Ages Consultants Limited

ENVIRONMENTAL IMPACT STATEMENT and PLANNING JUSTIFICATION REPORT REVIEW

Langmaid's Island
Township of Lake of Bays
Town of Huntsville
District of Muskoka

Derek J. Coleman, PhD., R.P.P., M.C.I.P.
Ages Consultants Limited

Review of Additional Submissions

November 2018

155 Glenforest Road, Cambridge
N3C 1V6 519-658-6085

Table of Contents

Executive Summary,

I have reviewed the additional reports submitted by the Langmaid's Island Corporation and conclude:

1. My review of the inventories of the features and values of Langmaid's Island found that there is not sufficient information to determine environmental impacts.

2. The policies (PPS, District OP, Township) require an assessment impact on the values for which the Island was determined to be important and protected – including diversity, quality and scenic values. I conclude that the Island meets these three criteria. These values are not properly addressed in the EIS or Planning Justification Reports. The amendments to the Planning documents recommended in the Planning Justification report rely on these values not existing. Thus, the amendments are not supported.

3. I note that the PPS not only permits but encourages local municipalities to protect areas of local significance as well as those of Provincial significance. The various arguments put forward by the proponent are based on Langmaid's not meeting Provincial standards of significance. This ignores this Provincial direction and the actions taken by the District and Township.

4. The documents do not provide a description of the development sufficient to analyze impacts. More detail is necessary on a lot by lot basis. As a result, the proposal does not conform to the Township of Lake of Bays documents or District Official Plan nor is it consistent with the Provincial Policy Statement (2014).

5. The proposed implementing by-law and mechanisms (limited zoning, conservation easements, character guidelines) are unlikely to be effective in protecting natural values.

   In conclusion, I recommend that the proposal be denied or returned for refinement as indicated.

   In this respect, I agree with and support the Lake of Bays Township staff report (November 2018) on the application.

1.0 Introduction

This Report is the second Review and is prepared to assist the Lake of Bays Association and Lake of Bays Heritage Foundation in their review of a series of applications related to a development proposal by the Langmaid's Island Corporation for Langmaid's Island located in Township of Lake of Bays, Muskoka District and two shoreline parcels in the Town of Huntsville. Following a public meeting on the proposal in June 2018, the applicant submitted a series of new documents and modified the development proposed. This second review incorporates comments on the new information and these revisions.

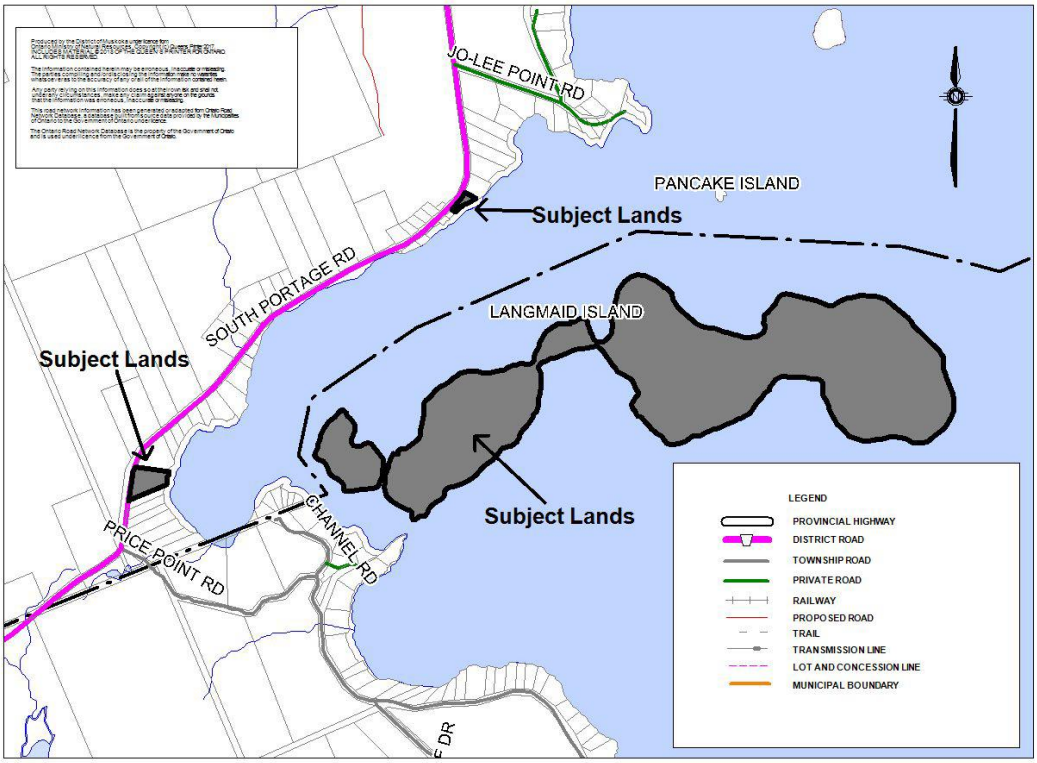
I note that while the thorough Ages Consultants review was provided to the municipalities (Township of Lake of Bays, District of Muskoka, Town of Huntsville), they did not review, comment or reply to the specific issues raised nor was the document posted for the public to obtain nor was it referred to the environmental planning Peer review consultant (Palmer Environmental) retained by them.

The proposal for the Island includes the Island itself and the two mainland properties from which boat access will be obtained as has been previously described.

The location and context for the proposals is shown on the figure below.

The proposal will be implemented through a Plan of Subdivision and amendments to the District and local planning documents (Township of Lake of Bays and Town of Huntsville).

I note that the Island is referred to as either Langmaid's or Langmaid – I will use the first spelling.



The applications are supported by a series of reports that I have reviewed – specifically:

- Planning Justification Reports (3 in total), MHBC Planning Consultants Limited, January 2018.
- Environmental Impact Assessments (3 in total), RiverStone Environmental Solutions Inc, January 2018.
- Functional Servicing Report, Langmaid's Island, C.C. Tatham & Associates Ltd., January 2018.
- Boating Impact Assessment, Langmaid's Island, Michalski- Nielsen Associates Limited, January 2018. Peer Reviews, Anthony Usher Planning Consultant (April, September, October 2018) and BIA Addendums (June and September 2018).
- Heritage Impact Assessment, MHBC, January 2018.

The additional documents that have been submitted and I have reviewed include:

- Michael Melling, Davies Howe LLP, Letter, June 8, 2018.
- Planning Justification Report (Revised August 2018), MHBC Consultants Limited.
- Addendum No. 1, Tatham & Associates, August 2018.
- Additional Details for Late Successional Forest Letter, August 2018, RiverStone Environmental Solutions Inc.
- Deer Wintering Study, May 2018, RiverStone Environmental Solutions Inc.
- Peer Review for Environmental Impact Study, Palmer Environmental Consulting Group, May 2018.
- Response to Peer Review of EIS Documents by PECG, July 2018.
- Final Peer Review, Palmer Environmental Consulting Group, October 2018.

- Summary of Studies, September 2018, RiverStone Environmental Solutions Inc.
- Revised Heritage Impact Assessments (June, September 2018) and Peer reviews by Unterman McPhail Associates (April, September 2018) and Responses (June, September 2018).
- Review of Lot Development Plans, Letter, RiverStone Environmental Solutions Inc., August 2018
- Michael Melling, Davies Howe LLP, Letter November 7, 2018.

I have also reviewed the staff report on the application (November 13, 2018).

There are many documents filed. I will focus my review and comments on ecology and environmental planning.

I note that I viewed the property on June 1, 2018 touring around it by boat for about 2 hours and familiarizing myself with all the features from that vantage point. I am particularly informed by a letter from Mr. Ed Pollen on behalf of his family dated March 19, 2018 and by my conversations, questions and responses from my contacts in the Foundation and Association who are very knowledgeable about the Island from many years of visiting it and by the reports filed by the applicant.

My review will consist of four sections that follow:

- General Concerns and Issues
- Langmaid's Island Features
- Proposal Update
- Conclusions

2.0 General Concerns and Issues

There are four topics that I will discuss of a more general nature where I differ from the interpretations/understanding put forward by the applicant (particularly Riverstone, Tatham and MHBC).

2.1 Langmaid's Island Character

The various documents and plans don't provide an assessment of the overall physical or suitability of Langmaid's Island for cottage development. The approach put forward is that there is sufficient space for the (now) 32 lots and that an engineering solution can be provided to resolve the constraints. This does not recognize that the proposal will require extensive modification of the Island to make it suitable.

I include below the guidance in the Township Official Plan on slopes.

Slopes

Lots with steep slopes often present desirable development sites due to the views and panorama offered. However, if development on a steep slope is not undertaken carefully, it can result in substantial alteration of the natural landscape, visual intrusion due to the prominence and location of development, interruption of the skyline, erosion, slope instability, damage to fish and wildlife habitat and a significant increase in storm water run-off which can negatively impact an adjacent property or waterbody. Along the shoreline, steep slopes often also present constraints with respect to locating water lines, locating shoreline structures and obtaining access from the water or locating an access route for construction.
Designing lots and siting development so that it fits into the natural contours of the land, limiting the extent of alteration to the landscape, retaining a substantial amount of the natural vegetation and implementing storm water management techniques can effectively mitigate these concerns. The terrain in the Township is so varied that individual site analysis and comprehensive design of development is more appropriate for dealing with this matter than attempting to apply one standard approach. A site inspection and site evaluation approach provides the flexibility to respond to the characteristics of individual sites.

E.1 Schedule D1 provides an indication of the presence of slopes greater than 20%. Where development is proposed, the degree of slope and slope stability will be confirmed by the Township through site inspection and/or the review of more detailed information submitted in support of a development proposal. Areas where slopes present a constraint to development may also be identified during site inspections or through the submission or review of additional information.

E.2 Where slopes greater than 20% exist on a property or a portion of a property, natural vegetation will be substantially retained on slopes, before and after construction, particularly

those adjacent to a shoreline, on a ridgeline or skyline, in areas where there is minimal soil and vegetative cover, or in areas of unstable slopes or potential erosion.

E.3 In addition to the requirements of Section E.2 and where slopes greater than 30% exist on a property or a portion of a property, the following principles will be implemented for development:

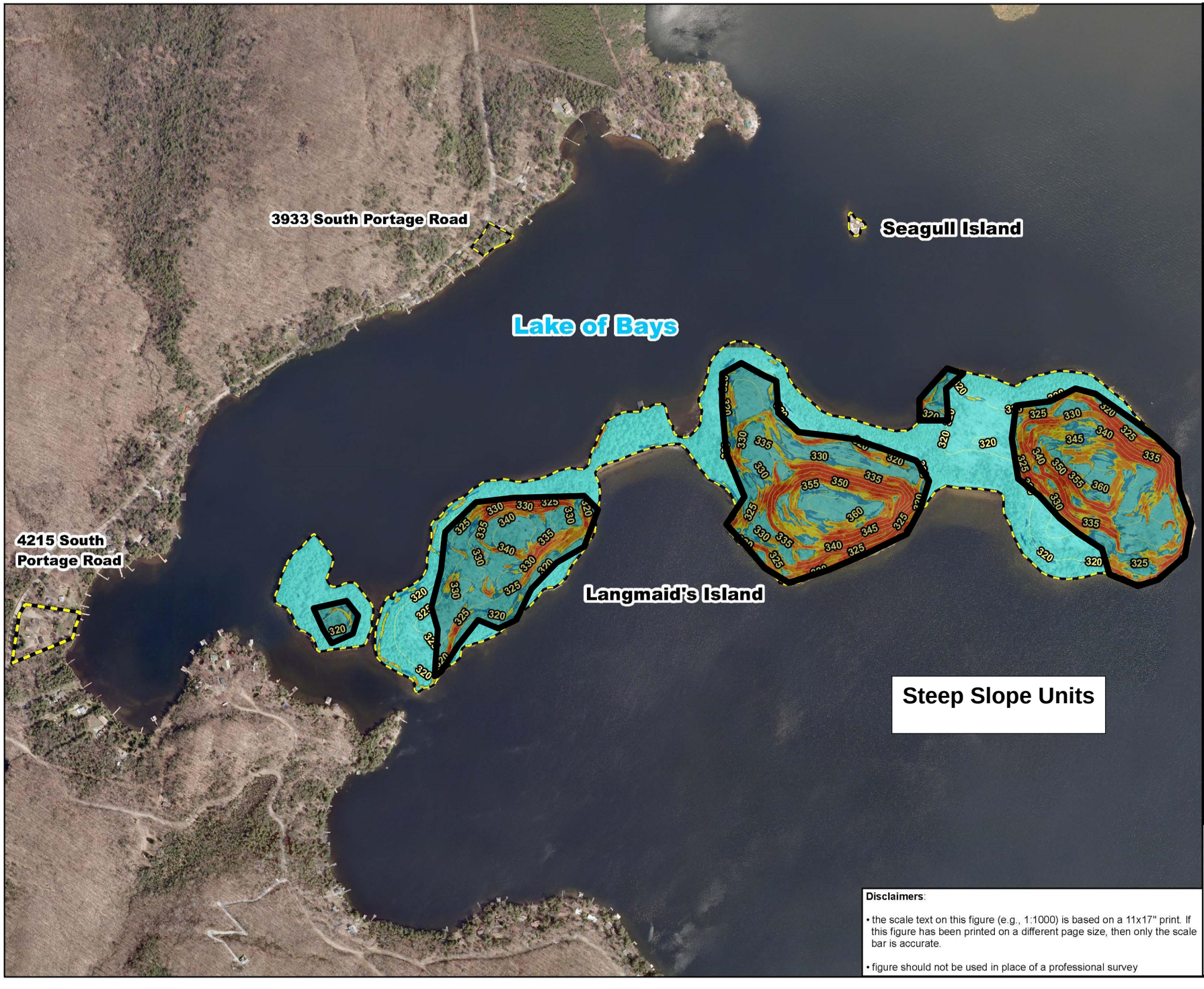
a) development on slopes should blend into the natural landscape without substantial site alteration, particularly blasting;
b) development will not be permitted on a slope where it is subject to erosion and would represent a potential hazard to life or property;
c) natural environmental values will be protected;
d) scenic slope faces and cliffs should be preserved;
e) visual impact of buildings such as the faceprint and height should be minimized;
f) lots will have sufficient frontage and area to accommodate the development proposed and should be larger than the minimum lot size permitted;
g) access to the property can be properly provided by road or from the water;
h) road access can be located in a manner which is safe, minimizes visual impact, minimizes site alteration and addresses storm water management during and after construction;
i) where only water access is proposed, suitable access will be provided for construction equipment, and where feasible, construction/access corridors should be provided;
j) a docking location and an access pathway to the dock is available on a shoreline lot; and
k) tolerance for engineered solutions which affect the natural landscape may

