manager. Once the Environmental Coordinator is notified, an environmental monitor may be dispatched to the site (if not already present) to identify the nest or bird species and determine the appropriate mitigation in consultation with the Construction Manager.

Herpetiles

Herpetiles usually occur in habitats that offer appropriate conditions of moisture availability, cover and suitable breeding environments (e.g., ephemeral ponds) (Heatwole 1961). The general physical nature of the habitat and pH level determines the amphibian populations inhabiting it, in terms of species assemblages and abundance, rather than a precise vegetation cover. In fact, these species may be absent from certain habitats because one or more environmental factors exceed their tolerance limits or because they are out-competed by species or populations occupying the same geographic area (Heatwole 1961).

Measures aimed at mitigating potential effects on herpetile populations in the Project area have predominantly been addressed through measures identified above for other resources. These measure include:

- minimizing the area of disturbance;
- avoiding wetland habitats and/or vernal (temporary pools of water) pools to the extent practicable; and
- applying erosion and sediment control.

6.7 Proposed Monitoring

Wetland monitoring provides methodologies for monitoring the effectiveness of mitigation strategies proposed for the Project. Construction monitoring, where applicable, allows monitors to track potential trends in monitoring data, acting as an early warning system for potential issue with mitigation. It is critical that all Project construction personnel are aware of the monitoring and mitigation required for the Project, and that they have fully considered them in their construction planning.

6.8 Opportunities for Wetland Enhancement / Compensation

The general public may be unaware of the benefits that wetlands provide and may have misconceptions about wetlands, including the idea that wetlands function only as breeding grounds for mosquitoes. Educating the public to overcome these barriers by providing information on the benefits of wetlands can be of great value, not only to the developer in terms of increased property values, but promote a sense of local community and belonging for future users. The developer, in conjunction with the City of St. John's, may negotiate to create trail linkages and integrated open space and park opportunities within the Project footprint or adjacent open spaces. Within these areas may exist opportunities for the promotion of wetland stewardship opportunities and the inclusion of wetland education programs designed to provide information to the end user on means to reduce inputs of nutrients and other pollutants to wetlands, enhance or restore wetlands in vicinity to their property and maintenance of wetland health and function.

7.0 SUMMARY

10718 Newfoundland Inc. is proposing to construct a mix of residential, commercial and light-industrial developments in St. John's, Newfoundland and Labrador. The Project, located east of the TCH and south of Pitts Memorial Drive, within the City of St. John's. The area is currently zoned Productive Forest (PF), Open Space Reserve (OR) and Open Space (O) Rural Zone and changes to the current land development regulations will be required before the area can be re-designated and a concept plan for the entire area can proceed. The objectives of the Wetland Delineation and Functional Assessment were to identify and assess the possible interaction between the Project and the natural environment investigating the potential affects to the biological resources, in particular wetlands, resulting from Project construction. Appropriate mitigation measures are recommended to protect and conserve these resources, where required. The Wetland Delineation and Functional Assessment included background research, a field study and preparation of this report. Background research indicated that no previous surveys for biological resources had been completed in the immediate area of the Project. The field component of the survey involved a thorough inspection of the Property and surrounding area. The field component of the assessment was conducted during June and November, 2013.

A review of available background information from a variety of sources, including the NLDEC Water Resources portal, existing studies, aerial imagery and other available online and/or published resources, in addition to that of a field visits, resulted in the identification of numerous water bodies, riparian areas, or wetlands at the site. The nearest mapped water body is South Brook, located within the Project area. No activities will occur within 30 m of any watercourses. The Project should be designed to eliminate erosion and sedimentation generated during construction and post-construction into South Brook, its riparian areas and any additional water bodies or wetlands, thereby protecting water quality and quantity in these areas.

Based on a review of relevant literature and data on sensitive species and their habitats in the region, including the ACCDC database, and an abundance of native vegetation, development within the assessed wetlands has the potential to result in the loss of individuals and/or reduction of habitat for special-status species. In addition, given the existing undeveloped nature of the site, the Project has the potential to interfere with the habitats of those species such that the normal behaviours are disturbed or diminished. As such, wetland conservation opportunities aimed at protecting and preserving area wetlands / water bodies are encouraged.

Given the occurrence of additional large open space areas considered both large enough to maintain viable populations of species and provide travel routes for a variety of species, wildlife are expected to use the local area to meet their basic requirements of food, shelter and water. Wildlife use on a smaller scale, although constrained by urban development and the construction of physical obstacles or distractions (e.g., anthropogenic noise, lighting) that would

generally hinder wildlife use and movement, is expected in and around the Project area due to the presence of these native habitat areas. These open space, native habitat areas are likely to be used by a variety of species, including small and large mammals, birds, herpetiles and fish. Since the Project is generally occurring within areas of existing development, long-term effects resulting from construction of the Project area are not anticipated.

Due to the occurrence of an existing large, open space area of native habitat within and in vicinity to the Project area, a variety of nesting bird species, including wetland species, may be present and subject to the effects of construction activities. Disturbance and/or destruction of active bird nests, eggs, or nestlings that could result from spring and summer vegetation clearing, grubbing and other site preparation and construction activities would violate the MBCA. As such, it is recommended that vegetation clearing be conducted outside the bird breeding season (May 15 to July 31) to avoid effects to breeding birds and to comply with the Newfoundland and Labrador Wildlife Act and MBCA. If this is not possible, and nests containing eggs or young of migratory birds are located or discovered, all activities in the nesting area should be halted until nesting is completed (i.e., the young have left the vicinity of the nest). Any nest found should be protected with a buffer zone appropriate for the species and the surrounding habitat until the young have left their nest. As the proposed clearing and construction of the Project may occur in seasons of greater nesting activity (i.e., spring), a number of mitigative measures have been identified to conserve and protect the natural environment, including wetlands and the avian species that use them.

In summary, the Property was found to be dominated by an abundance of natural features, such as wetlands, watercourses and upland forests. The Property is largely in a pristine state and has high environmental value, providing habitat for plants, wildlife, fish, and species of special status and a high density of wetlands.

It is important to point out that any activity which is contemplated and which will have adverse effects upon waterbodies/wetlands within the Project area may be subject to authorisation under Section 48 of the Newfoundland and Labrador's *Water Resources Act [SNL 2002, c. W-4.01]*. As such, all activities that effect wetlands will require a Certificate of Approval for Any Alteration to a Body of Water from the Water Resources Management Division.

8.0 CLOSURE

This report has been prepared for the benefit of 10718 Newfoundland Inc. and for submission to the City of St. John's Department of Planning, Development and Engineering, in part recognizing the City's overall development requirements. This report may not be used by any other person or entity without the express written consent of Stantec and 10718 Newfoundland Inc..

Any use that a third party makes of this report, or any reliance on decisions made based on it, is the responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made, or actions taken, based on this report.

The information presented in this report represents the best technical judgment of Stantec based on the data obtained from the work. The conclusions are based on the site conditions observed by Stantec at the time the work was performed at the specific testing and/or sampling locations, and can only be extrapolated to another time and location without further analysis.

This assessment was prepared by Sean Bennett and reviewed by Elizabeth Kennedy and Ellen Tracy. We trust that the above meets your requirements at this time. Please contact Sean Bennett at (709) 576-1458 if there are any questions respecting this report.

9.0 REFERENCES

9.1 Personal Communications

Wadden, D. 2012. Hydrological Engineer. City of St. John's, St. John's, NL (Correspondence September 2012), 2012.

9.2 Literature Cited

ACCDC (Atlantic Canada Conservation Data Centre). 2013. Rare Flora and Fauna. Data request September 2013.

ACCDC (Atlantic Canada Conservation Data Centre). 2010. Provisional list of all vascular plant elements.

Agriculture Canada. 1981. Soils of the Avalon Peninsula, Newfoundland. Research Station, Agriculture Canada, St. John's West. Available at: http://sis.agr.gc.ca/cansis/publications/surveys/nf/nf3/nf3_report.pdf

Agriculture Canada Expert Committee on Soil Survey. 1982. The Canadian Soil Information System (CanSIS) Manual for Describing Soils in the Field. J.H. Day, editor. LRRI Cont. No. 82-52. Agriculture Canada. 97 pp.

Arseneault, R., T. Pollock, S. Ratnamand D. Hansen. 1985. Surface Water Quality Study in the Waterford River Basin. Urban Hydrology Study of the Waterford River Basin Technical Report No. UHS-WBR 1.4.

Castelle A.J., A.W. Johnson, and C. Conolly. 1994, Wetland and Stream Buffer Size Requirements-A Review. Journal of Environmental Quality, 23(5):878-882

City of St. Johns. 2013. Web site: map.stjohns.ca/mapcentre/mapcentre.html. [Accessed September 2013]

COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2013. Canadian Wildlife Species at Risk. www.cosewic.gc.ca/eng/sct0/rpt/rpt_csar_e.cfm [Accessed September 2013].

Environment Canada. 2012. Migratory Bird Conservation. Incidental take of migratory birds in Canada. http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=FA4AC736-1

Environment Canada. 2010a. Canadian Climate Normals, 1971-2000, St. John's A. Available at: http://climate.weatheroffice.gc.ca/climate_normals/results_e.html?Province=ALL&StationName=St%2E%20John%27s&SearchType=BeginsWith&LocateBy=Province&Proximity=25&ProximityFrom=City&StationNumber=&IDType=MSC&CityName=&ParkName=

&LatitudeDegrees=&LatitudeMinutes=&LongitudeDegrees=&LongitudeMinutes=&NormalsClass=A&SelNormals=&StnId=6720&start=1&end=13&autofwd=0 Last modified 2010-06-23; Accessed 2013-08-02

Environmental Technical Services Co. 1995.US Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.

Government of Canada. 1985. The Fisheries Act (1985). Queen's Printer, Ottawa, ON. Available at: http://laws-lois.justice.gc.ca/eng/acts/F-14/page-1.html#h-2

Government of Canada. 1991. The Federal Policy on Wetland Conservation. Canadian Wildlife Service, Environment Canada, Ottawa, ON.

Government of Canada. 1994. Migratory Birds Convention Act [, c.22]. Queen's Printer, Ottawa, ON. Available at: http://www.ec.gc.ca/alef-ewe/default.asp?lang=en&n=3DF2F089-1

Government of Canada. 1995. Canadian Biodiversity Strategy. Canada's Response to the Convention on Biological Diversity. Minister of Supply and Services Canada. Catalogue No. En21-134/1995E. Biodiversity Convention Office, Environment Canada, Hull, QC.

Government of Canada. 2002. The Species at Risk Act (2003). Queen's Printer, Ottawa, ON. Available at: http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html.

Government of Newfoundland and Labrador. 2001. Endangered Species Act, SNL 2001 cE-10.1. Queen's Printer, St. John's, NL. Available at: http://www.assembly.nl.ca/legislation/sr/statutes/e10-1.htm.

Government of Newfoundland and Labrador. 2002. Water Resources Act, SNL 2002 cW-4.01. Available at: http://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm.

Government of Newfoundland and Labrador. 2011a. Policy for Development in Wetlands. Department of Environment and Conservation. Available at: http://www.env.gov.nl.ca/env/waterres/regulations/policies/wetlands.html.

Government of Newfoundland and Labrador. 2011b. Newfoundland and Labrador's Wetland Habitat Stewardship Program.

Heatwole, H. 1961. Habitat selection and activity of the wood frog, Rana sylvatica Le Conte. American Midland Naturalist, 66(2): 301-313.

NatureServe, Arlington, Virginia. Available: http://www.natureserve.org/explorer/ NatureServe. 2009. NatureServe Conservation Status Assessments: Methodology for Assigning Ranks. Prepared by D. Faber-Langendoen, L. Master, J. Nichols, K. Snow, A. Tomaino, R. Bittman, G. Hammerson, B. Heidel, L. Ramsay, and B. Young, NatureServe, Arlington, VA.

Newfoundland and Labrador Department of Tourism, Culture and Recreation. 2004.

NLDEC (Newfoundland and Labrador Department of Environment and Conservation). 2010. Newfoundland and Labrador's General Status of Wild Species Program. Available at: http://www.env.gov.nl.ca/env/wildlife/all_species/general_status.html [Accessed: September 2012].

NLESA (Newfoundland and Labrador Endangered Species Act). 2007. Newfoundland and Labrador Regulation 57/02 Endangered Species List Regulations under the Endangered Species Act. Available at: http://www.assembly.nl.ca/legislation/sr/regulations/rc020057.htm

Novitzi, R.P., R.D. Smith and J.D. Fretwells. 1997. Restoration, Creation and Recovery of Wetland: Wetland Functions, Values and Assessment. National Water Summary on Wetland Resources, US Geological Survey, Water Supply Paper, 2425.

NWWG (National Wetlands Working Group). 1997. The Canadian Wetland Classification System. Second Edition. B.G. Warner and C.D.A Rubec (eds.), Wetlands Research Centre, University of Waterloo.

Ramsar Convention Secretariat. 2006. The Ramsar Convention Manual: a Guide to the Convention on Wetlands (Ramsar, Iran, 1971), 4th Edition. Gland, Switzerland. Available at: http://www.ramsar.org/pdf/lib/lib_manual2006e.pdf Accessed: June 2011.