I have prepared two figures on the following pages from the information provided in the various reports to illustrate the physical limitations on the Island, relying on my education and experience.

The first figure shows an interpretation of the limitations that slope presents to development. In the Island analysis (Riverstone, Tatham) a very narrow view of the slope limitations is presented by identifying and considering only those slopes greater than 30 % as a constraint. The analysis is further biased by breaking the Island up into very small slope units or "facets" of perhaps 1 to 2 metres in length. In reality, the slope gradient constraint should be considered over longer run (i.e. 15-20 metres) as these are the practical limitations for a development. In the first figure – Steep Slope Units – I have grouped the RiverStone facets into larger units to illustrate where there is a severe limitation without substantial modification of the topography.

I have also measured the slope over various transects on the Island to further analyze the slope limitation. There are only very few locations on the Island from the peaks to the water where the slope over a distance is less than 20%. See the policy E.2 above and later comments on the lack of controls after construction.

The point I make is that, except for the two saddles between the three peaks on the Island, the Island is constrained by slopes. The policies above were written for an individual lot. Should a development be contemplated where most of the 32 lots are so constrained? Further in this review, I will comment on whether the submissions satisfy the policies above.



Legend

Contour Mapping Provided by First Base Solutions

5 m Contours

Planning Boundaries

Subject Property

Percent Slope

- ≤ 20 %
- >20 to 25 %
- ≥25 to 30 %
- ≥30 to <40 %
- ≥40 %

Scale	RS Project No.	Date Last Updated	By
1:8,000	2017-088	Oct 20, 2017	AS

0 110 220 Metres

RIVERSTONE

Figure 2. Percent Slope from Digital Terrain Model.Langmaid`s Island, Geographic Township of McLean, Township of Lake of Bays.
Part Lot 24, Concession 1, and Seagull Island, Geographic Township of Brunel, Town of Huntsville.

Prepared for: Langmaid's Island Corp.

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey

The third figure is prepared to illustrate the limitations that shallow soil depths pose to cottage development. The Tatham report includes a plan showing where soil depths were either dug with a test pit (4 locations) probed with a hand tool (66+/- locations) but it is difficult to interpret other than to say there are no locations where there are natural soil depths that would permit installation of the wastewater treatment system without importation of fill materials.

The figure on the following page developed from the RiverStone EIS shows the extent of "barren rock" or "very shallow" soils on the Island.

The Island is constrained by both steep slopes and shallow soils. This raises the question whether development should even be contemplated.

2.2 ANSI Interpretation

The RiverStone Response to Peer Review (July 2018) contains the following section:

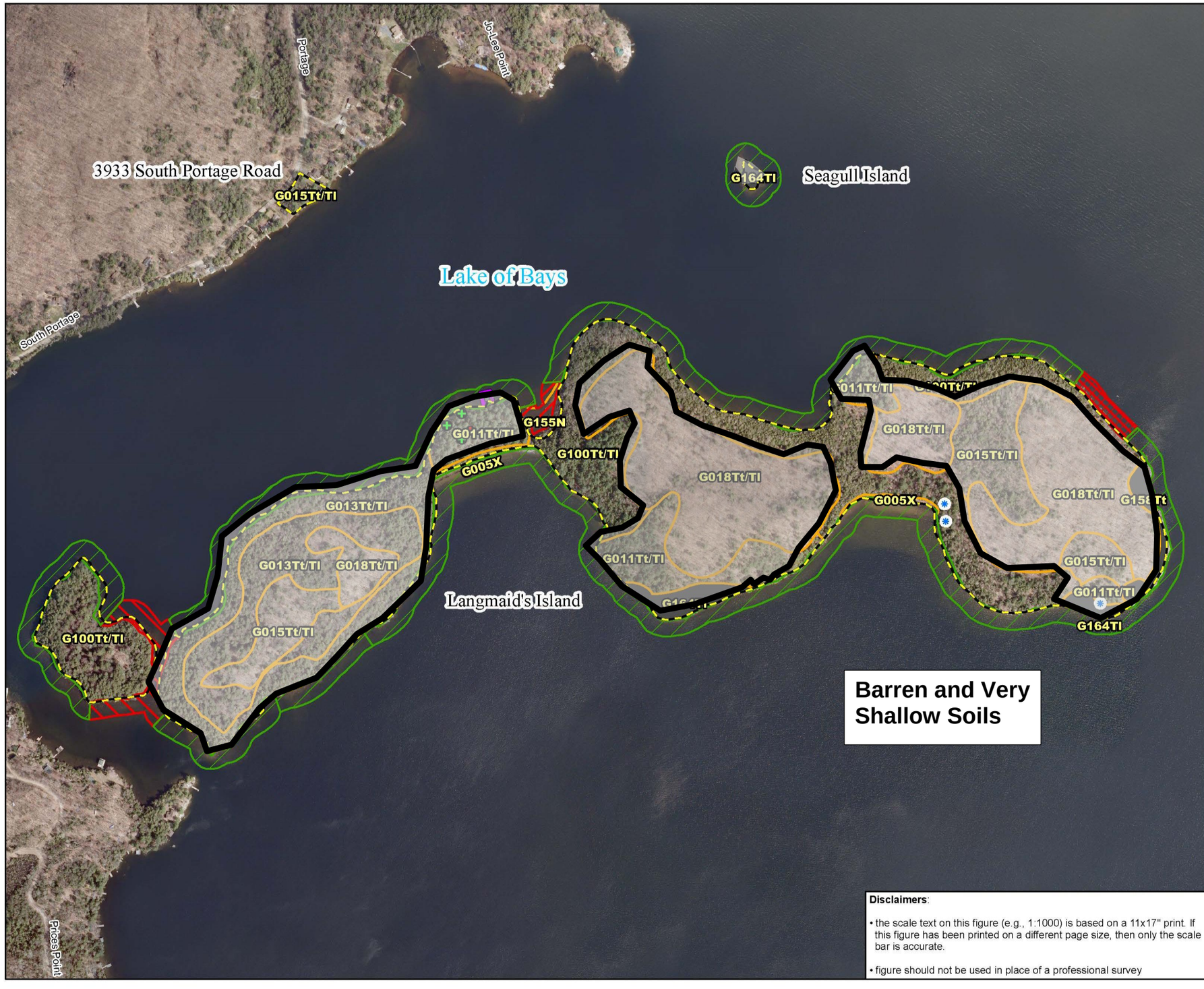
> *In order to understand the requirements, criteria, and protection afforded to an ANSI, we spoke with Ms. Jaclyn Brown, District Planner for the MNRF (Parry Sound). The MNRF is responsible for identifying ANSI's. Ms. Brown forwarded a Draft Report by Brunton (1991) that recommended the Island be considered a candidate ANSI. This recommendation is found in a document that was apparently never completed and is now 27 years old. It was never accepted by MNRF, and therefore the Island has never been classified as a candidate or actual ANSI. Based on the work completed as part of the EIS and this letter, RiverStone believes that the description in Section D.96c) of the Township Official Plan is misleading in suggesting that ANSI classification has merit.*

I believe that this is an understatement of the way that the ANSI program was intended to work. The intent was to identify those areas which were Provincially Significant and to provide appropriate protection and management to them. The first step was to complete an inventory of resources of an MNR District (Bracebridge in this case) and to assign a preliminary evaluation as to whether it was of Provincial, Regional or local significance. The Brunton Report on ANSIs (1991) recommended the Island as a Regionally Significant Candidate ANSI. Then, formally, certain of the areas were taken forward as "nominated" or "candidate" ANSIs and were evaluated by a review committee. Those candidate ANSIs had their rating confirmed or not as Provincially or Regionally significant.

Langmaid's Island, although recommended as a Candidate Regional ANSI was not evaluated or confirmed. There can be several reasons why this did not occur, including other sites in the District that are within Parks are already protected or that the Ministry did not wish to intrude on private lands, but left that to the Planning Act documents.

The Natural Heritage Reference Manual (MNRF, 2010) contains the following guidance.

> *MNR ranks ANSIs as being provincially, regionally or locally significant. To date, more than 500 of these areas have been identified across the province. For the purposes of policies 2.1.4(e) and 2.1.6 of the PPS, significant ANSIs include only ANSIs identified as provincially significant. Although ANSIs identified as regionally or locally significant*



Barren and Very Shallow Soils

Legend

N

Planning Boundaries

- Subject Property

Man-made Features Existing at Time of Site Visit (Approximate)

- Accessory Building
- Cottage

Biophysical Features and Functions Identfied By RiverStone

- Localized Seepage Areas

Ecological Communities (Shaded Communities - Condidate Significant Wildlife Habitat)

- G100Tt/TI - Fresh, Silty to Fine Loamy Hemlock-Cedar Conifer
- G011Tt/TI - Very Shallow, Dry to Fresh: White Pine Conifer
- G013Tt/TI - Very Shallow, Dry to Fresh: Hemlock-Cedar Conifer
- G015Tt/TI - Very Shallow, Dry to Fresh: White Pine Mixedwood
- G017Tt/TI - Very Shallow, Dry to Fresh: Oak Hardwood
- G018Tt/TI - Very Shallow, Dry to Fresh: Maple Hardwood
- G155N - Active Limnetic Mineral
- G158Tt - Acidic Treed Cliff
- G164TI - Rock Barren
- G005X - Active Mineral Shoreline

Fish Habitat

Type 1 (Critical)

- Aquatic Vegetation
- Complex Features
- Lake Trout Spawning (Potential)

Type 2 (Important)

- General Shoreline Habitat

Endangered and Threatened Species Habitat

- Barn Swallow Structure

Orthorectified aerial photo - spring 2008

Scale	RS Project No.	Date Last Updated	By
1:6,500	2017-088	Oct 20, 2017	AS

0 75 150 Metres

RIVERSTONE

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey

Figure 3. Biophysical Features and Functions. Langmaid`s Island, Geographic Township of McLean, Township of Lake of Bays. Part Lot 24, Concession 1, and Seagull Island, Geographic Township of Brunel, Town of Huntsville.

Prepared for: Langmaid's Island Corp.