Smith, R.D., A. Ammann, C. Bartoldus and M.M. Brinson. 1995. An Approach for Assessing Wetland Functions Using Hydrogeomorphic Classification. Reference Wetlands and Functional Indices, US Army Corps of Engineers, Washington, DC.

Soil Classification Working Group. 1998. The Canadian System of Soil Classification. Agriculture and Agri-Food Canada Publication, 1646 (Revised). 187 pp.

Wells, E.D. and F.C. Pollett. 1983. Peatlands. 207–266. In South, G. R., Biogeography and Ecology of the Island of Newfoundland, Volume 48. Dr W. Junk Publishers. The Hague.

US Environmental Protection Agency. 2003. An introduction and users guide to wetland restoration, creation, and enhancement. http://www.epa.gov/owow/wetlands/pdf/restdocfinal.pdf

APPENDIX A

Terms of Reference

TERMS OF REFERENCE
FOR ENVIRONMENTAL ASSESSMENT REPORT
PROPOSED REZONING FROM OPEN SPACE RESERVE (OR) and OPEN SPACE (O) ZONES
PROPONENT: 10718 NEWFOUNDLAND INC

The following items shall be addressed by the proponent at its expense. All information is to be submitted under one report in a form that can be reproduced for public information and review. A list of those persons/agencies who prepared the Environmental Assessment Report shall be provided as part of the report.

A. Engage a professional environmental engineering company to perform a wetland evaluation of the land in question using the procedure in "Wetland Evaluation Guide" by the North American Wetlands Conservation Council (Canada) to determine what lands, if any, should be protected as a significant wetland and buffer.

B. Any wetlands must be field surveyed using GPS equipment with sub-meter accuracy. An AutoCAD 2007 drawing referenced in the NAD83 coordinate system must be provided indicating the surveyed wetland and recommended buffer overlayed on the City's latest aerial mapping.

APPENDIX B

Proposed Glencrest Site Plan

TO TRANS CANADA HIGHWAY WEST

TRANS CANADA HIGHWAY

TO CONCEPTION BAY SOUTH

TO ST. JOHN'S EAST

EX. GOLF ACCESS ROAD

FUTURE COLLECTOR BLVD

PITTS MEMORIAL DRIVE

AREA OF WETLAND TO BE DELINEATED

AREA OF WETLAND TO BE DELINEATED

AREA OF WETLAND TO BE DELINEATED

COCHRANE POND

NAV CANADA SIGNAL TOWER

600mR

SOUTH BROOK

CEMETERIES
30.80 ha
(76.11 ac)

EX. WATER TOWERS

GLENDENNING GOLF CLUB (EXISTING)

pond

pond

RUTH AVE.

FUTURE PHASE 11

FUTURE PHASE 11

FUTURE PHASE 12

FUTURE SOUTHLANDS BLVD

FUTURE PHASE 4

FUTURE PHASE 10

FUTURE PHASE 10

FUTURE PHASE 8

FUTURE PHASE 3

PHASE 2

PHASE 1

FUTURE PHASE 9

FUTURE PHASE 7

SCHOOL

PEARLGATE COMMERCIAL CENTRE

Richard Nolan Drive

Mary Queen of Peace Drive

Bill Rowe Avenue

Property Boundary

LAND USE	Area
RESIDENTIAL - STAGE 1	554.08 ha (1369.16 ac)
COMMERCIAL - STAGE 1	80.94 ha (200.01 ac)
INDUSTRIAL - STAGE 1	149.59 ha (369.65 ac)
TOTAL	**784.61 ha (1938.82 ac)**
OPEN SPACE	98.70 ha (243.90 ac)
CEMETERIES	30.80 ha (76.11 ac)
EX. GOLF COURSE	82.05 ha (202.75 ac)

NOTES:
1. CONTOURS SHOWN BASED ON CITY OF ST. JOHN'S 1:500 DIGITAL MAPPING.
2. EXISTING CONTOURS, EXISTING GROUND ELEVATIONS AND PROPOSED ELEVATIONS ARE REFERENCED TO NAD83 DATUM.

PRELIMINARY CONCEPT PLAN

PINNACLE ENGINEERING LIMITED
Civil Engineering & Project Management

GLENCREST

TERMS OF REFERENCE
WETLAND DELINEATION

Date: 06 MARCH 2013
Scale: 1 : 5000

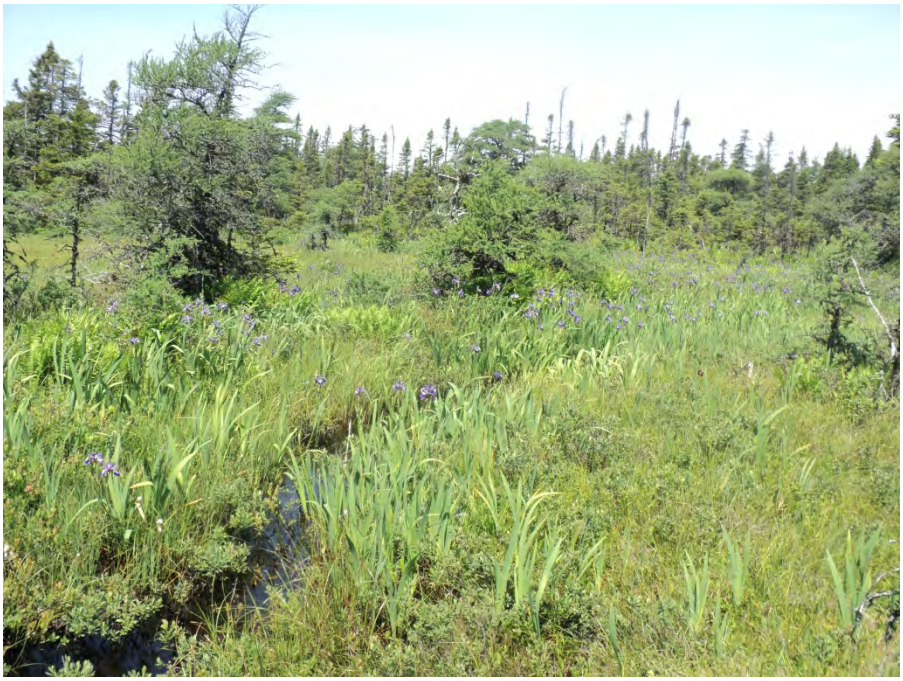
10003 – F076 Rev. B

APPENDIX C

Photographs

Photograph 1 South Brook

Photograph 2 Small Open Water Areas along South Brook



Photograph 3 Unnamed Brook Flowing in Direction of Power's Pond

Photograph 4 Unnamed Brook Flowing in Direction of Paddy's Pond

Photograph 5 Unnamed Brook (above) Flowing Beneath TCH at Paddy's Pond

Photograph 6 Domed Bog

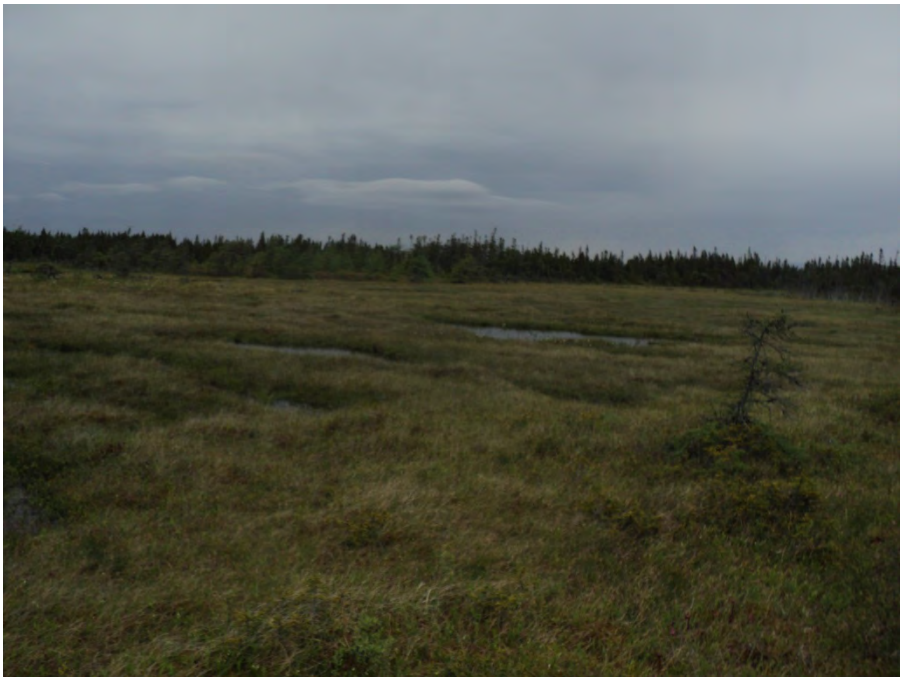
Photograph 7 Organic Soils within String (Ladder Fen) Portion of Domed Bog

Photograph 8 String (Ladder Fen) or Lagg associated with Domed Bog

Photograph 9 Slope Bog (Treed)

Photograph 10 Organic Soils within String (Ladder Fen) Portion of Domed Bog

Photograph 11 Slope Fen associated with South Brook Drainage



Photograph 12 String Fen

Photograph 13 Riparian Stream Marsh

Photograph 14 Shallow Open Water / Ponds

Photograph 15 Evidence of Use by Large Mammals (Moose Tracks)

Photograph 16 Evidence of Use by Large Mammals (Skeletal Remains)

Photograph 17 Green Frog in Habitat

Photograph 18 All-terrain vehicle (ATV) / walking trails

Photograph 19 **Bracke scarification of Domed Bog (note parallel furrows)**

APPENDIX D

Explanation of Global, National and Provincial Species at Risk and General Status Ranking

Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and *Species at Risk Act* (*SARA*) Wildlife Species Status Categories

COSEWIC and *SARA* wildlife species status categories are described in Table D1.

Table D1 Committee on the Status of Endangered Wildlife in Canada and *Species at Risk Act* Species Status Category Descriptions

Rank*	Description*
Extinct (X)	A wildlife species that no longer exists
Extirpated (XT)	A wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild
Endangered (E)	A wildlife species that is facing imminent extirpation or extinction in Canada
Threatened (T)	A wildlife species that is likely to become an endangered species if nothing is done to reverse the factors leading to its extirpation or extinction
Special Concern (SC)	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats
Data Deficient (DD)	A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction
Not At Risk (NAR)	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

**COSEWIC 2011. Excerpt from web site - http://www.speciesatrisk.gc.ca/legislation/default_e.cfm*

Wildlife Species – "a species, subspecies, variety or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years" (COSEWIC 2011).

NatureServe Conservation Status Ranks

The NatureServe Conservation Status Rank is used to rank rare plant species across North America. Rare species are those species that occur in only a few localities and/or are represented by relatively few individuals. The system is consistent with all conservation data centres across North America to facilitate tracking of rare plant occurrences and, where known, threat on global, national (federal) and subnational (provincial) levels. Conservation status ranks range from critically imperiled (N1) to demonstrably secure (N5). Status is assessed and documented at three distinct geographic scales: global (G); national (N); and subnational (S) (i.e., state / province / municipal) (Table D2.). These status assessments are based on the best available information and consider a variety of factors, such as species abundance, distribution, population trends and threats (NatureServe 2009).

Table D2 NatureServe National (N) and Subnational (S) Conservation Status Ranks

Status	Rank	Definition
NX SX	Extinct or Presumed Extirpated	Not located despite intensive searches and no expectation of rediscovery
NH SH	Possibly Extirpated	Possibly extinct or extirpated; known only from historical occurrences but still hope of rediscovery. There is evidence that the species or ecosystem may no longer be present in the jurisdiction, but not enough to state this with certainty
N1 S1	Critically Imperilled	At very high risk of extinction due to extreme rarity (often five or fewer populations), steep declines or other factors, making the species especially susceptible to extirpation or extinction
N2 S2	Imperilled	At high risk of extinction due to very restricted range, few populations (often 20 or fewer), steep declines, or other factors
N3 S3	Vulnerable	At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors
N4 S4	Apparently Secure	Uncommon but not rare, and usually widespread in the range. Some cause for long-term concern
N5 S5	Secure	Common or very common and widespread and abundant. Not susceptible to extirpation or extinction under current conditions
N#N# S#S#	Range Rank	A numeric range rank (e.g., S2/S3 or S1/S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1/S4).
NU SU	Unrankable	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends
NNR SNR	Unranked	National or subnational conservation status not yet assessed
N#? S#?	Inexact Numeric Rank	Denotes inexact numeric rank

Atlantic Canada Conservation Data Centre Rankings

The ACCDC status ranks for Labrador were used to identify regionally uncommon vascular plant species. Definitions of the ACCDC rankings are provided in Table D3.