> *are not included in the PPS definition, information about such ANSIs can still support the development of natural heritage systems under policy 2.1.2 (see section 3) or identification of significant wildlife habitat under policy 2.1.4 (see section 9). Recognizing the importance of regionally or locally significant ANSIs, some municipalities have provided protection through their official plan policies.*
>
> *Provincial-level ANSIs that MNR has identified and recommended for protection but that have not been formally confirmed through a confirmation procedure are referred to as "candidate ANSIs." For the purposes of the PPS, an ANSI is not considered provincially significant until it has been confirmed. Additional candidate ANSIs may be identified at any time, and it is recommended that planning authorities consult the most recent information on the status of ANSIs (see appendix B). Planning authorities may choose to protect candidate ANSIs as locally or regionally significant natural heritage features and areas as per the PPS definition for "significant" (see section 4.3).*

I agree that Langmaid's Island is not a Provincially Significant ANSI. However, as the explanation above indicates, a municipality can use the ANSI information to protect areas of local significance and this is what was contemplated and occurred with Langmaid's Island. Thus, I conclude that the Section D.96c referenced by RiverStone is not misleading as they stated. The area was considered as candidate ANSI but never confirmed at the Provincial level. The Township of Lake of Bays properly moved to protect it as a local feature.

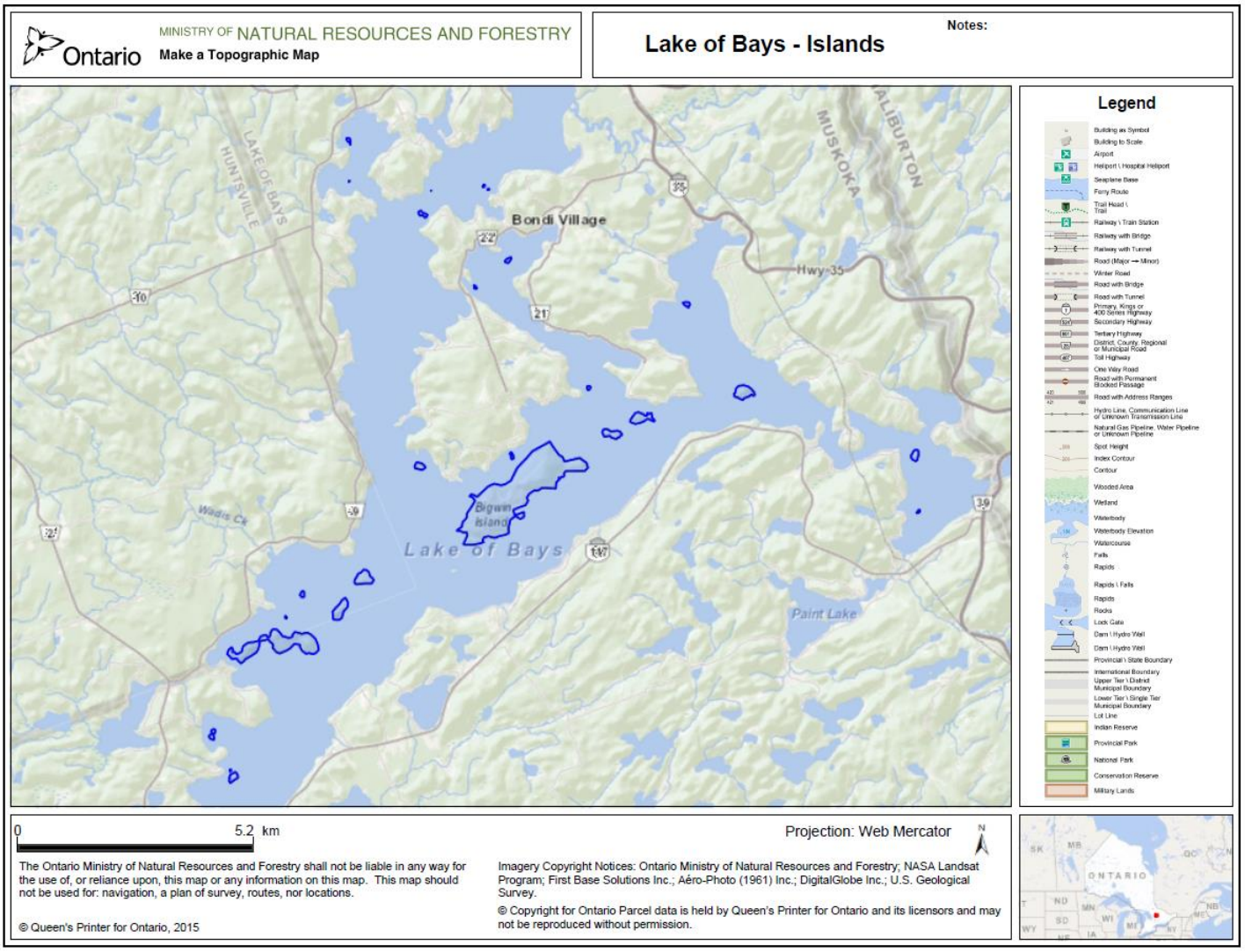
2.3 Regionally Significant Forest

In a similar interpretation, I disagree with the RiverStone denigration of the forest on the Island in their Response to Peer review:

> *First, the description of the Island as a regionally-significant forest is somewhat misleading. There is no current classification of forests at the Municipal, District or Provincial level that recognises regional significance. This was confirmed by both the District and MNRF. In addition, the PPS does not recognize any forest on the Canadian Shield or north of the Shield as significant (i.e. Significant Woodland). Given that there is no classification system to create regionally-significant forests in this jurisdiction, there are no policies or laws that stipulate criteria or require protection*.

This comment takes the description out of context. The Reid and Bergsma (1994) report that used the descriptor was 2 years before the first PPS in 1996 where forests were identified as features to be considered for protection and the definitions started to evolve to define specifically the criteria to identify the features. At the time of the report, they viewed Langmaid's Island as a "regionally significant forest" and that description stands the test of time. In my May 2018 Review, I showed that Langmaid's is the second largest island in Lake of Bays and the only one with the same degree of undisturbed integrity. I include again the figure from my May report on the following page.

Langmaid's has 6100 metres of undisturbed shoreline and quality forest communities. More on this later as the Island is the last large undisturbed island (Fairview has been approved but appealed).



2.4 Provincial Policy Statement Guidance

I also point out that the PPS is to be read in its entirety and that that there is guidance in the implementation section that speaks to the last two points above:

> *4.9 The policies of this Provincial Policy Statement represent minimum standards. This Provincial Policy Statement does not prevent planning authorities and decision-makers from going beyond the minimum standards established in specific policies, unless doing so would conflict with any policy of this Provincial Policy Statement.*

and, also in the Definitions section on Significance:

Criteria for determining significance for the resources identified in sections (c)-(e) are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used. While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation.

In both the sections noted above, a municipality can exceed the provincial standard (and is encouraged to do so) particularly for locally significant features.

Thus, with respect to the treatment of the ANSI and significant woodland descriptions of Langmaid's Island, I find that the descriptions used in the Lake of Bays Official Plan Section D.96c are supported by the PPS and are appropriate as locally significant features.

3.0 Environmental Impact Criteria

The approach taken to assessing the impact of the subdivision proposal has changed over the last months from their January to August reporting.

In the January 2018 EIS, the approach was that an inventory of the Island identified the individual significant features and established criteria that protected them. As I pointed out in my May 2018 review they missed both the integration of the individual features into an overall ecosystem view and did not show or assess the extent of the changes and impacts the proposal would cause on the Island.

The later documents, particularly the July 2018 Response to Peer Review and September 2018 Summary of Studies Letter, take a different approach by putting forward a case that the Island did not meet the criteria for identification and protection as a Muskoka Heritage Area. Thus, impact is not a consideration to them. The RiverStone reports do not constitute an environmental impact report.

I disagree with the both approach and the analysis presented. I will review the four criteria for identification of Langmaid's as a Muskoka Heritage Area that they comment on.

In my review, I have been assisted by the detailed file on the Island that has been maintained at the District and contains more information and comment than the summary in Reid and Bergsma.

3.1 Wildlife and Fish

RiverStone has completed many studies on the resources of the Island and I accept their descriptions as competent studies. There is some difference, however, in interpretation of the results in relation to policy.

I do accept the RiverStone conclusions on:

- Bat Maternal Colonies for non-SAR Bat species.
- Bald Eagle and Osprey nesting, Foraging, Perching Habitat.
- The protection of Seeps/Springs

- The presence/absence of Deer Yarding Areas
- Rare vegetation communities

with two comments/reservations.

I accept that the Island is not a "deer wintering area", in the sense of a Provincially significant feature, but I do not ignore use of the Island by deer as a value in its overall ecological composition. RiverStone appears to accept the public comment that deer use the Island in winter. From the public perspective, this is an important value of the Island. RiverStone has not adequately addressed this value and how it will be impacted by the tree clearing/thinning and presence of the cottages/cottagers/dogs/traffic/etc.

Secondly, I did note in my initial read of the EIS that documentation was incomplete without lists of plants and birds that were observed. Palmer Environmental Group requested the plant list and received it. No Breeding bird list has been provided.

The provided plant list does present a question of its value. The EIS (January 2018) lists 10 visits to the property in 2017 and there have been more in 2018. They list 88 vascular plant species for the Island. The Reid and Bergsma report identified 134 total plant species with only three visits. The EIS appears low in terms of recorded observations of plants.

3.2 Diversity

The Criterion in the Muskoka Heritage Area Report is:

> *Criterion B-2: Diversity*
>
> *The area exhibits high diversity of native flora and fauna, either at the species or community level.*

The summary description of the Island in the District file is:

> *Habitat Diversity/Importance for Wildlife*
> *Even for its size, Langmaids Island has a surprisingly high diversity of habitat. This includes coniferous fringe, hardwood forest, mixed forest, rocky shoreline, sandy beach, marshland and topography ranging up to over 150 feet (45 m) above lake level. With this variety of habitats, the proximity of the mainland, and the undisturbed state of the island, this represents a high degree of importance for wildlife. Rating: 5 points.*
>
> *Species Diversity*
>
> *The following vertebrate species were recorded at Langmaids Island: fisher, beaver, snowshoe hare, red squirrel, common loon, common raven, common crow, ruffed grouse, spotted sandpiper, belted kingfisher, blue jay, eastern pewee, veery, black—capped chickadee, white—breasted nuthatch, yellow—rumped warbler, song sparrow, American toad and mink frog.'*

Noteworthy here is the evidence of fisher (droppings were found) a species that relies heavily on expanses of mature forest. This animal likely includes the island within its foraging circuit, and may even den in its undisturbed habitat. Rating: 5 points.

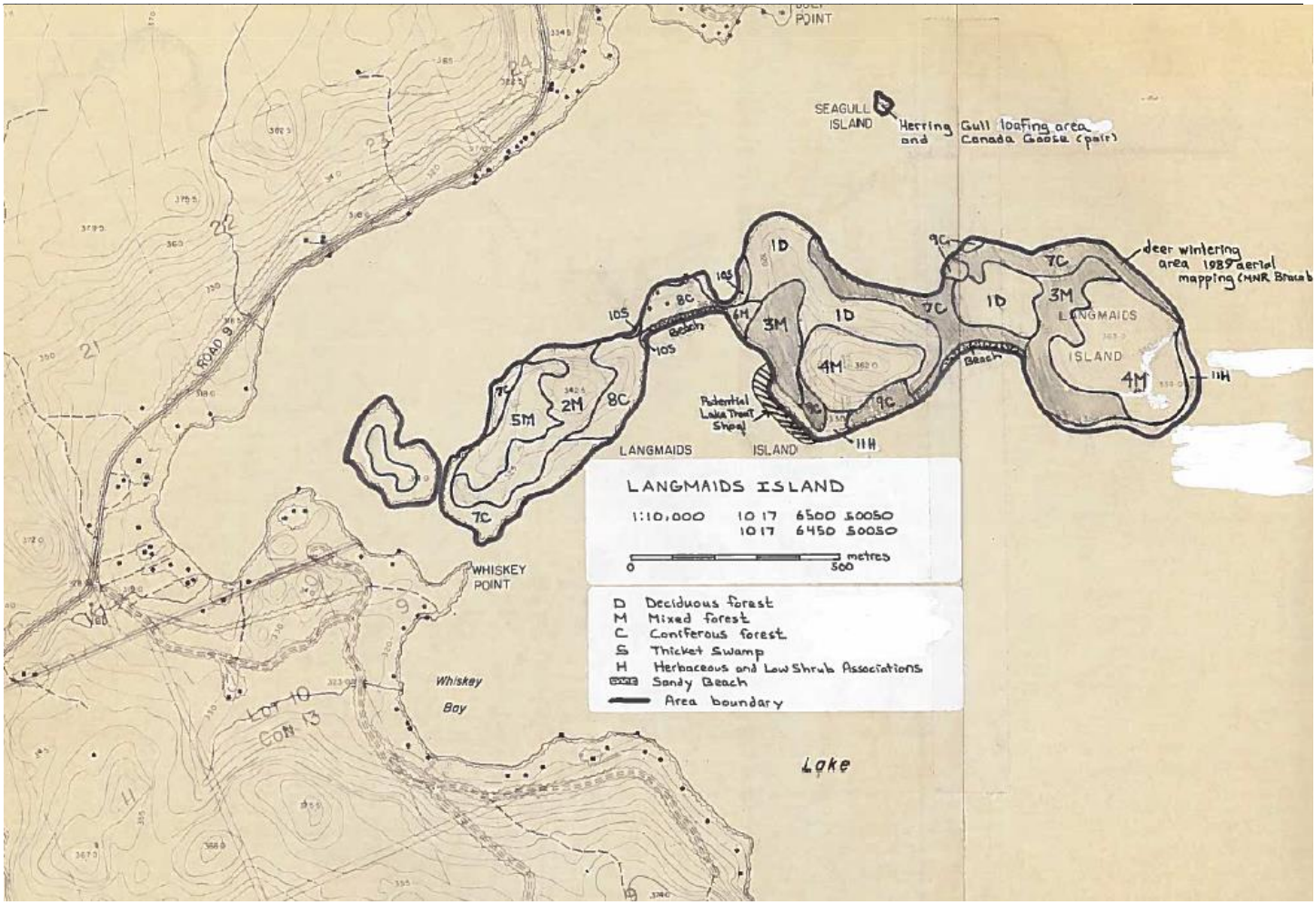
The initial point I make is that the diversity assessment included both floral and faunal assessments and Langmaid's scored its highest rating points on vegetation communities and on fauna found on the Island.