Table D3 Definitions of the Atlantic Canada Conservation Data Centre S Rankings

Provincial Ranking	Frequency / Comments
S1	Extremely rare throughout its range in the province (typically five or fewer occurrences or very few remaining individuals). May be especially vulnerable to extirpation
S2	Rare throughout its range in the province (6 to 20 occurrences or few remaining individuals). May be vulnerable to extirpation due to rarity or other factors
S3	Uncommon throughout its range in the province, or found only in a restricted range, even if abundant in some locations (21 to 100 occurrences)
S4	Usually widespread, fairly common throughout its range in the province and apparently secure with many occurrences, but the species is of long-term concern (e.g., watch list) (100+ occurrences)
S5	Demonstrably widespread, abundant and secure throughout its range in the province, and essentially ineradicable under present conditions
S#/S#	Numeric range rank: A range between two consecutive numeric ranks. Denotes uncertainty about the exact rarity of the species (e.g., S1/S2)
?	Inexact or uncertain: for numeric ranks, denotes inexactness (e.g., SE? denotes uncertainty of exotic status). (The? Qualifies the character immediately preceding it in the S Rank)
SU	Unrankable: Possibly in peril, but status is uncertain - more information is needed
SR	Reported but without persuasive documentation (e.g., misidentified specimen)
SE	Exotic / introduced species
Hybrid	Hybrid of two similar species
Source: ACCDC 2010	

A rare plant species is defined in this study as those assigned S Ranks of S1, S2, S2/S3 or SU by the provincial NLDEC Wildlife Division and as recorded by the ACCDC. While S3 species are of concern from a provincial biodiversity perspective, they have not been included as their populations are considered less sensitive.

Wild Species: The General Status of Wild Species in Canada Rankings

The NLDEC Wildlife Division also makes use of a different ranking system known as *The General Status of Species in Canada*. *The General Status of Species in Canada* presents the results of general status assessments for a broad cross-section of Canadian species. Under this system, each species assessed in the *Wild Species* reports received a general status rank in each province, territory, or ocean region in which they are known to be present, as well as an overall Canada General Status Rank (Canada rank). Definitions of the General Status rankings are provided in Table D4.

Table D4 Wild Species: The General Status of Wild Species in Canada

Rank	General Status Category	Category Description
0.2	Extinct	Species that are extirpated worldwide (i.e., they no longer exist anywhere)
0.1	Extirpated	Species that are no longer present in a given geographic area, but occur in other areas
1	At Risk	Species for which a formal, detailed risk assessment (COSEWIC status assessment or provincial or territorial equivalent) has been completed and that have been determined to be at risk of extirpation or extinction (i.e., Endangered or Threatened). A COSEWIC designation of Endangered or Threatened automatically results in a Canada General Status Rank (Canada rank) of At Risk. Where a provincial or territorial formal risk assessment finds a species to be Endangered or Threatened in that particular region, then, under the general status program, the species automatically receives a provincial or territorial general status rank of At Risk
2	May Be At Risk	Species that may be at risk of extirpation or extinction and are therefore candidates for a detailed risk assessment by COSEWIC, or provincial or territorial equivalents
3	Sensitive	Species that are not believed to be at risk of immediate extirpation or extinction but may require special attention or protection to prevent them from becoming at risk
4	Secure	Species that are not believed to belong in the categories Extinct, Extirpated, At Risk, May Be At Risk, Sensitive, Accidental or Exotic. This category includes some species that show a trend of decline in numbers in Canada but remain relatively widespread or abundant
5	Undetermined	Species for which insufficient data, information, or knowledge are available with which to reliably evaluate their general status
6	Not Assessed	Species that are known or believed to be present regularly in the geographic area in Canada to which the rank applies, but have not yet been assessed by the general status program
7	Exotic	Species that have been moved beyond their natural range as a result of human activity. In this report, exotic species have been purposefully excluded from all other categories
8	Accidental	Species occurring infrequently and unpredictably, outside their usual range

Source: '*Wild Species: The General Status of Wild Species in Canada' website Available at: http://www.wildspecies.ca/ranks.cfm?lang=e* (NLDEC 2010)

Appendix D

From: Khan, Ali <akhan@gov.nl.ca>
Sent: Monday, October 29, 2018 9:25 AM
To: Dave Wadden
Cc: Jason Sinyard; Khan, Haseen; Khayer, Mohammad; Holloway, Rob
Subject: RE: Galway Wetland - email 1 of 2

Hi Dave

Thank you for your e-mails and the information provided

In your letter dated September 26, 2018 you have sought

1. input regarding wetland delineation in Galway
2. to determine if the Developer for Galway has obtained Provincial approval to alter wetland areas within the Galway wetland in order to construct building lots in the industrial area or any other area within the Galway development
3. The Minister's position on both the proposed development in the wetlands and on wetland delineation is necessary for Council to make an informed decision that would not be contrary to Provincial legislation regarding the amendment to the Development Regulations for wetland protection.

Our responses are follows

Item 1

The wetland delineation by Stantec is more detailed than the wetland delineation in the 50,000 scale topographic maps. The Province uses the wetland delineation in the 50,000 scale topographic maps to regulate development and issue permits. However if more detailed and site specific wetland mapping is available, as is in this situation, the Province uses the more detailed and site specific wetland mapping to regulate development and issue permits.

Item 2

The developer has not obtained any prior Provincial approval to alter wetland areas within the Galway wetland in order to construct building lots in the industrial area or any other area within the Galway development.

On a related subject please note that WRMD has received an application dated October 22 from DewCor for the development of wetland in Galway under Section 48 of the Water Resources Act.

WRMD has advised DewCor to obtain City of St. John's permission prior to the issuance of any permit under Section 48.

Item 3

As per the "Policy for Development in Wetlands" this development will be permitted as the proposed alteration is on the fringes of the existing wetlands and it is not anticipated to "aggravate flooding problems or have un-mitigable adverse water quality or water quantity or hydrologic impacts".

The Province will require measures to be undertaken to maintain hydrologic connectivity at spots where roads will cross the wetlands.

However, as per our policy the Department cannot issue a Section 48 Permit without an approval letter from the City of St. John's.

Please do not hesitate to contact me if you have any further questions.

Regards,
Ali
Amir Ali Khan, Ph.D, P.Eng
Manager
Water Rights, Investigations, and Modelling Section
Water Resources Management Division
Department of Municipal Affairs and Environment
Government of Newfoundland and Labrador

4th Floor, Confederation Building, West Block
PO Box 8700, St. John's NL Canada A1B 4J6

Ph No (709) 729-2295
Fax No (709) 729-0320

From: Dave Wadden [mailto:dwadden@stjohns.ca]
Sent: Wednesday, September 26, 2018 11:20 AM
To: Khan, Ali
Cc: Jason Sinyard
Subject: Galway Wetland - email 1 of 2

Ali:

Attached is a covering letter regarding the Galway wetland along with Appendices A and B for your review. Appendices C, D, and E will be sent in a separate email. Please contact me if you have any questions.

Dave Wadden, M.Eng., P.Eng.
Manager of Development - Engineering
Department of Planning, Engineering & Regulatory Services
City of St. John's
Phone: (709)-576-8260
Fax: (709)-576-8625
e-mail: dwadden@stjohns.ca

September 26, 2018

Dr. Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights Investigation and Modeling Section
Water Resource Management Division
Department of Municipal Affairs and Environment
West Block, Confederation Building
P.O. Box 8700
St. John's NL A1B 4J6

Dear Ali:

Re: Galway Wetland

I am writing to you with the attached documentation to seek input regarding wetland delineation in Galway and to determine if the Developer for Galway has obtained Provincial approval to alter wetland areas within the Galway wetland in order to construct building lots in the industrial area or any other area within the Galway development.

To give you some background on this development, the Developer approached the City of St. John's in 2012 with the attached concept plan in Appendix A. The Developer wanted to rezone land in the area for development. The City advised the Developer that there were wetlands and potential floodplains in the area and that both would need to be delineated to establish the area of land that needed to be protected with suitable buffers in accordance with the City's legislative obligations.

The Developer retained the services of Stantec Consulting Limited ("Stantec") to perform the wetland delineation and the final report was prepared in December 2013 and subsequently submitted to the City (see Appendix B). Stantec performed a delineation and evaluation of the wetlands in the study area identifying 78.5 hectares of wetlands.

On January 3, 2014, the Developer's project management company, KMK Capital ("KMK"), requested to alter the wetlands through a land exchange program, see Appendix C, which would see 11.9 hectares of wetland removed from the protected area. In consideration, KMK proposed that 12.6 hectares of adjacent land that was not wetland would be designated as wetland/Open Space. *(We note a discrepancy in KMK's letter which indicates the wetland as delineated by Stantec in the 2013 report is 57.08 hectares. The original area in the 2013 report is 78.5 hectares which was confirmed by GIS measurement.)* The City responded that it needed additional information to evaluate the proposal including: a revision to the 2013 Stantec report

that assessed each parcel of wetland to be removed; addition of the recommended buffers; delineation of the 100-year floodplain for each watercourse within the study area; and, have the area to be protected from development overlaid upon the City's aerial mapping based on the larger of the 100-year floodplain/buffer, the wetland/buffer or a combination of the two.

On January 31, 2014, KMK responded to the City's request for additional information with a letter and supplementary report from Stantec, see Appendix D. In staff's opinion, all the concerns were not satisfactorily addressed, and the City advised the Developer that the proposed land exchange program was not acceptable.

Subsequently, KMK submitted a second report entitled "Glencrest-Galway Development / Proposed Protected Natural Areas Assessment – Final Report", see Appendix E. Again, in staff's opinion, all the concerns were not satisfactorily addressed, and the City advised the Developer that the proposed protected areas layout was not acceptable.

You should be aware that the City and the Developer are not in agreement on what lands in the Industrial area have been approved for development and what wetland areas should be protected under the City's Development Regulations. The amendment of the Development Regulations to establish an overlay for the protection of wetlands in Galway is currently before Council. As the Developer's proposal for wetland delineation alters the wetland for the purposes of future development, the Developer would need to seek approval under Section 48 of the Water Resources Act from the Minister of Municipal Affairs and Environment for wetland alteration. As the Developer has not provided the City with any evidence of Ministerial approval for the removal of 11.9 hectares of wetland, we are seeking the Province's position on this matter. The Minister's position on both the proposed development in the wetlands and on wetland delineation is necessary for Council to make an informed decision that would not be contrary to Provincial legislation regarding the amendment to the Development Regulations for wetland protection.

You can contact me at 709-576-8260 or at dwadden@stjohns.ca if you need additional information or wish to discuss further.

Regards,

Dave Wadden, M.Eng., P.Eng.
Manager, Development - Engineering
Planning, Engineering and Regulatory Services
DW/dlm

Attachments

Appendix E

REPORT
ENVIRONMENTAL ADVISORY COMMITTEE MEETING
January 9, 2019 – 12:00 p.m. – Conference Room A

Present John Drover, Chair, Citizen Representative
Brian Head, Manager of Parks & Open Spaces, Lead Staff Representative
Councillor Ian Froude
Councillor Maggie Burton (retired at 12:53 pm)
Cheryl Mullett, City Solicitor
Ken O'Brien, Chief Municipal Planner
Jason Sinyard, Deputy City Manager – Planning, Engineering, Regulatory Services
Brian Mercer, City Arborist
Piers Evans, Northeast Avalon ACAP
Kieran Hanley, NL Environmental Industry Association
Griffyn Chezenko, Youth Representative
Bruce Roberts, Tree Canada
Maureen Harvey, Legislative Assistant

Regrets: Neil Dawe, Atlantic Provinces Association of Landscape Architects
Kimberly Keats, Citizen Representative
Sarah Richards, Canadian Institute of Forestry
Deputy Mayor Sheilagh O'Leary

Guest: Sean Bennett, Author of Reports of Stantec Consulting Ltd.

Decision Note dated November 14, 2018 re: Galway Wetland

The Decision Note seeks expert advice from the Committee on which wetland boundary for the Galway Industrial area that the City should adopt – either the wetland boundary in the December 2013 Stantec report or the protected natural areas boundary as identified in the April 2014 Stantec report.

Recommendation

Moved: Bruce Roberts Seconded: John Drover

With respect to the wetland boundary for the Galway Industrial Area, Council accept the latest mapping material based on the 2014 Stantec Report and the most recent map provided by the Manager of Development Engineering Development Engineer provided to the Committee at the December 4, 2018 meeting of the Environmental Advisory Committee.

RECOMMENDATION CARRIED WITH PIERS EVANS DISSENTING

The Committee recommends that such issues should be brought to them as soon as practical in the approval process.

Chairperson
John Drover

NOTICES PUBLISHED

Applications which have been advertised in accordance with the requirements of Section 5.5 of the St. John's Development Regulations and which are to be considered for approval by Council at the **Regular Meeting of Council on February 25, 2019.**

Ref #	Property Location/ Zone Designation	Ward	Application Details	Floor Area (square metres)	# of Employees (includes the applicant)	# of On-Site Parking Spaces	Written Representations Received	Planning and Development Division Notes
1	**59 Flower Hill** Residential Downtown (RD) Zone	2	A Discretionary Use application has been made requesting a Change of Non-Conforming Use at **59 Flower Hill.** The proposal is to convert the exiting Residential Retail Store into a Dwelling Unit. On-site parking is provided.				**1 Submissions Received (attached)**	The Planning and Development Division recommends approval of the application subject to all applicable City requirements
2	**355-367 Main Road** Commercial Neighbourhood (CN) Zone	5	A Discretionary Use application has been submitted to operate a Car Washing Establishment in an existing building at **355-367 Main Road.** The business will operate Tuesday–Sunday 9a.m.-5p.m. and have a floor area of 55 m^2. The business will be used for hand washing/detailing vehicles and will be owner operated with 1 part time employee.	55 m^2			**No Submissions Received**	The Planning and Development Division recommends approval of the application subject to all applicable City requirements
3	**4325 & 4327 TCH** Forestry (F) Zone	5	A Discretionary Use application has been submitted by Clarke's Trucking & Excavation Ltd. requesting permission to use **4325 & 4327 Trans-Canada Highway** as a quarry for Mineral Workings Use. The proposed 4.93 Hectares (4325 TCH) & 3.89 Hectares (4327 TCH) of Crown Land will be used for quarrying aggregate, which will involve blasting, crushing and screening				**No Submissions Received**	The Planning and Development Division recommends approval of the application subject to all applicable City requirements

The Office of the City Clerk and the Department of Planning, Engineering and Regulatory Services, in joint effort, have sent written notification of the applications to property owners and occupants of buildings located within a minimum 150-metre radius of the application sites. Applications have also been advertised in The Telegram newspaper on at least one occasion and applications are also posted on the City's website. Where written representations on an application have been received by the City Clerk's Department, these representations have been included in the agenda for the Regular Meeting of Council.

G:\Planning and Development\Planning\Notices Published\2019\06 - February 25 2019.docx

Jason Sinyard, P. Eng, MBA
Deputy City Manager, Planning, Engineering and Regulatory Services

[redacted]Flower Hill
St. John's, NL, A1C 4M2

Office of the City Clerk
P.O. Box 908
St. John's, NL, A1C 5M2

Sent by email: February 12, 2019

I have been a resident of Flower Hill since 1995. Although it was very convenient to have the store right across the street from my house, I understand the difficulty in these economic times, of owing a small business and the need to invest more money in making it profitable and safe, than is feasible.

At the end of the day, I understand the circumstances, and the desire to remain in the neighbourhood, and have no issue with the conversion of the exiting residential retail store into a dwelling unit.

There are many such dwellings in other neighbourhoods in St. John's, where I remember as a child buying candy on my way home from school, that are now residential dwellings – and except for memories, there are no signs that they were ever anything different.

Our convenience should not outweigh the desire for someone who owns property on Flower Hill, and have lived , worked, and contributed to the local economy for more than 25 years, to be able to retire, renovate, and live in their property.

Sincerely,

Mary Shortall

REPORT
COMMITTEE OF THE WHOLE
February 20, 2019 – 9:00 a.m. – Council Chamber, 4th Floor, City Hall

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Present Mayor Danny Breen
Deputy Mayor Sheilagh O'Leary
Councillor Maggie Burton
Councillor Sandy Hickman
Councillor Ian Froude
Councillor Deanne Stapleton
Councillor Jamie Korab
Councillor Wally Collins (entered at 9:48 am)

Regrets Councillor Hope Jamieson
Councillor Dave Lane
Councillor Debbie Hanlon

Staff Kevin Breen, City Manager
Derek Coffey, Deputy City Manager of Finance & Administration
Jason Sinyard, Deputy City Manager, Planning, Engineering and Regulatory Services
Lynnann Winsor, Deputy City Manager – Public Works
Cheryl Mullett, City Solicitor
Ken O'Brien, Chief Municipal Planner
Elaine Henley, City Clerk
Karen Chafe, Acting Legislative Assistant

Planning & Development – Councillor Maggie Burton

1. Decision Note dated February 13, 2019 re: Text Amendment to the revise the Definition of Institution - REZ1800019 - 21 Adams Avenue

Moved – Councillor Burton; Seconded – Councillor Hickman

That the committee recommend Council's approval of the following recommendation as outlined in the above cited decision note: that the application for a text amendment to the St. John's Development Regulations to revise the definition of Institution be considered. It is also recommended that the application be advertised for public review and comment. The application would then be referred to a regular meeting of Council for consideration of adoption.

CARRIED UNANIMOUSLY

2. Decision Note dated February 13, 2019 re: Application to Rezone Land to the Residential Mixed (RM) Zone for an Office - REZ1800016 - 276 Pennywell Road

Moved – Councillor Burton; Seconded – Deputy Mayor O'Leary

That the Committee recommend Council's approval of the following recommendation as outlined in the above cited decision note: that Council consider a proposed rezoning at 276 Pennywell Road from the Residential Medium Density (R2) Zone to the Residential Mixed (RM) Zone, as well as associated Development Regulations text amendments. It is also recommended that the application be advertised for public review and comment. The application would be referred to a regular meeting of Council for consideration of adoption.

CARRIED UNANIMOUSLY

3. Decision Note dated February 13, 2019 re: Rezoning from the Commercial Central Mixed Use (CCM) Zone to the Commercial Central Office (CCO) Zone for a hotel and concert hall - MPA1900001 - 9 Buchanan Street, 426 and 430 Water Street

Moved – Councillor Burton; Seconded – Deputy Mayor O'Leary

That the committee recommend Council's approval of the following recommendation as contained in the above cited decision note: that Council consider the proposed rezoning at 9 Buchanan Street, 426 and 430 Water Street from the Commercial Central Mixed Use (CCM) Zone to the Commercial Central Office (CCO) Zone, as well as the associated Municipal Plan and Development Regulations text amendments. Upon submission of a satisfactory Land Use Assessment Report, it is recommended that the application be referred to a Public Meeting chaired by an independent facilitator. Following the public meeting, the application would be referred to a regular meeting of Council for consideration of adoption.

CARRIED UNANIMOUSLY

4. Built Heritage Experts Panel Report of Feb. 6, 2019

i. Decision Note – 9 Buchanan Street, Designated Heritage Building Review Initiated by an Application for a Demolition Permit

Moved – Councillor Burton; Seconded – Councillor Korab

That Council approve the Built Heritage Experts Panel recommendation as follows: that as 9 Buchanan Street does not merit designation as a Heritage Building, it is recommended to work with the developer and encourage that the redevelopment of the site incorporate design that respects the past histories of the site and neighbourhood. Further, the Committee recommends that the site not be demolished until the new development has been confirmed.

MOTION LOST WITH ONLY MOVER SUPPORTING

Moved – Councillor Burton; Seconded – Councillor Hickman

That Council approve the recommendation as outlined in the above cited decision note: that as 9 Buchanan Street does not merit designation as a Heritage Building, it is recommended to work with the developer and encourage that the redevelopment of the site incorporate design that respects the past histories of the site and neighbourhood.

CARRIED UNANIMOUSLY

ii. Decision Note - 139 Water St. – Exterior Façade Renovations

Moved – Councillor Burton; Seconded – Deputy Mayor O'Leary

That Council approve the Built Heritage Experts Panel recommendation that the exterior façade renovations at 139 Water Street be approved as presented.

CARRIED UNANIMOUSLY

5. Decision Note dated February 13, 2019 re: Envision St. John's Municipal Plan and Development Regulations Drafts dated February 2019 - Adoption-in-Principle

The Chief Municipal Planner conducted a power point presentation in relation to the above noted matter, followed by discussion. Public consultation has been extensive and the general public, agencies and organizations will continue to be consulted as the process goes forward. Members of Council generally expressed support of the Envision Plan and draft development regulations. Staff were commended for their work in this regard. Councillor Burton agreed to consult with Communications Division about the display of information at the Access Center in relation to the Envision Plan.

Moved – Councillor Burton; Seconded – Councillor Froude

That the committee recommend Council's approval of the following recommendation: that Council adopt-in-principle the Envision St. John's Municipal Plan and the Envision St. John's Development Regulations, dated February 2019. If adopted-in-principle by Council, these will be sent to the Municipal Affairs and Environment with a request for provincial release. Once the release is received, the documents will be referred back to a future regular meeting of Council for consideration of formal adoption and the appointment of a commissioner to conduct a public hearing, as required by the Urban and Rural Planning Act.

CARRIED UNANIMOUSLY

Mayor Danny Breen
Chairperson

REPORT TO COUNCIL
DEVELOPMENT COMMITTEE MEETING
February 19, 2019 – 10:00 a.m. – Conference Room A, 4th Floor, City Hall

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1. Day Care Center Extension, DEV 1800207 – 31 Doyle's Road

Conclusion/Next Steps

For information only – Staff to revise the approval for the additional floor area.

2. Request for Building Line Setback, DEV 1900032 – 27 Waterford Heights North

Recommendation

It is recommended that Council approve the 11.67 metre building line setback.

Jason Sinyard
Deputy City Manager – Planning, Engineering & Regulatory Services
Chairperson

INFORMATION NOTE

Title:	Day Care Center Extension DEV1800207 31 Doyle's Road
Date Prepared:	February 20, 2019 (Date of next meeting: February 25, 2019)
Report To:	His Worship the Mayor and Members of Council
Ward:	5
Issue:	Extension to approved Floor Area

Discussion – Background and Current Status:
A Discretionary Use application has been submitted for an extension to the existing Day Care Center at 31 Doyle's Road. Council approved the expansion with a total floor area of 309.3 square meters at the regular meeting on January 7, 2019. Since this time the applicant has finalized the building plans and the floor area has now increased. The total floor area which will be utilized by the Day Care is 366.4 square meters which is an increase of 57.1 square meters from Councils approval. This additional floor area is contained within the approved building extension. No further extension to the building is required.

Key Considerations/Implications:

1. **Budget/Financial Implications:** Not applicable.
2. **Partners or Other Stakeholders:** Not applicable.
3. **Alignment with Strategic Directions/Adopted Plans:** Not applicable.
4. **Legal or Policy Implications:**
   Sections 7.6 & 10.3.2(c) of the St. John's Development Regulations.
5. **Engagement and Communications Considerations:** Not applicable.
6. **Human Resource Implications:** Not applicable.
7. **Procurement Implications:** Not applicable.
8. **Information Technology Implications:** Not applicable.
9. **Other Implications:** Not applicable.

Conclusion/Next Steps:
For information only- Staff to revise the approval for the additional floor area.

Prepared by/Signature:
Ashley Murray, Development Officer II

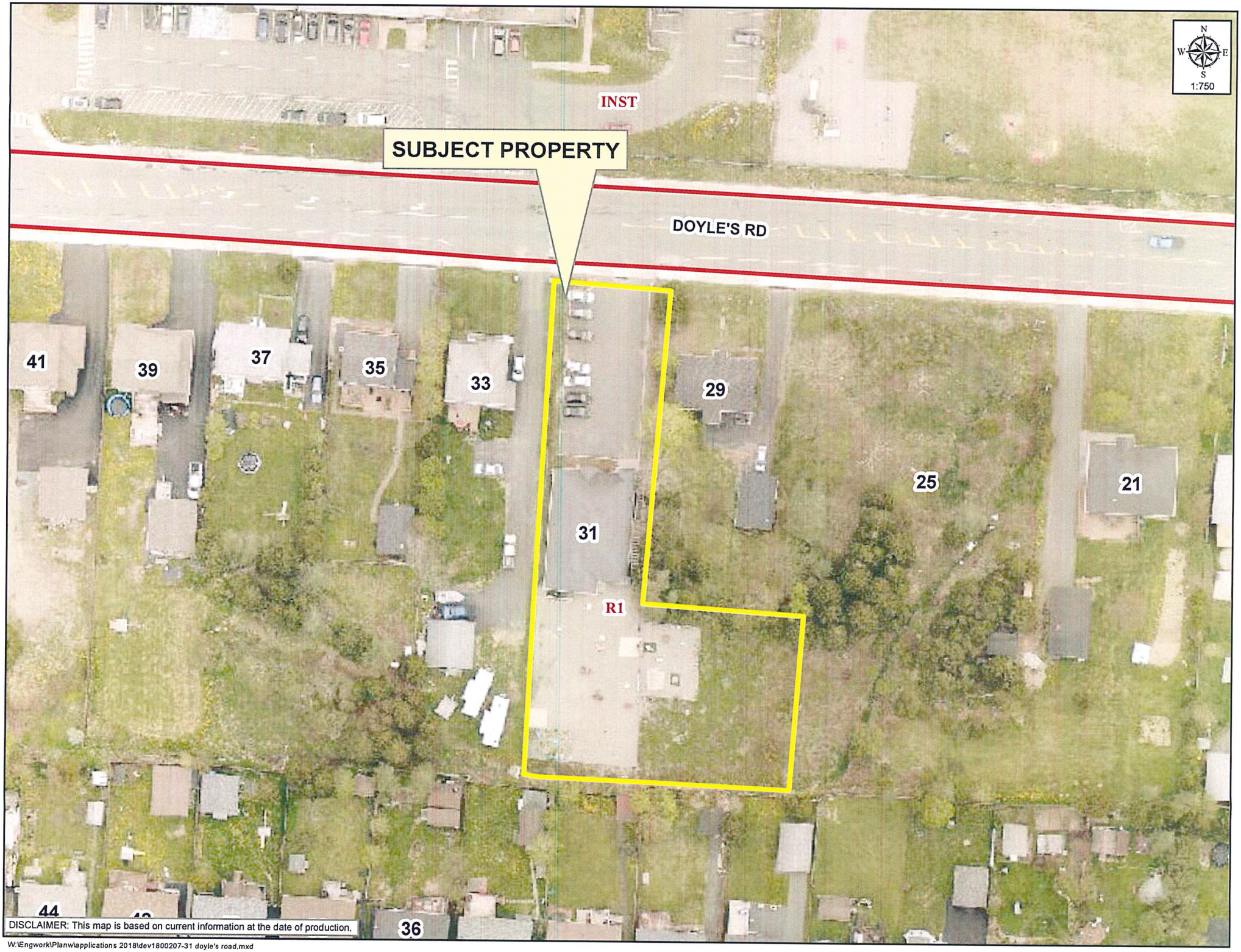
Signature: Ashley Murray

Approved by/Date/Signature:
Jason Sinyard, Deputy City Manager, Planning, Engineering & Regulatory Services

Signature:

AAM/dlm

Attachments: Location Map



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DECISION/DIRECTION NOTE

Title:	Request for Building Line Setback DEV1900032 27 Waterford Heights North
Date Prepared:	July 18, 2018 (Date of next meeting: July 23, 2018)
Report To:	His Worship the Mayor and Members of Council
Councillor and Role:	Councillor Maggie Burton, Planning & Development Lead
Ward:	2

Decision/Direction Required:
To seek approval for a 11.67 metre Building Line setback to accommodate the reconstruction of a dwelling at 27 Waterford Heights North.