I find that in such assessments one of the best indicators that we have is the breeding bird use of the areas that best reflect the quality of the environments involved. In the Langmaid's case, it is to be noted that this bird use includes many woodland songbirds.

Community Diversity

The District file on Langmaid's contained a vegetation community map of the Island that I include on the next page.

It is most interesting because it illustrates the degree of effort that was expended on examining the resources of the Island and, also, because of its general similarity to the ELC figure included in the RiverStone EIS. The MHA inventory distinguishes fourteen different communities on the Island, while the RiverStone EIS notes only ten.



A summary of the community diversity of the Island is taken from the District file:

> *The two larger sections of the island are undeveloped and represent a high degree of naturalness. This is notable in light of the scarcity of undeveloped habitat around Lake of Bays. These sections support a diversity of habitat types including coniferous fringe, hardwood forest, mixed forest, rocky pine-clad shoreline, sandy beach shoreline and marshland. Topography ranges to over 45m above the lake the summit of these hills is a commanding and very beautiful view of the lake.*
>
> *The diversity of habitat and wildlife that the island supports is a reflection of the island's topography, soils and climate.*

The highlighting is mine and will be referred to.

The RiverStone Response to Peer Review attempts to diminish the community diversity on the Island by concluding that there only two areas of shallow marsh that are only a fringe and are limited in extent.

The NHA file contains the following description on the marshes:

> *Some of the sheltered inlets along the edge of the island support marshes edged with Winterberry, Leatherleaf, Willows and Serviceberries. These marshes are good spots to watch for robust blue-and—white Belted Kingfishers, which often perch in nearby trees to watch for small fish. Marshes are home also to Mallards, Spotted Sandpiper and Song Sparrows, as well as Beaver. They may provide protected nesting sites for Common Loon which fish in the adjacent open waters.*

The NHA assessment describes the marshes as edging the Island so they were cognizant of the limited extent and this was factored into their assessment.

The RiverStone argument also ignores the area they identify as "aquatic vegetation" which contributes to the diversity of habitat and species on Langmaid's as noted in the District file.

The diversity of habitats is reflected in the diversity of species that I cover next.

Consequently, I conclude that Langmaid's Island did and still meets the criterion for Community Diversity.

Species Diversity

The species diversity criterion includes both flora and fauna factors.

I have taken the data from the Reid and Bergsma Report and produced the following table to gain a better appreciation of the character of the Island. It is the same information as that report but contains additional analyses. Particularly, the last two columns show # of plant and birds species per 10 ha of area. This is for the MHAs less than 1000 ha in size as per Reid and Bergsma.

The results which are summarized in the Table show:

	# bird species/10 ha	# native plant species/10 ha
Langmaid's Island	5.09	24.36
MHA Areas Average (<1000ha)	2.86	33.72

These measures show that the Island demonstrates a much higher diversity of fauna (breeding birds) than the average of the sites studied. RiverStone reported the same # of bird species (28) as Reid and Bergsma, confirming the earlier result. The floral criterion used by Reid and Bergsma employed a regression analysis, concluding that the Island was below average for the MHA site in Muskoka. My simpler average approach reached the same conclusion.

The rationale in the District file contains the following:

> *Langmaids Island provides the Lake of Bays with an excellent example of an island with a high degree of naturalness and undeveloped shoreline. The high diversity of habitats relative to its*

	A	B	C	D	E	F	G	H
1	**NATURAL HERITAGE AREA**	**SIZE (Ha)**	**# Native Plants**	**# Introduced Plants**	**% Introduced Plants**	**# Bird Species**	**# Bird Species per 10 ha**	**# Native Plants per 10 ha**
2	COASTAL BARRENS							
3	Pine islands	50	10	0	0.00%	4	0.80	2.00
4	Moreaus Bay	445	169	2	1.17%	22	0.49	3.78
5	Longuissa Bay	421	218	5	2.24%	26	0.62	5.12
6	Gibson River	495	129	3	2.27%	20	0.40	2.59
7	Bone Island	573	219	12	5.19%	35	0.61	3.74
8								
9	SEVERN CORRIDOR							
10	Potato Island	241	171	19	10.00%	36	1.49	7.10
11	Severn Outlier	11	46	20	30.30%			41.82
12	Lost Channel	905	462	40	7.97%	58	0.64	5.10
13	Neipage Lake	525	339	22	6.09%	71	1.35	6.46
14	Lower Swift Slope	7	261	36	12.12%			372.86
15	Lion's Head	4	159	11	6.47%			397.50
16	Moose Lake	105	225	15	6.25%	47	4.48	21.43
17	McLean Bay	65	143	8	5.30%			22.00
18	Ellison Bay	75	167	20	10.70%			22.27
19	Clipsham's Wood	8	176	20	10.20%	22	27.50	220.00
20								
21	GIBSON							
22	Lower Moon River	570	136	5	3.55%	10	0.18	2.39
23	Gray Rapids	300	149	2	1.32%	21	0.70	4.97
24	Concession Lake	485	204	21	9.33%	29	0.60	4.21
25	Bala Bog	425	318	47	12.88%	47	1.11	7.48
26	Loon Lake	550	303	38	11.14%	60	1.09	5.51
27	Morrison Lake	425	455	58	11.31%	65	1.53	10.71
28								
29	MUSKOKA LAKES							
30	Bruce Lake Marshes	174	392	57	12.69%	46	2.64	22.53
31	Clark's Pond	259	335	49	12.76%	73	2.82	12.93
32	Eilean Gowan Isl.	107	254	28	9.93%	33	3.08	23.74
33	Well's Creek	158	191	9	4.50%	31	1.96	12.09
34	Scarcliffe Bay	11	135	11	7.53%	36	32.73	122.73
35								
36	VICTORIA HIGHLANDS							
37	Jevin's Lake	188	267	38	12.46%	45	2.39	14.20
38	S. Three Mile Lake	338	253	16	5.95%	11	0.33	7.49
39	Riley lake Barrens	384	243	26	9.67%	53	1.38	6.33
40	Lewisham Wetland	640	203	15	6.88%	73	1.14	3.17
41								
42	ALGONQUIN BEACHES							
43	S.Muskoka Canton	49	298	39	11.57%	40	8.16	60.82
44	Sharpe's Creek	60	349	65	15.70%	71	11.83	58.17
45	Cooper's Pond	570	252	20	7.35%	87	1.53	4.42
46	Beaumont Bay	220	304	40	11.63%	47	2.14	13.82
47	East River Delta	297	295	29	8.95%	72	2.42	9.93
48	Novar Peat Forest	347	286	23	7.44%	77	2.22	8.24
49								

	A	B	C	D	E	F	G	H
50	MAGNETEWAN							
51	Axe Lake Peatland	607	174	12	6.45%	44	0.72	2.87
52								
53	LAKE OF BAYS							
54	Spring Creek	402	222	2	0.89%	37	0.92	5.52
55	Shack Creek	500	170	0	0.00%	48	0.96	3.40
56	Fawn lake	400	161	2	1.23%	50	1.25	4.03
57	Langmaid's Island	55	134	3	2.19%	28	5.09	24.36
58	Britannia Esker	130	129	4	3.01%	33	2.54	9.92
59	Lower Oxtongue River	172	181	8	4.23%	68	3.95	10.52
60								
61	OXTONGUE							
62	Dwight Peat Forest	115	93	0	0.00%	17	1.48	8.09
63								
64	NATURAL HERITAGE AREAS	12868			6.85%		2.86	33.72

total area, the wildlife migration opportunity from the mainland, and the quality of its communities make Langmaids an interesting and very special part of Muskoka's natural heritage.

I agree Langmaid's Island meets the criterion for diversity (specifically community and breeding birds), even considering it is below the line on floral diversity.

3.3 Quality

There is some similarity between the quality and diversity criteria

Criterion B-3: Quality and Disturbance

The area contains biotic communities of unusually high quality or showing little recent disturbance.

I note for later reference that this criterion included two characteristics – high quality and recent disturbance.

High Quality

The RiverStone submissions seem to contradict themselves on the point of quality of the Island. The following is taken from the RiverStone January 2018 EIS (highlighting is mine):

The quality and lack of disturbance of the habitats is unquestionable. The vast majority of the Subject Property has been left in a natural state by the previous owners, who have had very little to do with the Subject Property for many decades. The only evidence of disturbance is the result of non-owners, such as various items left on the beach shoreline and inland, vandalism to the existing buildings, as well as the remains of several small fires. Otherwise there is little evidence of disturbance, with natural features remaining intact across the Subject Property.

The later submissions (Response to Peer Review) argue that the Island is not high quality as it never reached the candidate ANSI status or was not a regionally significant forest – both points I dealt with earlier and differ on with Riverstone.

Riverstone's argument does not refute the highlighted section of their January Report as noted above.

The Reid and Bergsma report described the Island as having a late successional forest (120-140 years) on the western portion of the Island.

The RiverStone Late Forest Succession Letter (July 2018) puts forward two arguments on quality. First, coring of various trees (particularly Hemlock (12 of 19 trees sampled)), revealed:

The Eastern Hemlock ranged in age from 62 to 229 years old, with an average age of 120 years. Based on the DBH measurements for Eastern Hemlocks which were not cored, it is

expected that several of would be aged at over 120 years as well, with DBH's over approximately 50 cm.

First, on a community level, Eastern Hemlock is a late successional species as it is shade tolerant and is sensitive to site disturbances, particularly exposure to sun and wind. Thus, the community sampled is, by definition, late successional.

Secondly, the core sampling to determine age of the hemlocks supports the Reid and Bergsma conclusion.

RiverStone introduces an argument in the Forest Succession Letter that the community is not Provincially Significant Wildlife Habitat under the PPS as it is less than 30 ha. This is misleading because the reasons for designation are not those of the Island's Provincial significance. It is protected at the District and local levels of significance.

Finally, a measure that is frequently referred to is the percent of native/non-native species present as a disturbed area will frequently show more non-native (aggressive) species invading. The Reid and Bergsma report calculates this breakdown and I have checked it and produced an average for areas under 1000 ha:

Langmaid's Island 2.19% introduced plants

MHS Average 6.85% introduced plants

Both Langmaid's and the average for the MHA areas are good in terms of indicating lack of disturbance. Langmaid's shows a better than average condition, indicating higher quality.

3.4 Scenic Landscapes

Criterion C-7: Scenic Landscapes

The area contains sites or landscapes with patterns of form, line, colour, or texture that together present outstanding scenic value.

This is the fourth criterion that qualified Langmaid's Island as a Muskoka Heritage Area. Reid and Bergsma utilized the earlier Berney and Reid (1992) report – this is the same Reid in both reports – as input but made final recommendations.