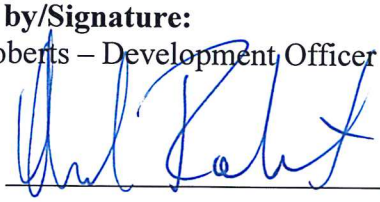
Discussion – Background and Current Status:
An application was submitted to demolish and reconstruct a dwelling at 27 Waterford Heights North. The property is situated in the Residential Low Density (R1) Zone where the minimum Building Line for existing streets or service streets is to be established by Council. The proposed set back of 11.67 metres is 6 metres closer than the previous dwelling, however this setback consistent with varied pattern of development of the other properties on the street.

Key Considerations/Implications:

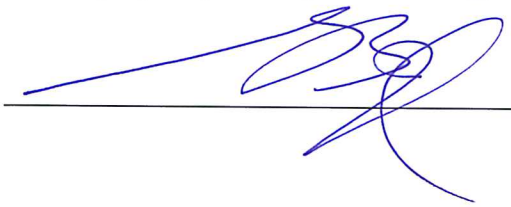
1. Budget/Financial Implications: Not Applicable.
2. Partners or Other Stakeholders: Not Applicable.
3. Alignment with Strategic Directions/Adopted Plans: Not Applicable.
4. Legal or Policy Implications:
   Section 10.3.3 (c) (ii) and Section 8.3.1 of the St. John's Development Regulations
5. Engagement and Communications Considerations: Not Applicable.
6. Human Resource Implications: Not Applicable.
7. Procurement Implications: Not Applicable.
8. Information Technology Implications: Not Applicable.
9. Other Implications: Not Applicable.

Recommendation:
It is recommended that Council approve the 11.67 metre Building Line setback.

Prepared by/Signature:
Andrea Roberts – Development Officer

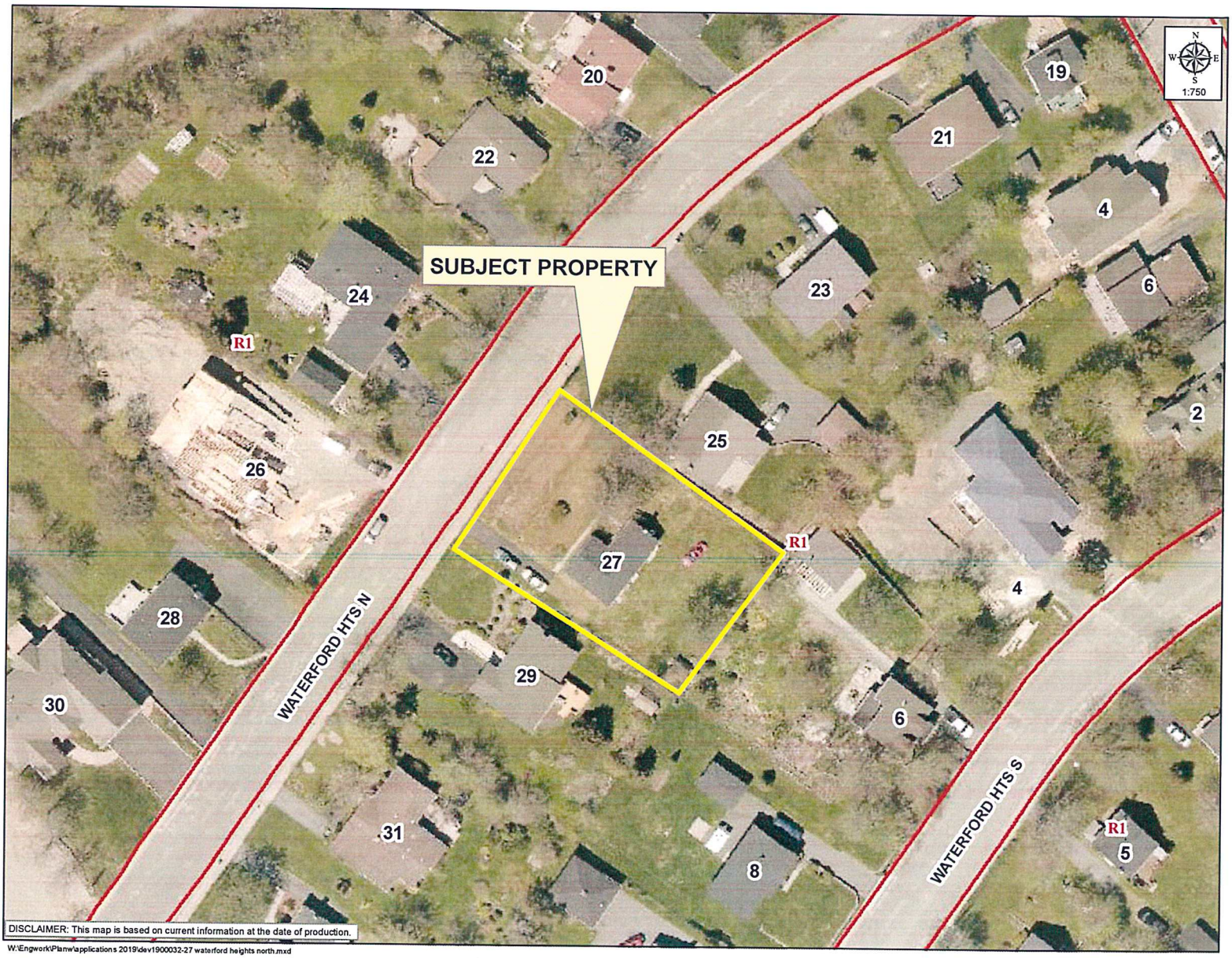
Signature: 

Approved by/Date/Signature:
Jason Sinyard, Deputy City Manager - Planning, Development and Regulatory Services

Signature: 

AAR/dlm

Attachments: Not Applicable


SUBJECT PROPERTY
WATERFORD HTS N
WATERFORD HTS S
R1
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31
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1:750
DISCLAIMER: This map is based on current information at the date of production.
W:\Engwork\Planw\applications 2019\dev1900032-27 waterford heights north.mxd

Building Permits List
Council's February 25,2019 Regular Meeting

Permits Issued: 2019/02/14 to 2019/02/20

Class: Commercial

40 O'leary Ave	Co	Warehouse
260 Blackmarsh Rd	Ms	Club
57 Blackmarsh Rd	Ms	Place Of Assembly
26 Carpasian Rd	Ms	Place Of Assembly
30,44,64 Crosbie Rd	Ms	Retail Store
395 East White Hills Rd	Ms	Commercial Garage
60 Elizabeth Ave	Ms	Clinic
84-86 Elizabeth Ave	Ms	Retail Store
84-86 Elizabeth Ave	Ms	Office
391-395 Empire Ave	Ms	Service Shop
324 Frecker Dr	Ms	Retail Store
324 Frecker Dr	Ms	Retail Store
336 Freshwater Rd	Ms	Office
12 Gleneyre St	Ms	Clinic
2-8 Great Southern Dr	Ms	Service Station
169 Hamlyn Rd	Ms	Custom Workshop
12-20 Highland Dr	Ms	Retail Store
189 Higgins Line	Ms	Office
61 James Lane	Ms	Warehouse
278 Kenmount Rd	Ms	Car Sales Lot
11-17 Kenmount Rd	Ms	Service Shop
161 Kenmount Rd	Ms	Retail Store
193 Kenmount Rd	Ms	Eating Establishment
541 Kenmount Rd	Ms	Communications Use
65 Kiwanis St	Ms	Retail Store
210 Lemarchant Rd	Ms	Tavern
147 Lemarchant Rd	Ms	Service Shop
90 Logy Bay Rd	Ms	Club
101 Macdonald Dr	Ms	Place Of Amusement
204-206 Main Rd	Ms	Clinic
452-456 Main Rd	Ms	Church
355-367 Main Rd	Ms	Tavern
355-367 Main Rd	Ms	Tavern
10 Messenger Dr	Ms	Retail Store
120 Mundy Pond Rd	Ms	Place Of Assembly
120 Mundy Pond Rd	Ms	Place Of Assembly
200-220 Newfoundland Dr	Ms	Apartment Building
446 Newfoundland Dr, Sun Sushi	Sn	Eating Establishment
447 Newfoundland Dr	Ms	Service Shop
87 Old Pennywell Rd	Sn	Retail Store
40 O'leary Ave	Sn	Warehouse
154 Pennywell Rd	Ms	Service Station
279 Portugal Cove Rd	Ms	Clinic
150 Clinch Cres	Ms	Lodging House
46-50 Robin Hood Bay Rd	Ms	Industrial Use
38-42 Ropewalk Lane	Ms	Retail Store
38-42 Ropewalk Lane	Ms	Eating Establishment
10 St. Clare Ave	Ms	Recreational Use
10 Stavanger Dr	Ms	Retail Store
410 Stavanger Dr	Ms	Retail Store
13 Stavanger Dr	Ms	Restaurant
88 Thorburn Rd	Ms	Retail Store
446 Topsail Rd	Ms	Service Station
462 Topsail Rd	Ms	Retail Store

644 Topsail Rd	Ms	School
644 Topsail Rd	Ms	Day Care Centre
668 Topsail Rd	Ms	Eating Establishment
681 Topsail Rd	Ms	Retail Store
681 Topsail Rd	Ms	Tavern
26 Torbay Rd	Ms	Tavern
26 Torbay Rd	Ms	Tavern
26 Torbay Rd	Ms	Tavern
248 Torbay Rd	Ms	Eating Establishment
430 Torbay Rd	Ms	Tavern
710 Torbay Rd	Ms	Retail Store
141 Torbay Rd	Ms	Office
585 Torbay Rd	Ms	Retail Store
50 White Rose Dr	Ms	Take-Out Food Service
35 White Rose Dr	Ms	Clinic
17-19 Duffy Pl	Rn	Office
565 Kenmount Rd	Rn	Place Of Assembly
279 Duckworth St	Rn	Office
336 Water St	Cr	Eating Establishment
25 Hebron Way, Unit C	Cr	Retail Store
141 Torbay Rd	Rn	Retail Store
204 Freshwater Rd	Nc	Pharmacy
Avalon Mall	Rn	Retail Store

This Week $ 19,389,656.00

Class: Industrial

This Week $ .00

Class: Government/Institutional

This Week $ .00

Class: Residential

28 Griffin's Lane	Nc	Patio Deck
292 Main Rd	Nc	Accessory Building
81 Pleasant St	Co	Single Detached & Sub.Apt
19 Mark Nichols Pl	Cr	Single Detached Dwelling
A44/155 Forest Rd	Rn	Condominium
22 Great Southern Dr	Rn	Single Detached Dwelling
7 Jennmar Cres	Rn	Single Detached Dwelling
28 Malta St	Rn	Single Detached Dwelling
13 Polina Rd	Rn	Single Detached & Sub.Apt
53 Poplar Ave	Rn	Single Detached Dwelling
366 Thorburn Rd	Rn	Single Detached Dwelling
53 Valleyview Rd	Rn	Single Detached Dwelling
42 Vancouver St	Rn	Single Detached Dwelling
103 Whiteway St	Rn	Single Detached Dwelling

This Week $ 247,575.00

Class: Demolition

This Week $ .00

This Week's Total: $ 19,637,231.00

Repair Permits Issued: 2019/02/14 To 2019/02/20 $ 24,000.00

Legend

Co	Change Of Occupancy	Sw	Site Work
Cr	Chng Of Occ/Renovtns	Ms	Mobile Sign
Ex	Extension	Sn	Sign
Nc	New Construction	Cc	Chimney Construction
Oc	Occupant Change	Dm	Demolition
Rn	Renovations		

YEAR TO DATE COMPARISONS			
February 25, 2019			
TYPE	**2018**	**2019**	**% VARIANCE (+/-)**
Commercial	$25,510,713.00	$29,579,575.00	16
Industrial	$0.00	$0.00	0
Government/Institutional	$2,000,000.00	$0.00	-100
Residential	$18,605,702.00	$2,459,390.00	-87
Repairs	$122,500.00	$122,750.00	-86
Housing Units(1 & 2 Family Dwelling)	14	2	
TOTAL	**$46,238,915.00**	**$32,161,715.00**	-30

Respectfully Submitted,

Jason Sinyard, P. Eng., MBA
Deputy City Manager
Planning, Engineering & Regulatory Services

MEMORANDUM

Weekly Payment Vouchers
For The
Week Ending February 20, 2019

Payroll

Public Works	**$ 528,707.47**
Bi-Weekly Administration	**$ 793,508.96**
Bi-Weekly Management	**$ 859,693.21**
Bi-Weekly Fire Department	**$ 822,616.34**
Accounts Payable	**$ 3,659,486.98**
Total:	**$ 6,664,012.96**

ST. JOHN'S
DEPARTMENT OF FINANCE
CITY OF ST. JOHN'S PO BOX 908 ST. JOHN'S NL CANADA A1C 5M2 WWW.STJOHNS.CA

NAME	CHEQUE #	DESCRIPTION	AMOUNT
MERIT SOLUTIONS INC.,	1489	PROFESSIONAL SERVICES	1,540.50
ADAM GREGORY VISCOUNT	119769	REFUND OVERPAYMENT OF TAXES	227.43
CONSTANTINE'S ENGINE & PERFORMANCE LTI	119770	PROFESSIONAL SERVICES	1,725.24
CITY OF ST. JOHN'S	119771	REPLENISH PETTY CASH	187.28
AUGUSTINE KEITH BREEN	119772	LEGAL CLAIM	2,500.00
IRON MOUNTAIN CANADA CORP.	119773	PROFESSIONAL SERVICES	1,451.88
THE WORKS	119774	PAYROLL DEDUCTIONS	432.72
NEWFOUNDLAND EXCHEQUER ACCOUNT	119775	FILING FEE	100.00
NUTRI LAWN	119776	PROFESSIONAL SERVICES	20,640.46
RECEIVER GENERAL FOR CANADA	119777	PARKING LOT RENT (290 EMPIRE AVE)	460.00
INDUSTRY CANADA ALS FINANCIAL CENTRE	119778	RADIO RENEWAL LICENCE FEE	408.00
DAVE CARROLL	119779	BAILIFF SERVICES	292.00
THE PRINTING PLACE	119780	OFFICE FORMS	182.85
NORTRAX CANADA INC.,	119781	REPAIR PARTS	10,286.84
COASTAL MOUNT PEARL	119782	REPAIR PARTS	62.09
CLEARWATER POOLS LTD.	119783	POOL SUPPLIES	414.12
WAJAX POWER SYSTEMS	119784	REPAIR PARTS	2,632.97
DRIVE LINE MACHINE SHOP	119785	AUTO PARTS	352.89
ECONOMY DRYWALL SUPPLIES	119786	BUILDING SUPPLIES	307.17
EMM HARDCHROME & HYDRAULIC LTD	119787	REPAIR PARTS	1,186.92
BOMA NL	119788	CONFERENCE FEE	207.00
ST. JOHN'S FARMERS MARKET COOPERATIVE L	119789	REFRESHMENTS FOR MEETING	57.50
ADR ATLANTIC INSTITUTE	119790	MEMBERSHIP RENEWAL	352.19
WATER & ICE NORTH AMERICA	119791	REPAIR PARTS	434.70
YELLOW PAGES	119792	ADVERTISEMENT	28.41
MEMORIAL UNIVERSITY OF NFLD.	119793	EMPLOYEE TRAINING	2,472.50
VECTOR MEDICAL CORPORATION	119794	PROFESSIONAL SERVICES	3,446.50
WHOLESALE CLUB	119795	AFTER SCHOOL PROGRAMS SUPPLIES	223.18
COASTAL WAVE ELITE INC.	119796	REAL PROGRAM	139.88
10718 NFLD. INC.	119797	REFUND APPLICATION FEES	17,096.64
CAMPIA GYMNASTICS	119798	REAL PROGRAM	183.10
KIWANIS MUSIC FESTIVAL ASSOCIATION OF ST	119799	2019 KIWANIS MUSICAL FESTIVAL	2,500.00
SUPREME COURT OF NEWFOUNDLAND AND L	119800	APPLICATION FEE	123.00
THE LITTLE GYM OF ST. JOHN'S	119801	REAL PROGRAM	108.83
WAYNE & LINDA PURCHASE	119802	REFUND OVERPAYMENT OF TAXES	112.04
ALEX FOLEY'S ACADEMY OF MATIAL ARTS	119803	REAL PROGRAM	196.73
MAHER'S CONTRACTING LTD.	119804	PROFESSIONAL SERVICES	12,495.90
BRISTOL DEVELOPMENT	119805	REFUND OVERPAYMENT OF TAXES	500.50
MEMORIAL UNIVERSITY OF NEWFOUNDLAND	119806	TIME PROGRAM TRAINING & SUPPORT	150.00
GERALD & MARGARET RUBY	119807	REFUND OVERPAYMENT OF TAXES	368.83
DR. PAULA HORWOOD	119808	MEDICAL EXAMINATION FEE	20.00
STAN BUTLER	119809	ENTERTAINMENT FEE	500.00
NL HOUSING & HOMELESSNESS NETWORK IN	119810	HMIS AGREEMENT CLAIM	185.84
WILLIAM GRIFFIN	119811	REFUND OVERPAYMENT OF TAXES	474.64
OVERCAST PUBLISHING INC.	119812	ADVERTISEMENT	1,035.00

NAME	CHEQUE #	DESCRIPTION	AMOUNT
JENNIFER DAWE	119813	REFUND SECURITY DEPOSIT	50.00
LINDSAY CONSTRUCTION	119814	REFUND SECURITY DEPOSIT	10,000.00
WAYNE GERARD PUTT & JEANETTE ELIZABETH	119815	REFUND OVERPAYMENT OF TAXES	8.00
STEPHEN & DIANA CLEARY	119816	REFUND OVERPAYMENT OF TAXES	6,494.15
ANJALI KAMRA	119817	REFUND OVERPAYMENT OF TAXES	115.12
NICHOLAS FELDERHOE	119818	REFUND OVERPAYMENT OF TAXES	491.18
SHAWN & CATHERINE GOODWIN	119819	REFUND OVERPAYMENT OF TAXES	80.85
RANDY WHITEWAY	119820	REFUND OVERPAYMENT OF TAXES	75.46
PAUL GULLIVER	119821	REFUND RECREATION PROGRAM	85.00
INFINITY CHEERLEADING TEAM OF MAX FORCE	119822	TRAVEL GRANT 2019	1,000.00
DR. RENELLE BUTT	119823	MEDICAL EXAMINATION FEE	20.00
ANNE MARIE CAREW & HEALEY'S AUTO BODY	119824	LEGAL CLAIM	3,343.80
MARIANNE ROGERS	119825	REFUND SECURITY DEPOSIT	100.00
HAROLD SKINNER	119826	REFUND SECURITY DEPOSIT	100.00
CATHERINE JAMES	119827	REFUND OVERPAYMENT OF TAXES	1,274.85
VENTILATION AND SIGN EXPERTS LTD.	119828	PROFESSIONAL SERVICES	1,035.00
GBS TECHNOLOGIES	119829	IPHONE CASE	114.99
NEWFOUNDLAND EXCHEQUER ACCOUNT	119830	REGISTRATION OF EASEMENT	100.00
HISCOCK RENTALS & SALES INC.	119831	HARDWARE SUPPLIES	1,421.06
MCLOUGHLAN SUPPLIES LTD.	EFT000000013643	ELECTRICAL SUPPLIES	1,672.17
NEWFOUNDLAND POWER	EFT000000013644	ELECTRICAL SERVICES	49,290.43
DULUX PAINTS	EFT000000013645	PAINT SUPPLIES	23.64
DARLENE SHARPE	EFT000000013646	CLEANING SERVICES	750.00
IRVING OIL MARKETING GP	EFT000000013647	GASOLINE & DIESEL PURCHASES	2,934.71
ROGERS COMMUNICATIONS CANADA INC.	EFT000000013648	DATA & USAGE CHARGES	29,924.03
BUTT, ROBERT	EFT000000013649	TRAVEL ADVANCE	354.38
ANNA BAUDITZ	EFT000000013650	TRAVEL REIMBURSEMENT	57.83
NEWFOUNDLAND POWER	EFT000000013651	ELECTRICAL SERVICES	178,201.12
SIMONE LILLY	EFT000000013652	TRAVEL REIMBURSEMENT	2,054.03
PUBLIC SERVICE CREDIT UNION	EFT000000013653	PAYROLL DEDUCTIONS	3,116.39
ACKLANDS-GRAINGER	EFT000000013654	INDUSTRIAL SUPPLIES	550.40
ACTION CAR AND TRUCK ACCESSORIES	EFT000000013655	AUTO PARTS	492.17
APEX CONSTRUCTION SPECIALTIES INC.	EFT000000013656	REPAIR PARTS	144.87
ASHFORD SALES LTD.	EFT000000013657	REPAIR PARTS	893.01
ATLANTIC OFFSHORE MEDICAL SERV	EFT000000013658	MEDICAL SERVICES	5,308.07
ATLANTIC PURIFICATION SYSTEM LTD	EFT000000013659	WATER PURIFICATION SUPPLIES	761.88
TOYS "R" US CANADA LTD	EFT000000013660	SUPPLIES - RECREATION PROGRAMS	321.95
AVALON FORD SALES LTD.	EFT000000013661	AUTO PARTS	107.77
BABB SECURITY SYSTEMS	EFT000000013662	SECURITY SERVICES	113.85
RDM INDUSTRIAL LTD.	EFT000000013663	INDUSTRIAL SUPPLIES	544.40
NEWFOUNDLAND EXCHEQUER ACCOUNT	EFT000000013664	ANNUAL OPERATING FEES	358.80
HERCULES SLR INC.	EFT000000013665	REPAIR PARTS	85.57
BELBIN'S GROCERY	EFT000000013666	CATERING SERVICES	667.22
ROCKWATER PROFESSIONAL PRODUCT	EFT000000013667	CHEMICALS	3,900.63
PRINT & SIGN SHOP	EFT000000013668	SIGNAGE	905.49

NAME	CHEQUE #	DESCRIPTION	AMOUNT
MSC INDUSTRIAL SUPPLY ULC	EFT000000013669	REPAIR PARTS	453.02
WESTERN HYDRAULIC 2000 LTD	EFT000000013670	REPAIR PARTS	15,133.06
BDI CANADA INC	EFT000000013671	CHEMICALS	153.11
THE OUTFITTERS	EFT000000013672	CLOTHING ALLOWANCE	230.00
ATLANTIC TRAILER & EQUIPMENT	EFT000000013673	REPAIR PARTS	1,341.97
CABOT BUSINESS FORMS AND PROMOTIONS	EFT000000013674	LEASE OF OFFICE SPACE	16,834.56
SPARTAN ATHLETIC PRODUCTS	EFT000000013675	SPORTING SUPPLIES	62.56
TRIWARE TECHNOLOGIES INC.	EFT000000013676	COMPUTER EQUIPMENT	763.60
CANADIAN CORPS COMMISSIONAIRES	EFT000000013677	SECURITY SERVICES	27,877.13
AIR LIQUIDE CANADA INC.	EFT000000013678	CHEMICALS AND WELDING PRODUCTS	27,583.07
HISCOCK'S SPRING SERVICE	EFT000000013679	HARDWARE SUPPLIES	46.05
THOMSON REUTERS CANADA	EFT000000013680	PUBLICATIONS	2,482.24
COASTAL DOOR & FRAME LTD	EFT000000013681	DOORS/FRAMES	287.50
LAT49 ARCHITECTURE INC.	EFT000000013682	PROFESSIONAL SERVICES	13,943.75
MAC TOOLS	EFT000000013683	TOOLS	508.81
NORTH ATLANTIC SUPPLIES INC.	EFT000000013684	REPAIR PARTS	819.20
KENT	EFT000000013685	BUILDING SUPPLIES	271.38
ATLANTIC HOME FURNISHINGS LTD	EFT000000013686	APPLIANCES	2,028.60
EXECUTIVE BUS LTD	EFT000000013687	TRANSPORTATION SERVICES	212.62
DULUX PAINTS	EFT000000013688	PAINT SUPPLIES	223.37
PF COLLINS CUSTOMS BROKER LTD	EFT000000013689	DUTY AND TAXES	658.43
COLONIAL GARAGE & DIST. LTD.	EFT000000013690	AUTO PARTS	2,607.69
EASTERN VALVE & CONTROL SPEC.	EFT000000013691	REPAIR PARTS	172.50
PETER'S AUTO WORKS INC.	EFT000000013692	TOWING OF VEHICLES	4,030.75
MAXXAM ANALYTICS INC.,	EFT000000013693	WATER PURIFICATION SUPPLIES	709.55
CRANE SUPPLY LTD.	EFT000000013694	PLUMBING SUPPLIES	3,146.54
JAMES G CRAWFORD LTD.	EFT000000013695	PLUMBING SUPPLIES	880.39
ENVIROSYSTEMS INC.	EFT000000013696	PROFESSIONAL SERVICES	756.53
LONG & MCQUADE	EFT000000013697	REAL PROGRAM	831.35
CUMMINS CANADA ULC	EFT000000013698	REPAIR PARTS	5,470.71
EASTERN DEMOLITION & RECYCLERS (2011) LT	EFT000000013699	REFUND SECURITY DEPOSIT	7,500.00
DICKS & COMPANY LIMITED	EFT000000013700	OFFICE SUPPLIES	3,959.37
MADSEN DIESEL & TURBINE INC.	EFT000000013701	CHEMICALS	966.00
MIC MAC FIRE & SAFETY SOURCE	EFT000000013702	SAFETY SUPPLIES	1,252.18
EAST COAST HYDRAULICS	EFT000000013703	REPAIR PARTS	1,087.28
GENTARA REAL ESTATE LP	EFT000000013704	LEASE OF OFFICE SPACE	18,661.05
HITECH COMMUNICATIONS LIMITED	EFT000000013705	REPAIRS TO EQUIPMENT	359.74
REEFER REPAIR SERVICES (2015) LIMITED	EFT000000013706	REPAIR PARTS	13,542.76
DOMINION RECYCLING LTD.	EFT000000013707	PIPE	199.93
THYSSENKRUPP ELEVATOR	EFT000000013708	ELEVATOR MAINTENANCE	862.51
CAHILL TECHNICAL SERVICES	EFT000000013709	PROFESSIONAL SERVICES	515.78
CANADIAN TIRE CORP.-HEBRON WAY	EFT000000013710	MISCELLANEOUS SUPPLIES	71.25
CANADIAN TIRE CORP.-KELSEY DR.	EFT000000013711	MISCELLANEOUS SUPPLIES	96.54
ROGERS COMMUNICATIONS CANADA INC.	EFT000000013712	DATA & USAGE CHARGES	713.00
WINNIE GLAVINE	EFT000000013713	INSTRUCTOR FEE	1,210.00