The Scenic Evaluation Report developed criteria to identify sites worthy of protection through public inputs (highlighting is mine) and invited nominations:

1. *The view or feature must be visible from a public road, waterway, trail, or lands.*

2. *The view or feature must not be negatively affected by visual intrusions that significantly detract from the view or feature.*

3. *A minimum of one of the following criteria must be fulfilled:*

i. The view or feature has a well-known reputation or significant public exposure (e.g. High Falls).
ii. The View or feature attracts public attention for at least a portion of the year (e.g. Utterson ice wall).
iii. The view or feature contains running water or a water body visible from a road (e.g. White's Falls).
iv. The View or feature contains contrasting elements, colours, or topography (e.g. Lake Muskoka shoreline).
v. The view or feature exhibits harmony between cultural and natural elements (e.g. Bracebridge Falls).
vi. The view or feature has a high potential for educational or interpretive activity (e.g. Skeleton Lake crater).
vii. The view or feature provides a high degree of visual contrast within an urban setting (e.g. Muskoka canyon).
viii. The view or feature is visually unique or highly distinctive within Muskoka (e.g. Big Chute)

Seagull Island was nominated and is listed in the report as meeting the criterion. The description in Reid and Bergsma includes the view from the hills on Langmaid's Island – see previous text. RiverStone argues that the Island does meet the Scenic Landscape criterion as it is separate from Seagull Island and that the views are from the hills and not to the hills.

I will comment.

First, the process followed in Berney and Reid asked the public to nominate scenic areas. Seagull Island was nominated and may have included Langmaid's. It is not clear.

The conclusion from the RiverStone Response document is:

> *Under the Lake of Bays sub-category of Lakes and Shores, Seagull Island was noted as meeting the criteria, and recommended as a scenic area. <u>There is no mention of Langmaid's Island in any of the discussion or in the Report at all.</u>*

The underlining is Riverstone's. The Berney and Reid report produced only a list and does not contain a description of any of the areas so that the extent and features are not fully documented. While literally correct, the RiverStone conclusion is an overstatement as it implies that Langmaid's was not included.

This statement above is contradicted by the District file on Langmaid's:

> *Topography ranges to over 45m above the lake, the summit of these hills is a commanding and very beautiful view of the lake.*

and by the MHA Reid and Bergsma description:

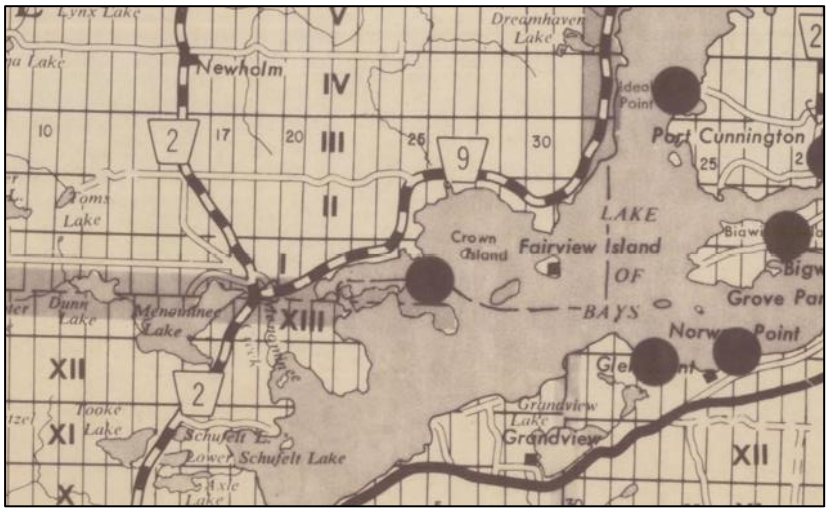
> *4. Scenic Landscapes - (C7) Seagull Island was identified as having high scenic value. In*

addition, the views from the summit of the hills on Langmaid's Island provide a commanding and highly scenic vista of the Lake of Bays.

Further, the conclusion from RiverStone is stated:

Further, a map is included in the Report that clearly identifies the location of each scenic area. It clearly shows Seagull Island as the scenic area, <u>not Langmaid's Island.</u>

The original map from the Berney and Reid study is shown below:



I draw a different conclusion than RiverStone on the above. The symbol is centred on Seagull Island but certainly overlaps with the Langmaid's. This inclusion matches the text descriptions on file as I have shown.

Finally, the Reid and Bergsma report used the Berney and Reid Report as input as well as other factors including three visits to the island. The final result is that they indicate Langmaid's as meeting the scenic criterion. RiverStone ignores the end result relying only on the Berney and Reid report.

I also note that the public nominated five areas in the Lake of Bays that are listed in Berney and Reid, but Reid and Bergsma only included Seagull Island in their MHAs. They also added an additional site – the Lower Oxtongue River – as meeting the C7 criterion which was not a nominated site. This illustrates that they exercised considerable judgement and that includes adding Langmaid's Island under C7.

In addition to the above, I have also toured around the Island and gained an appreciation of its character and scenic value and conclude that it meets the criteria as a Muskoka Scenic Area used by Berney and Reid:

1. The view or feature must be visible from a public road, waterway, trail, or lands.

Langmaid's Island is clearly visible from the lake around it where there is busy boating traffic.

1. *A minimum of one of the following criteria must be fulfilled:*

   i. The view or feature has a well-known reputation or significant public exposure (e.g. High Falls).

The consultation and reaction to the development proposal shows how well known the Island is and that the degree of public concern/exposure is high

   iv. The View or feature contains contrasting elements, colours, or topography (e.g. Lake Muskoka shoreline).

The view from the water (see photo later) shows a high degree of these contrasting elements.

For these reasons, I conclude that Langmaid's Island meets the scenic area criterion under the MHA Evaluation and as expressed in the Reid and Bergsma report.

As a conclusion to this section of my review, I have reviewed the additional submissions from the Langmaid's Island Corporation and the Palmer peer review documents and conclude that the Island satisfies three Criteria (Diversity, Quality, Scenic) as a Muskoka Heritage Area.

The policies on natural heritage features in the Lake of Bays OP also requires comment. Specifically:

D 70.
Additional areas or sites may be identified during development applications, or through other inventories or evaluations. The general policies for natural heritage will apply until specific policy for a new heritage area or site is prepared. Schedule C1 will be updated by amendment to this plan, to show any new natural heritage areas or sites.
New Areas and Sites.

D.71
The features and values, which contribute to the importance of natural heritage areas and sites, will be preserved and these areas will be protected from incompatible uses or activities. Nothing in the policies for natural heritage is intended to limit the ability of existing agricultural uses to continue.

First, Natural Heritage Sites receive protection as well as Natural Heritage Areas. Sites meet one criterion and Areas two or more. Thus, even if the rating of Langmaid's is reduced, it might still meet the protection provisions of the OP by meeting only one criterion.

Secondly, the policy on additions during development applications allows for new information that might not have been previously apparent. RiverStone has added additional information and comment on the designation/protection of Langmaid's. I have done the same and answered the RiverStone criticisms. I recommend maintaining the existing policies.

4.0 The Development Proposal

In my May 2018 Review, I indicated concerns that the various reports did not adequately address the impacts of the proposal, particularly since:

- the proposed subdivision did not show the extent of disturbances
- the analysis did not study all the impacts
- the implementation will not protect the features

I will review these topics in relation to additional filings.

4.1 Subdivision Proposal

The plan of subdivision has been revised downward from 36 to 32 lots and removing additional cottages from two of the lots, but these are minor changes in terms of the entire footprint of the proposal. In my first review, I indicated that there was no accurate picture of the extent of what was being proposed. This is still the case.

The Tatham FSR Report (January 2018) has been updated by an Appendix #1 (August 2018) that includes individual general layouts for each lot. This is an improvement in defining the proposal but there are three difficulties with the information shown.

First, the lot plans are very difficult to read as the lines on the plans are very faint and there is no overall disturbance envelope shown.

Second, there are various disturbances that are not shown:

- The Tatham illustrations assumes a 4000 ft^2 cottage but the WR designation permits 510 m^2 (5490 ft^2) within 60 metres of the water. There is no limit beyond that distance. The Tatham FSR notes that "this is not necessarily what would be constructed. Most lots can accommodate larger homes and septic treatment beds." This may be physically possible, but it could create far greater ecological and visual impacts.
- The three bunkies that are permitted in the development permit proposal.
- The areas and depths of blasting and rock work. Utilities will be underground and below the frost depth.
- The quantities of fill that will need to be brought in
- Removal of trees necessary to obtain clear transmission from satellites. As satellite angles are low to the horizon it is possible that no service could be obtained without placing the receiving dish on top of the hills.

Thirdly, the Tatham report introduces several assumptions that are not currently supported by the submissions:

- The wastewater disposal system is sized based on 180 days of occupancy. There is no means shown of enforcing that limitation on residents. I note that on all of the lots, except for

possibly three, pumping of the wastewater uphill to the disposal area will be required – introducing cost and risk factors.

- The disposal systems will be tertiary treatment. The filter bed mantle will not require the cutting of trees on some lots. Tile beds will be replaced by removing the old beds and re-building on top or by snaking the tiles between trees. There is no means indicated to enforce these requirements. I note that the proposals/assumptions by Tatham have not yet received an engineering review.

- Tree clearing will be limited to the area shown around the building plus 6 metres and the access roads and trails. However, the Tatham report itself includes the following requirements under fire hazard:

    - Prune tree branches to a height of 1m to 3m;
    - Remove evergreen trees to within 10 m of the house
    - Tree thinned (crowns don't touch) for at least within 30 m of house
    - Thin pine trees and remove dead wood to within 60 m of house
    - Remove brush, mow and water lawns
    - Reduce combustible material near to the home by chipping small branches and trees and composting lighter vegetation

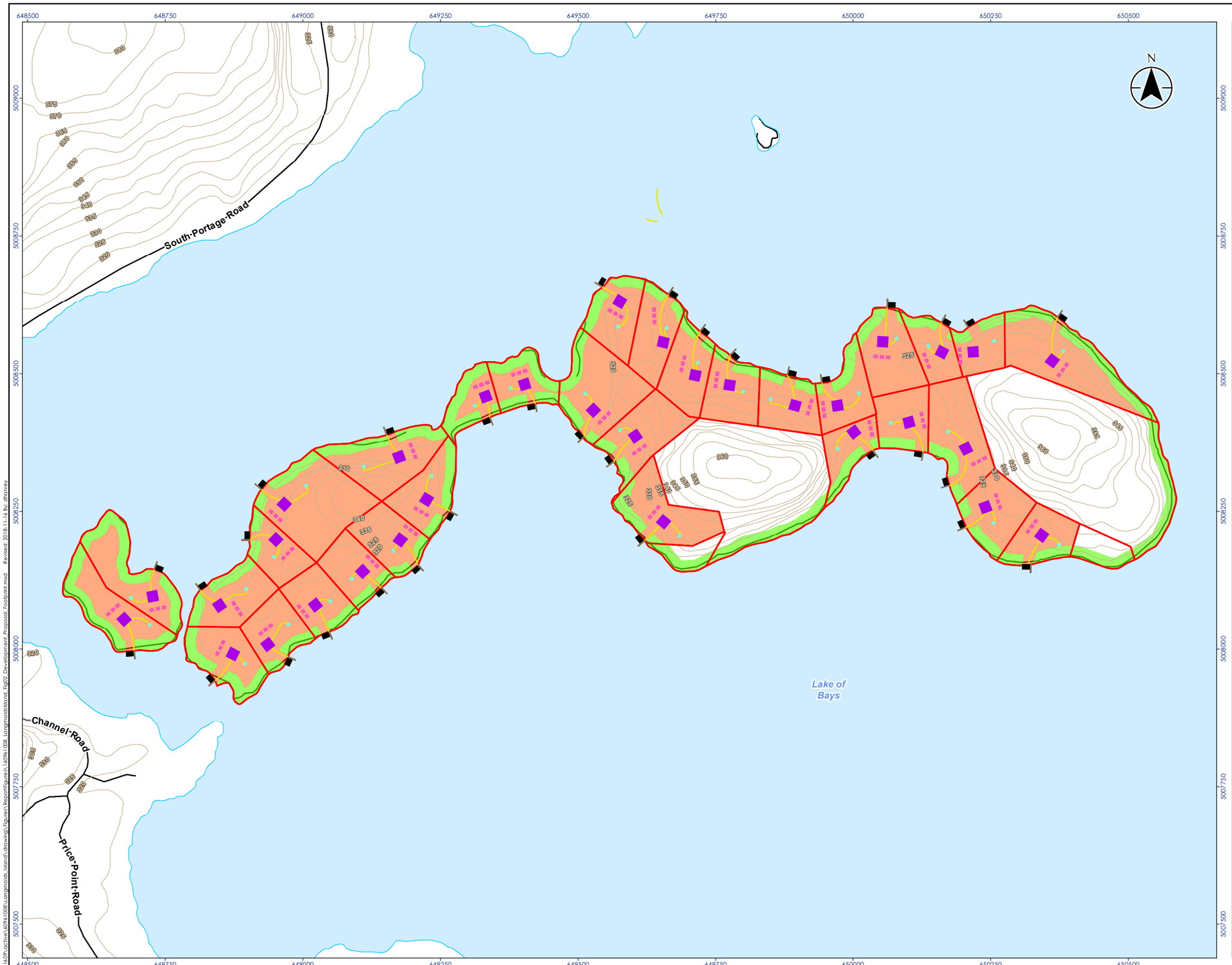
    These requirements have not been included in the assessment of impacts.