NAME	CHEQUE #	DESCRIPTION	AMOUNT
EASTERN MEDICAL SUPPLIES	EFT000000013714	MEDICAL SUPPLIES	1,044.20
ELECTRIC MOTOR & PUMP DIV.	EFT000000013715	REPAIR PARTS	350.75
ELECTRONIC CENTER LIMITED	EFT000000013716	ELECTRONIC SUPPLIES	111.21
NATIONAL ENERGY EQUIPMENT INC.	EFT000000013717	PROFESSIONAL SERVICES	193.20
THE TELEGRAM	EFT000000013718	SUBSCRIPTION RENEWAL	119.00
HOME DEPOT OF CANADA INC.	EFT000000013719	BUILDING SUPPLIES	1,413.53
EMERGENCY REPAIR LIMITED	EFT000000013720	AUTO PARTS AND LABOUR	159.56
OMB PARTS & INDUSTRIAL INC.	EFT000000013721	REPAIR PARTS	532.18
FRESHWATER AUTO CENTRE LTD.	EFT000000013722	AUTO PARTS/MAINTENANCE	1,942.65
PRINCESS AUTO	EFT000000013723	MISCELLANEOUS ITEMS	948.29
IMPACT SIGNS AND GRAPHICS	EFT000000013724	SIGNAGE	46.00
DALHOUSIE UNIVERSITY	EFT000000013725	TUITION FEES	5,525.00
STELLAR INDUSTRIAL SALES LTD.	EFT000000013726	INDUSTRIAL SUPPLIES	18.40
ENTERPRISE RENT-A-CAR	EFT000000013727	RENTAL OF VEHICLES	275.00
LSW WEAR PARTS LIMITED	EFT000000013728	REPAIR PARTS	9,931.40
EASTERN PROPANE	EFT000000013729	PROPANE	335.80
ATLANTIC CRANE & MATERIAL HANDLING	EFT000000013730	PROFESSIONAL SERVICES	1,354.55
HARRIS & ROOME SUPPLY LIMITED	EFT000000013731	ELECTRICAL SUPPLIES	893.89
HARVEY & COMPANY LIMITED	EFT000000013732	REPAIR PARTS	11,182.57
A HARVEY & CO. LTD.	EFT000000013733	ROAD SALT	292,909.48
UNIVERSITY OF GUELPH	EFT000000013734	TUITION FEES	545.00
BRENNTAG CANADA INC	EFT000000013735	CHLORINE	18,104.63
MURRAY'S LANDSCAPE SERVICES LTD.	EFT000000013736	PROFESSIONAL SERVICES	310.50
HILTI CANADA LIMITED	EFT000000013737	REPAIR PARTS	807.30
HOLDEN'S TRANSPORT LTD.	EFT000000013738	RENTAL OF EQUIPMENT	782.00
FLEET READY LTD.	EFT000000013739	REPAIR PARTS	1,505.37
SOURCE ATLANTIC INDUSTRIAL DISTRIBUTION	EFT000000013740	REPAIR PARTS	2,820.27
UNIVAR CANADA	EFT000000013741	CHEMICALS	9,963.51
PENNECON TECHNICAL SERVICES LTD	EFT000000013742	PROFESSIONAL SERVICES	3,516.13
WATERTRAX INC.	EFT000000013743	SUBSCRIPTION RENEWAL	810.75
IBM CANADA LTD.	EFT000000013744	COMPUTER EQUIPMENT	15,498.61
IMPRINT SPECIALTY PROMOTIONS LTD	EFT000000013745	PROMOTIONAL ITEMS	657.28
PINNACLE ENGINEERING (2018) LIMITED	EFT000000013746	REFUND APPLICATION FEES	150.00
CHRIS SQUIRES ENTERPRISES INC.,	EFT000000013747	PROFESSIONAL SERVICES	1,297.06
PRINTER TECH SOLUTIONS INC.,	EFT000000013748	REPAIRS TO EQUIPMENT	274.85
MERCER'S PAVING INCORPORATED	EFT000000013749	SNOW CLEARING SERVICES	12,304.23
CDMV	EFT000000013750	VETERINARY SUPPLIES	549.31
NATIONAL PROCESS EQUIPMENT	EFT000000013751	PUMP KIT NP	85,031.00
YMCA OF NEWFOUNDLAND AND LABRADOR	EFT000000013752	MEMBERSHIP RENEWAL	500.00
TRANE CANADA CO.	EFT000000013753	REPAIR PARTS	154.13
BOSCH REXROTH CANADA CORP.	EFT000000013754	REPAIR PARTS	21,781.58
WORK AUTHORITY	EFT000000013755	CLOTHING ALLOWANCE	2,140.08
SAFETY FIRST-SFC LTD.	EFT000000013756	PROFESSIONAL SERVICES	25,753.37
DALLAS MERCER CONSULTING INC.,	EFT000000013757	PROFESSIONAL SERVICES	448.50
XYLEM WATER SOLUTIONS CANADA	EFT000000013758	REPAIR PARTS	11,494.25

NAME	CHEQUE #	DESCRIPTION	AMOUNT
DILLON CONSULTING LTD.	EFT000000013759	PROFESSIONAL SERVICES	28,327.95
FIRST RESPONSE SUPPLY INC.,	EFT000000013760	FIRE DEPARTMENT SUPPLIES	682.30
VOHL INC.,	EFT000000013761	REPAIR PARTS	1,225.97
KING PROCESS TECHNOLOGY	EFT000000013762	REPAIR PARTS	3,835.25
THE CARPET FACTORY SUPERSTORE	EFT000000013763	LEGAL CLAIM	159.56
MACKAY COMMUNICATIONS - CANADA, INC.	EFT000000013764	PROFESSIONAL SERVICES	4,187.05
CARMICHAEL ENGINEERING LTD.	EFT000000013765	PROFESSIONAL SERVICES	633.65
UNIFORM WORKS LIMITED	EFT000000013766	OFFICE SUPPLIES	886.08
J.A. LARUE	EFT000000013767	REPAIR PARTS	708.80
MARK'S WORK WEARHOUSE	EFT000000013768	PROTECTIVE CLOTHING	3,372.66
ALYSSA'S PROPERTY SERVICES PRO INC.	EFT000000013769	PROFESSIONAL SERVICES	5,060.00
REXEL CANADA ELECTRICAL INC.,	EFT000000013770	REPAIR PARTS	246.39
JJ MACKAY CANADA LTD.	EFT000000013771	PARKING METER KEYS	10,082.63
MCLOUGHLAN SUPPLIES LTD.	EFT000000013772	ELECTRICAL SUPPLIES	3,811.02
MIKAN SCIENTIFIC INC.	EFT000000013773	CHEMICALS	1,454.24
CUTTING EDGE LAWN CARE INC.,	EFT000000013774	PROFESSIONAL SERVICES	4,784.00
VETERINARY SPECIALTY CENTRE OF NEWFOUN	EFT000000013775	PROFESSIONAL SERVICES	243.80
SUMMIT PLUMBING & HEATING LTD.	EFT000000013776	PROFESSIONAL SERVICES	786.03
CAPITAL AUTO CENTRE & GLASS REPAIR	EFT000000013777	REPAIR PARTS	68.94
DR. LISA KIELEY	EFT000000013778	MEDICAL EXAMINATION FEE	20.00
DEL EQUIPMENT - MONCTON	EFT000000013779	REPAIR PARTS	4,272.27
WAJAX INDUSTRIAL COMPONENTS	EFT000000013780	REPAIR PARTS	965.96
NU-WAY EQUIPMENT RENTALS	EFT000000013781	RENTAL OF EQUIPMENT	2,760.00
NEWFOUNDLAND DISTRIBUTORS LTD.	EFT000000013782	INDUSTRIAL SUPPLIES	2,016.65
TRC HYDRAULICS INC.	EFT000000013783	REPAIR PARTS	1,196.55
NL KUBOTA LIMITED	EFT000000013784	REPAIR PARTS	1,875.33
NEWFOUNDLAND & LABRADOR HOUSING CO	EFT000000013785	HMIS CONTRACT	22,000.00
TOROMONT CAT	EFT000000013786	AUTO PARTS	211.34
NORTH ATLANTIC PETROLEUM	EFT000000013787	PETROLEUM PRODUCTS	239,100.59
PBA INDUSTRIAL SUPPLIES LTD.	EFT000000013788	INDUSTRIAL SUPPLIES	31.05
GCR TIRE CENTRE	EFT000000013789	TIRES	476.39
PARTS FOR TRUCKS INC.	EFT000000013790	REPAIR PARTS	19,032.33
POWERLITE ELECTRIC LTD.	EFT000000013791	ELECTRICAL PARTS	393.30
K & D PRATT LTD.	EFT000000013792	REPAIR PARTS AND CHEMICALS	8,018.84
PROFESSIONAL UNIFORMS & MATS INC.	EFT000000013793	PROTECTIVE CLOTHING	740.60
PYRAMID CONSTRUCTION LIMITED	EFT000000013794	PROGRESS PAYMENTS	689,023.94
RIDEOUT TOOL & MACHINE INC.	EFT000000013795	TOOLS	3,189.86
THE ROYAL GARAGE LIMITED	EFT000000013796	AUTO PARTS	94.76
ROYAL FREIGHTLINER LTD	EFT000000013797	REPAIR PARTS	521.89
S & S SUPPLY LTD. CROSSTOWN RENTALS	EFT000000013798	REPAIR PARTS	3,700.95
ST. JOHN'S PORT AUTHORITY	EFT000000013799	SECURITY CLEARANCES	230.00
SAUNDERS EQUIPMENT LIMITED	EFT000000013800	REPAIR PARTS	557.88
SMITH STOCKLEY LTD.	EFT000000013801	PLUMBING SUPPLIES	24.31
CHANDLER	EFT000000013802	CLOTHING ALLOWANCE	678.29
SUPERIOR OFFICE INTERIORS LTD.	EFT000000013803	OFFICE SUPPLIES	138.00

NAME	CHEQUE #	DESCRIPTION	AMOUNT
TELELINK-THE CALL CENTRE INC.	EFT000000013804	MESSAGE MANAGER	8,674.10
TRACTION DIV OF UAP	EFT000000013805	REPAIR PARTS	14,561.34
TULKS GLASS & KEY SHOP LTD.	EFT000000013806	PROFESSIONAL SERVICES	73.97
WATERWORKS SUPPLIES DIV OF EMCO LTD	EFT000000013807	REPAIR PARTS	8,689.11
WESCO DISTRIBUTION CANADA INC.	EFT000000013808	REPAIR PARTS	816.50
WINDCO ENTERPRISES LTD.	EFT000000013809	REPAIR PARTS	1,658.24
WORKPLACE HEALTH, SAFETY AND COMPENSA	EFT000000013810	PAYROLL DEDUCTIONS	1,098,002.94
DR. WADE MERCER	EFT000000013811	MEDICAL EXAMINATION FEE	20.00
JILL DREADDY DANCECO	EFT000000013812	REAL PROGRAM	669.01
THE GATHERING PLACE	EFT000000013813	GRANT	40,000.00
MICHAEL FOLEY'S ACADEMY OF MARTIAL ARTS	EFT000000013814	REAL PROGRAM	1,080.00
ACE CLEANING COMPANY	EFT000000013815	CLEANING SERVICES	13,048.07
QUALITY NDE LTD.	EFT000000013816	PROFESSIONAL SERVICES	115.00
BARRY ROSS	EFT000000013817	PROFESSIONAL SERVICES	127.60
SOBEYS ROPEWALK LANE	EFT000000013818	MISCELLANEOUS SUPPLIES	611.45
STELLA'S CIRCLE	EFT000000013819	HPS FUNDS	192,682.27
DOWNEY'S TAEKWON-DO	EFT000000013820	REAL PROGRAM	180.00
CHOICES FOR YOUTH INC.	EFT000000013821	HPS FUNDS	49,765.91
PROTEK INDUSTRIES LIMITED	EFT000000013822	REPAIR PARTS	3,339.60
THE GREEN SIGN COMPANY	EFT000000013823	SIGNAGE	3,099.25
BEST BUY CANADA LIMITED	EFT000000013824	ELECTRONICS	838.33
CLARITY CONFERENCING INC.	EFT000000013825	EHSJ CONFERENCE CALLS	16.72
GAMBERG, MIKE	EFT000000013826	MILEAGE	70.56
CRITCH, ROBERT	EFT000000013827	MILEAGE	196.31
WENDY MUGFORD	EFT000000013828	BOMA CONFERENCE FEE	86.25
WILLIAMS, KEITH	EFT000000013829	MILEAGE	72.56
MACKENZIE, NEIL	EFT000000013830	MILEAGE	73.40
RICHARD MACKEY	EFT000000013831	EMPLOYMENT RELATED EXPENSES	250.80
SMITH, DEBBIE	EFT000000013832	MILEAGE	382.61
MILLS SNOW, HEATHER	EFT000000013833	TRAVEL ADVANCE	774.50
WHITE, MARK	EFT000000013834	MILEAGE	204.00
JASON PHILLIPS	EFT000000013835	MILEAGE	107.28
CINDY MCGRATH	EFT000000013836	MILEAGE	6.18
BURTON, PAUL	EFT000000013837	EMPLOYMENT RELATED EXPENSES	79.21
COOPER, LYNN	EFT000000013838	EMPLOYMENT RELATED EXPENSES	278.43
SKINNER, ROBERT	EFT000000013839	EMPLOYMENT RELATED EXPENSES	69.00
HAYE, SHAWN	EFT000000013840	MILEAGE	101.52
TOBIN, JUDY	EFT000000013841	EMPLOYMENT RELATED EXPENSES	41.53
CREWE, RYAN	EFT000000013842	EMPLOYMENT RELATED EXPENSES	409.67
LISA BENNETT	EFT000000013843	MILEAGE	46.23
MIKE ADAM	EFT000000013844	MILEAGE	48.96
JENNIFER GRIFFITHS	EFT000000013845	EMPLOYMENT RELATED EXPENSES	200.00
RACHEL SKANES	EFT000000013846	MILEAGE	227.98
CISCO SYSTEMS CAPITAL CANADA CO.	EFT000000013847	SOFTWARE MAINTENANCE	9,004.05
CWB NATIONAL LEASING	EFT000000013848	PROFESSIONAL SERVICES	1,110.71

NAME	CHEQUE #	DESCRIPTION	AMOUNT
VALLEN	EFT000000013849	REPAIR PARTS	57.68
AVALON ANALYTICS	EFT000000013850	PROFESSIONAL SERVICES	153.45
TELUS	EFT000000013851	IPHONES	1,495.00
PROCUREMENT ADVISORY OFFICE INCORPOR/	EFT000000013852	PROFESSIONAL SERVICES	1,725.00
FLEETMIND SOLUTIONS LTD.	EFT000000013853	SOFTWARE MAINTENANCE	3,263.70
IDOCTORNL	EFT000000013854	PROFESSIONAL SERVICES	130.00
ROGERS COMMUNICATIONS CANADA INC.	EFT000000013855	DATA & USAGE CHARGES	134.38
CHRISTA NORMAN	EFT000000013856	TRAVEL REIMBURSEMENT	2,536.88
		TOTAL:	**$ 3,659,486.98**

BID APPROVAL NOTE

Bid #	2019014		
Bid Name	Lease of Excavator		
Department	Public Works	**Division**	Water and Wastewater
Budget Code	4131-52626		
Source of Funding	(●) Operating ( ) Capital ( ) Multiyear Capital		
Purpose	This open call is for the lease of an excavator to conduct repairs on water and sewer infrastructure.		
Results	(●) As attached ( ) As noted below		
	Vendor Name	**Bid Amount**	
Expected Value	(●) As above ( ) Value shown is an estimate only for a year period. The City does not guarantee to buy any specific quantities or dollar value.		
Contract Duration	84 Months		
Bid Exception	(●) None ( ) Contract Award Without Open Call ( ) Professional Services		
Recommendation	It is recommend to award this open call to the lowest bidder that meets specification(s), Wajax Equipment, as per the Public Procurement Act.		
Supply Chain Buyer	Sherri Higgins		
Supply Chain Manager	Rick Squires	**Date**	February 19, 2019
Deputy City Manager*		**Date**	

*Only required for a bid exception (contract award without open call or professional services).

ST. JOHN'S

2019014

Lease of Excavator

Closing Date: Friday, February 15, 2019

Vendor	Bid Amount
Reefer Repair Services	Disqualified
Wajax Equipment	**$322,442.11**
Madsen Construction Equipment	$347,254.78
Atlantic Powertrain & Equipment Inc.	$357,125.37
Toromont CAT	$370,074.60

BID APPROVAL NOTE

Bid #	2019015		
Bid Name	2019015 - Water Street Infrastructure Improvements - Phase II		
Department	PERS	**Division**	Engineering
Budget Code	ENG-2018-936		
Source of Funding	◯ Operating ◯ Capital ◉ Multiyear Capital		
Purpose	Water Street Infrastructure Improvements - Phase II is from Bishop's Cove to Ayre's Cove.		
Results	◯ As attached ◉ As noted below		
	Vendor Name	**Bid Amount**	
	Dexter construction company Limited	$4,389,685.13	
	Pyramid Construction Limited	$4,585,083.35	
	Coady Construction & Excavating Limite	$4,864,494.25	
	Modern Paving Limited	$5,272,065.75	
Expected Value	◉ As above ◯ Value shown is an estimate only for a year period. The City does not guarantee to buy any specific quantities or dollar value.		
Contract Duration	April 1, 2019 to June, 2019		
Bid Exception	◉ None ◯ Contract Award Without Open Call ◯ Professional Services		
Recommendation	It is recommended to award this Limited Call to Dexter Construction Company Limited $4,389,685.13 (HST Included). The lowest cost submission meeting specifications as per the Public Procurement Act.		
Supply Chain Buyer	John Hamilton		
Supply Chain Manager	Rick Squires	**Date**	19/02/21
Deputy City Manager*		**Date**	

*Only required for a bid exception (contract award without open call or professional services).

ST. JOHN'S

BID APPROVAL NOTE

Bid #	N/A		
Bid Name	Imagery		
Department	Finance and Administration	**Division**	Information Services
Budget Code			
Source of Funding	(●) Operating ( ) Capital ( ) Multiyear Capital		
Purpose	To acquire aerial imagery for the City of St. John's. This imagery is used by a variety of City departments as part of their day-to-day operations.		
Results	( ) As attached (●) As noted below		
	Vendor Name	**Bid Amount**	
	Pictometry	$111,115.30	
Expected Value	(●) As above ( ) Value shown is an estimate only for a year period. The City does not guarantee to buy any specific quantities or dollar value.		
Contract Duration	One (1) year		
Bid Exception	( ) None (●) Contract Award Without Open Call ( ) Professional Services		
Recommendation	It is recommended to award this contract without open call to the sole and exclusive provider of orthogonal and oblique imagery in Canada to Pictometry. (HST included)		
Supply Chain Buyer	Sherri Higgins		
Supply Chain Manager	Rick Squires	**Date**	February 19, 2019
Deputy City Manager*		**Date**	2019/02/20

*Only required for a bid exception (contract award without open call or professional services).

ST. JOHN'S

"SOLE BRAND" PROCUREMENT JUSTIFICATION

The drafting or application of specifications or bid requirements that directly or indirectly limit the bidding to a single brand does not provide for full and open competition, regardless of the number of sources solicited, and must be justified. Allowing for a "brand name or equivalent" permits a competitive process that allows bidders to propose equivalent items. A requirement for a proprietary (or sole brand) item does not necessarily justify sole source procurement, as more than one potential bidder or supplier may exist who can supply that item.

Department/Division name: **Finance and Administration / Corporate Information Services**

Requestor: **Greg Keating, Manager, LIS**

"Brand name" of product: **Pictometry Canada Corp.**

Description of "brand name" product: **Pictometry Canada Corp., Imagery Services**

Name of manufacturer of "brand name" product: **Pictometry Canada Corp.**

Only the "brand name" item specified will be accepted because:

__X__ patent rights, copyrights, secret processes, or control of certain materials or components provide superior use that cannot be obtained from similar products. Explain below these unique factors and why they are required. Explain below what other brands have been considered, rejected and why.

_____ the sole brand/product is unique and essential to the City's requirements, thereby precluding consideration of a product manufactured by another company. Explain below

_____ the sole brand/product is required to match other similar product already in place. Explain below

If the justification for using a Sole Brand is not listed above, please indicate other reasons for restricting competition:

Pictometry Canada Corp., is the sole and exclusive provider of the patented orthogonal and oblique Pictometry in Canada.

Signature of Manager or above	FEB 13 2019. Date
Signature of Supply Chain Manager	Feb 19/19 Date
Signature of Deputy City Manager	2014/02/13 Date

10/09

(Use Additional Sheets as Necessary)

TO: Government of Newfoundland and Labrador, Public Procurement Agency

Report to Chief Procurement Officer, Public Procurement Agency
(Pursuant to Section 32 or *The Public Procurement Regulations*)
Version 1 – 2018-03-24

FROM: Government Funded Body
City of St. John's, P.O. Box 908, St. John's, NL A1C5M2

Contract Description:

Pictometry Canada Corp., oblique imagery collection for Spring 2019. Pictometry imagery is used by the Assessors in our Assessment Department in conjunction with Assessment Analyst for property assessment review.

Contractor, Supplier or Lessor:

Name: Pictometry Canada Corp.

Address: 140 Fullarton Street, Suite 104, Talbot Centr Country: Canada

Contract Price (exclusive of HST): $ 96,622.00

Contract # or PO #: Requisition # 83637 Date of Award: 02/13/2019

Relevant Exception Clause (select only one):

6(a)(v) Only Available Source

Reason(s) Why an Open Call for Bids Was Not Invited:

This is not going to Tender because Pictometry Canada Corp., is the sole and exclusive provider of the patented orthogonal and oblique Pictometry imagery in Canada.

Prepared by: Greg Keating **Date:** 02/13/2019

Head of Public Body: **(DCM - Finance & Admin)** **Date:** 02/13/2019

Contract Award Without an Open Call for Bids

Relevant Exemption Clauses:

6(a)(ii): The commodity is of the nature that an open call for bids could reasonably be expected to compromise security (limited call for bids required)

6(a)(iii): The commodity is available from a public body

6(a)(iv): An emergency or a situation or urgency exists and the acquisition of the commodity cannot reasonably be made in time by an open call for bids

6(a)(v): There is only one source reasonably available for the commodity

6(a)(vi): A list of pre-qualified suppliers has been established using a request for qualifications and the public body is requesting quotations from all pre-qualified suppliers on the list

6(a)(vii): An acquisition of a commodity is for the purpose of resale or for incorporation into a product or resale

6(b): Set rates have been established by the Public Utilities Boards acting under the *Public Utilities Act* or another Act

19: (1) The acquisition of a commodity is exempt from the requirements of the framework where the following requirements are satisfied:

(a) the minister responsible for economic development has recommended the exemption on the basis that the acquisition of the commodity is for the purpose of economic development;

(b) the exemption has been approved by the Lieutenant-Governor in Council; and

(c) the exemption is not precluded by an intergovernmental trade agreement.

(2) Where a public body acquires a commodity that is exempted under subsection (1), the public body shall report the acquisition to the chief procurement officer.

EAGLEVIEW®

Monday, January 14, 2019

Mr. Greg Keating
Manager, Land Information Services
City of St. John's
10 New Gower Street
St. John's, NL A1C 5M2, Canada

Dear Greg,

Pictometry Canada Corp. is the sole and exclusive provider of US based EagleView Technologies patented orthogonal and oblique Pictometry® imagery in Canada. No other company may sell or sublicense Pictometry® imagery and associated software products in Canada.

Sincerely,

DocuSigned by:
Brian Brockmann
919C59280FF1419...

Brian Brockmann
Secretary and Treasurer
Pictometry Canada Corp.