- The sleep cabins will be clustered.

In my May Review. I included a plan showing the overall development proposal for the Island. None of the submissions by the Island Corporation has included this essential information.

On the following page, I have updated the plan to reflect the minor changes (lots, blocks) and includes a representation of the extent of potential disturbance.

In my opinion, this proposal will destroy the natural heritage values of the Island.



Ages Consultants Limited

Legend

- Proposed Lot
- Ground Topography (metres above mean sea level)
- Road
- Waterbody
- Shoreline - 20 metre Setback
- Potential Disturbed Area

Proposed Buildings

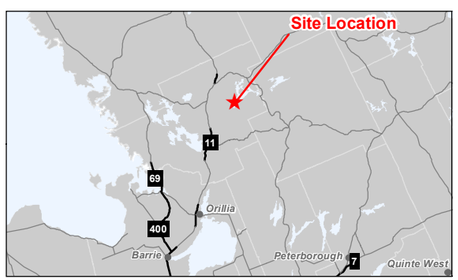
- Footpath/Access
- Boathouse
- Dock
- Dwelling
- Sleep Cabin
- Tile Field

0 100 200 metres

1:7,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
3. Orthoimagery: . Imagery date unknown.



Project Location
Township of
Lake of Bays

160961008-Langmaid's Island REVA
Prepared by PW on 2018-11-16

Client/Project
LANGMAID'S ISLAND

Figure No.
2.0

Title
Development Proposal

V:\2160\active\160961008\Langmaids Island\drawings\Figures\ReportFigures\160961008_LangmaidsIsland_Fig02_DevelopmentProposal_Footprint.mxd Revised: 2018-11-16 By: dharvey

4.2 Potential Impacts

The earlier Section 3 of this report found weaknesses in the RiverStone EIS as they did not analyze impacts on the diversity and quality of Langmaid's Island. Rather, they try to step around the issues by arguing the Island does not meet the criteria to be a Heritage Area. While I disagree, there are other policies in the Lake of Bays Official Plan that protect environmental features even if the RiverStone EIS position is accepted. The following require attention.

D.2
Conservation of the natural environment will take precedence over development when the two are in conflict and mitigation measures are unable to protect environmentally sensitive or significant natural heritage features and functions.

D.3
The conservation of the overall natural landscape, tree cover and vegetation will be encouraged in an effort to preserve the natural appearance, character and aesthetics of the area and to protect the natural heritage of the Township.

D.7
Important scenic sites as well as the scenic character of road, pedestrian, river and boating routes should be preserved and development should occur in a manner that maintains those scenic values.

D.9
Natural landscape features such as watercourses, significant heights of land, rock faces or cliffs, waterfalls, rapids, beaches, vistas and panoramas, and landmarks should be conserved. Development should be located and designed to protect these features, and where feasible, dedication or acquisition of such land for the purpose of conservation should be encouraged.

D.10
Development will be designed to maintain, fit into and use the natural characteristics and features of individual sites. In this regard, the following principles should guide lot design, road design and construction:
a) built form should not dominate the landscape;
b) visual impact should be minimized;
c) as much natural vegetation as possible should be maintained and natural vegetative buffers should be retained or restored adjacent to shorelines and roadways
d) natural land form and contours should be preserved;
e) ridge lines and skylines should be protected;
f) natural infiltration, storm water management and construction mitigation techniques should be used;
g) the use of environmentally friendly construction materials and design/installation will be strongly encouraged; and
h) conservation of the natural heritage system.

D.11
The height of buildings and structures should generally be low profile in nature and respect the character and height of the surrounding natural and built environment, including slope, tree cover, setbacks and architecture. Generally, the height of buildings and structures should not exceed the height of the tree canopy or break the skyline horizon.

The MHBC Planning Justification Report contains only brief comment on these policies and the EIS does not demonstrate how they are met as is asserted.

The one area I wish to comment on further is the visual impact of the proposal and the policies above that protect views from waterways. I have prepared an illustration to demonstrate the issues with Langmaid's Island. The figure on the next page shows the area of the Island at Lots 23, 24, 25 and 26 with the Block B shaded. I placed the locations for the cottages and boathouses on the photo to demonstrate the challenges that development on the Island poses:

- The shoreline is rocky, rises rapidly and is generally the lowest quality of shoreline for cottage development
- The locations have very little tree screening even with 23 m shoreline setbacks, additional plantings will be very limited by the rock
- Access to the cottage is very difficult
- Substantial fill materials will need to be placed and stabilized
- The boathouses are a significant distraction to the view of the Island and can't be screened

The Langmaid's Corporation submissions contain no similar analysis and should have if they wish to justify their proposal. There is no analysis of how the views from the hills will be changed by addition of the buildings and by the uncontrolled possible tree cutting.

There should be a complete lot by lot analysis before approvals are given in principle of the extent of works, potential ecological impacts and their visibility from the water.

Conceptual Cottage Site

Conceptual Boathouse Site

Lots 23-26
Illustration

4.3 Implementation

The revised plan of subdivision does bring some minor improvements with a reduced number of lots and increased protected blocks.

However, for the reasons enumerated in this review, it does not meet the existing policies nor justify the changes that are suggested in the Planning Justification Report (August 2018).

There are several weaknesses in the Planning Report recommendations that, in my opinion, will render the implementation ineffective.

1. The protected areas (Blocks A and B) are retained in private ownership with a conservation easement to be granted to an unnamed organization. In my experience, conservation easements as a development control mechanism are ineffective and not employed elsewhere in this way. The receiving organization is asked to police the Blocks itself and enforcement is potentially difficult as it would probably go through the Courts and not proceed under the Planning Act or other legislation. A condominium corporation/association (holding ownership) does not have the public interest as a principle of its existence.

   The most effective way to achieve protection is through dedication of the lands and physically defining the limits of the ground.

2. The monitoring of the conservation easement is proposed for an annual visit for a period of five years. This is not of sufficient frequency or length of time as the objective is to preserve the values in perpetuity.

3. Character Guidelines are proposed as an addition to the Lake of Bays Development Permit By-law. I find the approach as insufficient. First, the Guidelines are just that – a Guideline. There needs to be a firm commitment on a lot by lot basis to specific conditions. A general statement with no supporting studies is not acceptable. Secondly, the implementation is proposed to be by an architect. The issues are more environmentally complex than that. Finally, the limitations are relaxed once the cottage is occupied and the owner is free to alter the environment except where they require another development permit. Particularly, there is no limitation on cutting trees. This does not ensure long term preservation and protection of the environment.

5.0 Review Conclusions

In summary, I have reviewed the additional reports submitted and conclude:

1. My review of the inventories of the features and values of Langmaid's Island found that there is not sufficient information to determine environmental impacts.

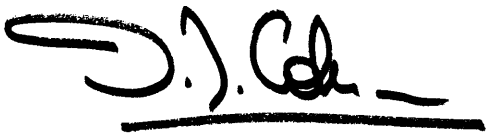
2. The policies (PPS, District OP, Township) require an assessment impact on the values for which the Island was determined to be important and protected – including diversity, quality and scenic values. I conclude that the Island meets these three criteria. These values are not properly addressed in the EIS or Planning Justification Reports. The amendments to the Planning documents recommended in the Planning Justification report rely on these values not existing. Thus, the amendments are not supported.

3. I note that the PPS not only permits but encourages local municipalities to protect areas of local significance as well as those of Provincial significance. The various arguments put forward by the proponent are based on Langmaid's not meeting Provincial standards of significance. This ignores this Provincial direction and the actions taken by the District and Township.

4. The documents do not provide a description of the development sufficient to analyze impacts. More detail is necessary on a lot by lot basis. As a result, the proposal does not conform to the Township of Lake of Bays documents or District Official Plan nor is it consistent with the Provincial Policy Statement (2014).

5. The proposed implementing by-law and mechanisms (limited zoning, conservation easements, character guidelines) are unlikely to be effective in protecting natural values.

   In conclusion, I recommend that the proposal be denied or returned for refinement as indicated. In this respect, I agree with and support the Lake of Bays Township staff report (November 2018) on the application.



Derek J. Coleman, PhD., MCIP, RPP

Appendices

District File on Langmaid's Island

LANGMAIDS ISLAND

Topographic Reference: 1:50,000 31E/3
1:10,000 10 17 6500 50050
10 17 6450 50050

Township: McLean, Lake of Bays

Area: approx. 40 ha

Ownership: Private

Coverage: Langmaid's Island was chosen for field study based on an evaluation of wildlife habitat by the Lake of Bays Heritage Foundation (Towle, 1988) which identified this relatively undisturbed island as an interesting example of both mainland and island wildlife habitat. It has also been recommended as a regionally significant candidate ANSI by Brunton (1991). Field visits were conducted on August 1 and 10 of the 1991 field season and on May 23 of the 1992 season.

Site Description:

a) Landforms and Soils:

Langmaids Island is situated in the Algonquin Highlands physiographic region, with a geology composed mainly of bedrock-drift complex. Three high peaks at 342, 362 and 363 metre elevation are of exposed bedrock with very thin drift cover. The steepest topography on the island shows an elevation of 50 metres from the water. The deep soils support a forested landscape.

b) Hydrology:

The island is situated just off the mainland north of Baysville on Lake of Bays. There is no major hydological function on the island. The moderate to steep slopes are well-drained. The shoreline is composed of rocky forested areas, sandy beaches and a small marshland.

c) Vegetation:

Langmaids Island supports a diversity of habitats including coniferous fringe forest, early successional deciduous forests, late successional mixed forests, rocky shorelines, sandy beach, marshland and steep rocky ridge exposed cliff faces. The following vegetation communities correspond to the vegetation map of Langmaids Island.

1D Early successional White Birch dominant (90%) upland deciduous forest with a mix of Trembling Aspen and Sugar Maple plus White Pine, White Cedar and Hemlock. Semi-open canopy with an understory of Bluebeard Lily, Canada Mayflower, wood ferns and Red Maple, on dry-mesic soils.

2M Mature late successional Sugar Maple, Yellow Birch, Hemlock and scattered White Cedar closed canopy upland mixed forest on deep, mesic soils. Dense understory of Striped Maple, Intermediate Wood Fern, Wild Sarsaparilla, Canada Yew. Rocky outcrops present.

3M White Birch and Hemlock mixed upland forest with Red Maple, Cedar and scattered White Pine in a closed canopy. Rich understory with trilliums, Trout Lily, Carolina Spring Beauty, White Grass and Rose Twisted Stalk.

4M Semi-open canopy upland mixed forest on areas of exposed bedrock and shallow till, with Red Oak, Red Maple, Ironwood, White Pine and White Birch plus Pin and Choke Cherries. Understory of White Ash and Sugar Maple with asters, Spreading Dogbane and Wild Sarsaparilla on dry soils.

5M White Cedar, White Birch and Yellow Birch lowland mixed forest with understory of saplings and wood ferns.

6M White Cedar and White Birch near the water edge.

7C Coniferous fringe forest of Hemlock (70%), White Cedar (5%) and White Birch (25%). Sparse understory on dry-mesic soils.

8C Coniferous forest of White Pine, Hemlock and White Spruce in a closed canopy. Outcrops of rock present and an understory with deciduous and coniferous saplings.

9C White Pine on exposed rocky terrain.

10S Shallow, rocky, marshy area bordered in tall shrubs such as Winterberry, willows, juneberries, Speckled Alder, and low shrubs such as Leatherleaf, Sweetgale and Meadowsweet. Marsh Blue Violet and Round-leaved Sundew on sandy shoreline.

11H Exposed rocky cliffs with pockets of soil supporting herbaceous and shrub species such as Staghorn Sumac, Dwarf Juniper, Pale Corydalis, Early Saxifrage, Wild Columbine, Bearberry, Poverty Grass and Crinkled Hair Grass, and three Regionally Uncommon plants: Plantain-leaved Pussytoes, Snowberry and Intermediate Pinweed.

d) Flora:

A total of 134 species of vascular plants were identified on Langmaids Island. Most of the plants were typical for the area and the forest habitats. The most unique area was the exposed, dry rocky cliffs which supported three Regionally Uncommon plant species.

e) Fauna:

Birds: Twenty-eight species of potentially breeding birds were recorded in late May of 1992. The forested interior was ideal for warblers, woodpeckers, chickadees and nuthatches. The marshy shoreline supported the Belted Kingfisher and sparrows. A spotted Sandpiper was observed on the sandy beach area, and a Common Loon in the open water. The small Seagull Island off the northeastern tip of Langmaids Island was a loafing spot for Herring Gulls, and supported a nesting Canada Goose which is considered Regionally Uncommon.

Mammals: Three mammal species were recorded by observation of scat near dens and sightings. Towle (1988) observed Fisher scat on the island and surmized that this animal used the island to forage and possibly den. The proximity of the island to the mainland would allow wildlife to migrate back and forth. The coniferous fringe of Hemlock and Cedar with Yew in the understory is ideal habitat for deer. The eastern section of the island is a deer wintering area (1989 M.N.R. deer mapping).

Herpetofauna: Four species form this category were recorded with the Regionally Uncommon Northern Ringneck Snake located in the area of White pine on exposed cliff.

Other Species: One butterfly and 4 dragonfly species were observed, plus 14 species of mushroom which were growing mainly in the coniferous fringe forest. The rocky shoreline at the bottom of the vegetation community 11H is a potential Lake Trout spawning shoal.

Disturbance and Condition:

There have been no recent disturbances to the forests on the island, however in the past the eastern section of the island may have burned. There was evidence of old burned stumps in the understory of the early successional forest dominated by White Birch with Trembling Aspen and White Cedar. These species often colonize burned over areas and dry soils. Development of the island is restricted to a cluster of buildings on the small peninsula separating the western and eastern

island sections and a limited network of paths. These buildings are no longer in use and the landowner wishes to maintain the island in a natural state. The sandy beaches are frequented by boaters who stop to picnic and swim. While some disturbance to the adjoining forests is occurring, the beaches remain relatively clean.

Criteria Fulfilled: B-1, B-3, B-5

Criterion B-1: The White Birch-Northern White Cedar mixed successional forests on sandy, mesic soils are a vegetation community type with limited representation in the District. Axe Lake shares representation with this site type.

Criterion B-3: The island contains biotic communities showing little recent disturbance. In particular, it supports long stretches of undeveloped shoreline and natural beaches in an area otherwise heavily developed for cottages.
The successional sequence following a natural disturbance (70-80 years ago) by fire on the eastern section of the island is of interest to compare with the late successional (120-140 year) forests on the western section of the island.

Criterion B-5: Langmaid's Island supports a deer wintering area as well as a potential Lake Trout shoal.

Boundaries and Buffers:

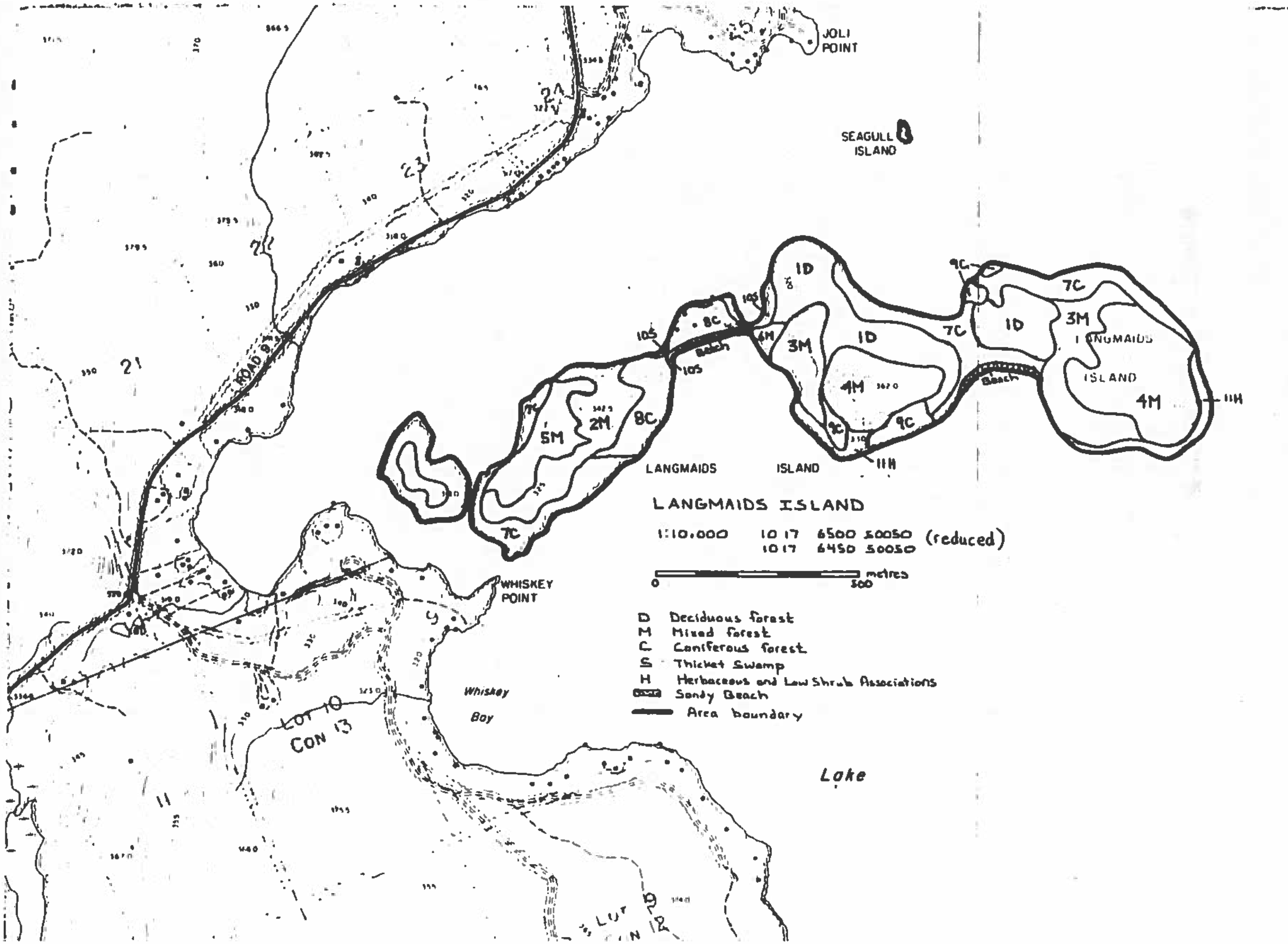
The boundary of the island follows the shoreline around the entire island plus the small island off the western tip and Seagull Island midway between Joli Point on the mainland and the northeastern end of the island. No buffer areas are identified.

Recommendations:

1) Langmaid's Island should be considered a candidate Natural Heritage Area since it meets three selection criteria.

2) Stewardship should be continued with the landowner to help him carry out his goal of protection of the island habitat.

3) The landowner should be made aware of the heavy use of the beach areas on the island. Trespassing, lack of washroom and garbage facilities and the susceptibility of the island to fires are the items of greatest concern. Posting of conservation signs may be all that is necessary to ensure the beaches and forested interior remain clean and unharmed.


JOLI POINT
SEAGULL ISLAND
ROAD 9
WHISKEY POINT
Whiskey Bay
Lake
LOT 10
CON 13
LANGMAIDS ISLAND
LANGMAIDS ISLAND
LANGMAIDS ISLAND
1:10,000
10 17 6500 50050
10 17 6450 50050
(reduced)
0
500
metres
D Deciduous forest
M Mixed forest
C Coniferous forest
S Thicket Swamp
H Herbaceous and Low Shrub Associations
Sandy Beach
Area boundary

diversity. Of particular importance is the existence of cover and privacy necessary for loon and waterfowl nesting or roosting, and the use of such areas for protection by young fish. Rating: 4 points.

Species Diversity
The following vertebrate species were recorded at the Wadis Creek mouth site: red squirrel, common loon, common merganser, mallard duck, American wigeon, great blue heron, red-eyed vireo, eastern pewee, eastern kingbird, belted kingfisher, black-capped chickadee, white-breasted nuthatch, cedar waxwing, goldfinch, red-winged blackbird, yellowthroat, bobolink, American robin, barn swallow, midland painted turtle, green frog, smallmouth bass, and several unidentified minnows or chub. Considering the time of year and brief length of time spent at the site, this represents a remarkably high diversity of species (the last three mentioned birds were likely present because of the area cleared by humans). Rating: 5 points.

Total points for Wadis Creek Mouth: 26

3.2 LANGMAIDS ISLAND

Topographic Map # 31 E/3. UTM Grid Reference 499080

The second largest island on the Lake of Bays, Langmaids lies close to the lakeshore, making it possible for wildlife to migrate back and forth between the island and the mainland. Since the island is relatively undisturbed, it represents on interesting example of both mainland and island wildlife habitat. This site was observed on several occasions for a total of approximately 6 # hours, both by canoe and on foot. The weather during these visits ranged from sunny and hot, to cool, windy and raining.

Rarity
It is difficult to make a judgement on islands relative to this criterion since they may embrace a diversity of habitats depending upon their size. Therefore an average score will be assigned in this case. Rating: 3 points.

Size/Typicalness
Again, this is a criterion on which it is difficult to assign a score. What for example, is typical island habitat? Furthermore, the larger the island and the closer it is to shore, the more similar it will appear to mainland habitats. With these difficulties in mind it is again preferable to assign an average score. Rating: 3 points.

Naturalness
Aside from the existence of three buildings in the centre of the island and a limited network of paths, Langmaids represents a high degree of naturalness. This is especially notable in reference to the long stretches of undeveloped shoreline – the most threatened of habitats around the Lake of Bays. Rating: 5 points.

Vulnerability
Henry Adamson, the owner of Langmaids Island, has every intention of keeping the island in its present natural state. Therefore, for the foreseeable future this site should remain well preserved. Rating: 1 point.

Habitat Diversity/Importance for Wildlife
Even for its size, Langmaids Island has a surprisingly high diversity of habitat. This includes coniferous fringe, hardwood forest, mixed forest, rocky shoreline, sandy beach, marshland and topography ranging up to over 150 feet (45 m) above lake level. With this variety of habitats, the proximity of the mainland, and the undisturbed state of the island, this represents a high degree of importance for wildlife. Rating: 5 points.

Species Diversity
The following vertebrate species were recorded at Langmaids Island: fisher, beaver, snowshoe hare, red squirrel, common loon, common raven, common crow, ruffed grouse, spotted sandpiper, belted kingfisher, blue jay, eastern pewee, veery, black-capped chickadee, white-breasted nuthatch, yellow-rumped warbler, song sparrow, American toad and mink frog.

Noteworthy here is the evidence of fisher (droppings were found) a species that relies heavily on expanses of mature forest. This animal likely includes the island within its foraging circuit, and may even den in its undisturbed habitat. Rating: 5 points.

Total score for Langmaids Island: 22 points.

3.3 LOWER OXTONGUE RIVER

Topographic Maps #31 E/6 and 31 E/7. UTM Grid Reference 570193

Stretching some thirty-five kilometres from what is now Algonquin Park to the Lake of Bays, the Oxtongue River was once an important link in a canoe route through Muskoka to Georgian Bay. In this study the "lower" Oxtongue is considered as that part which extends from Marsh's Falls to the river's mouth at Dwight Bay, Lake of Bays (plate 10).

As it approaches the Lake of Bays the Oxtongue becomes a relatively slow moving and wide river, meandering over a flat area of Pleistocene alluvial deposits. Over a period of several thousand years numerous oxbow lakes have been formed (plate 11) as, through erosion, the river changes course. This represents a highly dynamic drainage system and a major water and nutrient input for the Lake of Bays. The area was observed on several occasions, day and night, both on foot and by canoe.

Rarity
While the Oxtongue is not unique as a meandering river and oxbow lake complex in Muskoka (the Big East River further north is another example), it is nevertheless not typical of the usually more rugged Canadian Shield landscape. That such a river should be directly accessible from a major resort

-8

OF NATURAL AND SCIENTIFIC INTEREST · LIFE SCIENCE CHECKSHEET

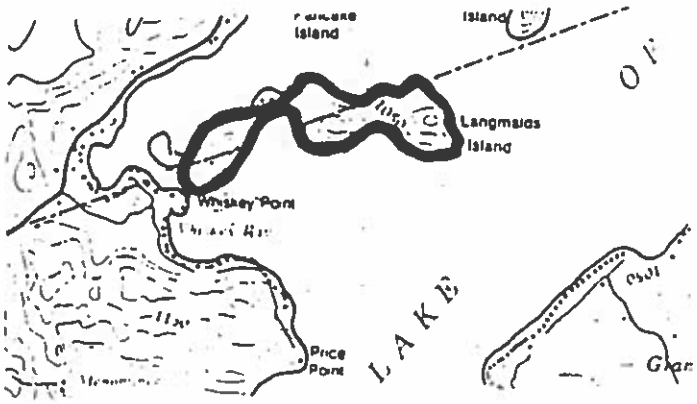
Site Name	Map Name	Map Number	UTM Ref.
Langmaids maids Island Candidate ANSI	Bracebridge	31 E/3	498080

County, District or Regional Municipality	Latitude	Longitude	ALTITUDE Min.	ALTITUDE Max.
Muskoka District	45° 13'	79° 06'	315m	350m

Locality 7 km north of Baysville — Area ca. 40 ha.

Township(s) — *1 : 50,000* — *NTS Map Showing Area Boundaries*

McLean Township



Ownership Private (H. Adamson)

Administration

Site Region and District	MNR Region and District
Algonquin (5-8)	Algonquin (Bracebridge)

Aerial Photographs

Year	Roll	Flight Line	Numbers

Physical and Biological Features

The site consists on a single narrow island in Lake of Bays formed by three large hills forested in mature late successional mixed forest (120 -140 year old Eastern Hemlock, Sugar Maple) on the western half and submature (70 - 80 year old) early successional deciduous forest (Trembling Aspen, White Birch, Sugar Maple) on the east. No recent forest disturbance has occurred and development is restricted to a cluster of buildings on the northern shore.

The landowner has apparently expressed his wishes to maintain the property in a natural condition (Towle 1988).

The site is on Ground Moraine landform and shares representation with a number of protected sites in the site district, notably Bigwind Provincial Park.

Major Information Sources

K. TOWLE. 1988. An Evaluation of Wildlife Habitat in the Vicinity of Lake of Bays. The Lake of Bays Heritage Foundation, Muskoka.

Evaluation and Priorities

Regionally Significant forest

Date Compiled October 1991 — *Compiler* Daniel F. Brunton

Ontario Ministry of Natural Resources, Parks and Natural Areas Policy Branch, Toronto, Ontario M7A 1W3

Langmaids Island

Langmaids Island, with its beautiful sandy beaches, is the second largest island on Lake of Bays. The island's proximity to mainland and relatively undisturbed condition provide ample opportunity for wildlife to migrate between it and the mainland. Thus, the island represents an interesting example of mainland and island wildlife habitat.

The island itself is divided into three segments that are joined together by two narrow strips of land. A few buildings and a boathouse are present on the northern side of the middle portion but are seldom used. Two long sandy beaches on the southern shores appear to be frequently used by boaters.

The two larger sections of the island are undeveloped and represent a high degree of naturalness. This is notable in light of the scarcity of undeveloped shoreline habitat around Lake of Bays. These sections support a diversity of habitat types including coniferous fringe, hardwood forest, mixed forest, rocky pine-clad shoreline, sandy beach shoreline and marshland. Topography ranges to over 45m above the lake level. At the summit of these hills is a commanding and very beautiful view of the lake.

The diversity of habitat and wildlife that the island supports is a reflection of the island's topography, soils, and climate. On the exposed pine clad rocks, where the heat from the sun is intense, the most common vegetation is Sumac, Juniper, Red Oak, Blueberries and Chokeberries. The interior moist slopes with more soil have quite a different forest community of White Pine and Sugar Maple, Yellow Birch, and Hemlock. This mixed forest is home to woodland birds such as Ruffed Grouse, Eastern Wood-peewee and many warblers. It is also a good place to listen for the melodic downward spiral song of the Veery, a member of the thrush family.

In the cooler lowland fringes, mostly coniferous forests of Hemlock, Cedar and Yellow Birch grow. These provide shelter to Red Squirrels, Snowshoe Hare, Fishers, Black-capped Chickadees, Yellow-rumped Warblers, and many other birds.

Much of the remainder of the island is clad in hardwood deciduous forests with White Birch as the dominant species. Scattered throughout these stands are Red Maple, Red Oak, Ironwood, White Ash and Yellow Birch trees. The occasional majestic White Pine protrudes through the hardwood canopy. Evidence of charcoaled

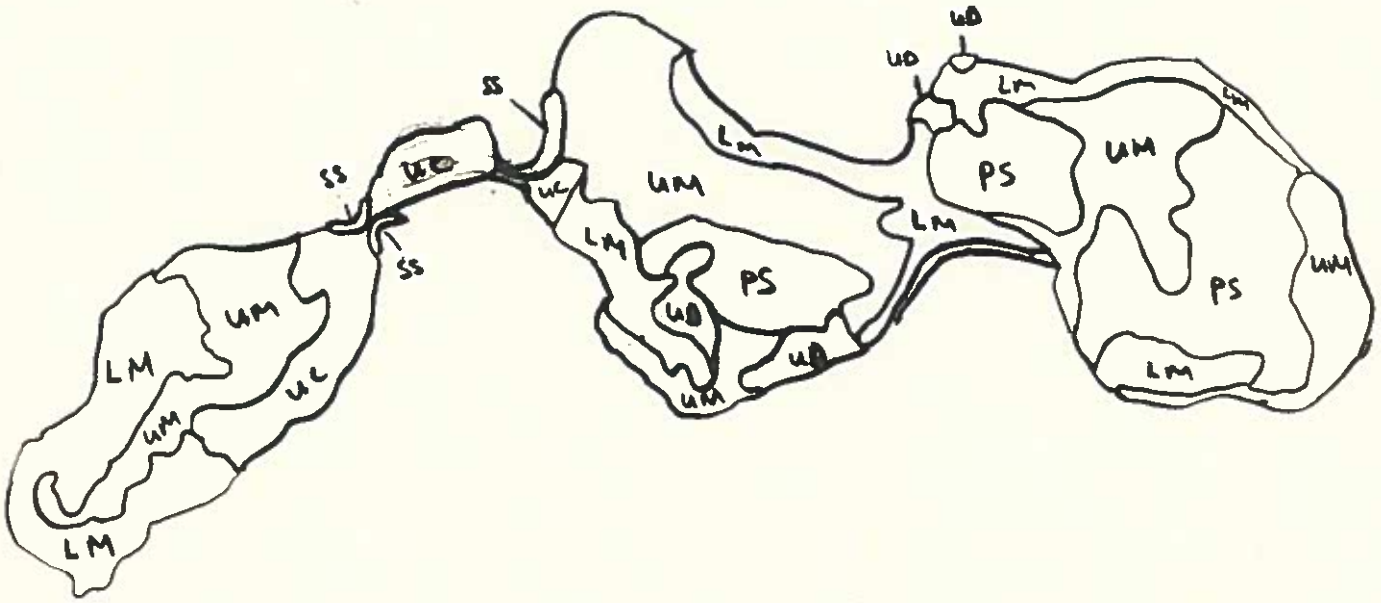
stumps suggests that this island has been regenerated by periodic burning, perhaps after logging. The early successional stage of growth and the dominance of White Birch, which grows well in full sunlight also support this theory.

Some of the sheltered inlets along the edge of the island support marshes edged with Winterberry, Leatherleaf, Willows and Serviceberries. These marshes are good spots to watch for robust blue-and-white Belted Kingfishers, which often perch in nearby trees to watch for small fish. Marshes are home also to Mallards, Spotted Sandpiper and Song Sparrows, as well as Beaver. They may provide protected nesting sites for Common Loon which fish in the adjacent open waters.

In the sky over Langmaids Island, you are likely to see Common Ravens, Herring Gulls and Turkey vultures soaring on wind currents.

Langmaids Island provides the Lake of Bays with an excellent example of an island with a high degree of naturalness and undeveloped shoreline. The high diversity of habitats relative to its total area, the wildlife migration opportunity from the mainland, and the quality of its communities make Langmaids an interesting and very special part of Muskoka's natural heritage.

LANGMAID'S ISLAND



Langmaid's Island Habitat Map

Forests

Upland

UC - pine stand
UD - upland deciduous
UM - upland mixed
PS - pine stand

Lowland

LM - lowland mixed

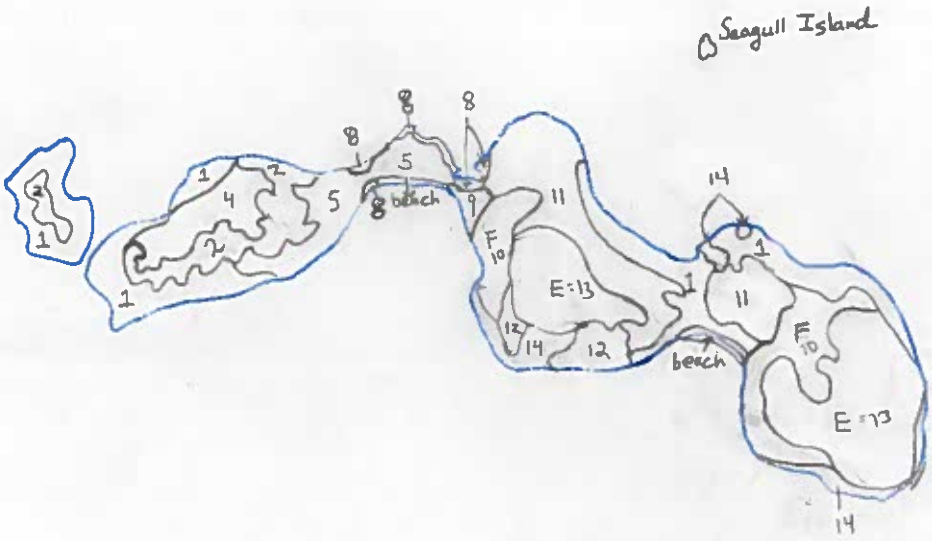
Wetlands

Swamp

SS - shrub swamp

LANGMAIDS ISLAND

AIRPHOTO 7271-50



Langmaids Island
Vegetation Map

1 = C-3 Coniferous fringe of Hemlock (70%), some White Birch (25%), some White Cedar (5%). No understory.

2 = M-3 Mature late successional mixed forest of Sugar Maple, Yellow Birch, Hemlock and some White Cedar. Dense understory of young Striped Maple, Intermediate Wood Fern, Wild Sarsaparilla, Canada Yew. Some rocky outcrops present.

4 = M- White Cedar, White Birch, Yellow Birch. Understory of young trees and Wood Fern.

5 = C- White Pine, Hemlock, White Spruce in a closed canopy. Outcrops of rock. Young tree understory.

9 = M- White Cedar and White Birch near water edge.

8 = Shallow, rocky, marshy area with Winterberry, Leatherleaf, Salix spp., Amelanchier spp.

10 = M-2 = F White Birch, Hemlock, Red Maple and White Cedar with scattered White Pine. Closed canopy.

11 = D- Early successional deciduous White Birch (90%) forest. Associates include Trembling Aspen and Sugar Maple with some White Pine, White Cedar and Hemlock. Semi-open canopy. Understory of Yellow Clintonia, Bunchberry, Dryopteris spp., Maple saplings.

12 = C-1 White Pine on rocky terrain.

13 = E = M- Semi-open canopy upland mixed forest with Red Maple, Red Oak, Ironwood, White Pine, White Birch and White Ash. Understory of Aster, Spreading Dogbane, Wild Sarsaparilla, young Sugar Maple.

14 = Exposed rocky cliffs with some White Pine and/or Sumac.

Codes for Stewardship Site Report Maps

Lowland Coniferous	[LC] = 1
Upland Coniferous	[UC] = 5
Lowland Mixed	[LM] = 4, 9
Upland Mixed	[UM] = 2, 10, 13
Upland Deciduous	[UD] = 11
Shrub Swamp	[SS] = 8
Pine Stand	[PS] = 12, 14

Langmaids Island (134 Species)
Plant Composite List - 18/09/92

Site Inspections: 01/08/91, 10/08/91, 23/05/92

GENUS	SPECIES	COMMON NAME
Abies	balsamea	Balsam Fir
Acer	pensylvanicum	Striped Maple
Acer	rubrum	Red Maple
Acer	saccharum	Sugar Maple
Acer	spicatum	Mountain Maple
Actaea	rubra	Red Baneberry
Alnus	incana ssp rugosa	Speckled Alder
Amelanchier	arborea	Downy June Berry
Amelanchier	laevis	Smooth June Berry
Amelanchier	saguinea var saguinea	Roundleaf June Berry
Anaphalis	margaritacea	Pearly Everlasting
Antennaria	neglecta	Field Pussytoes
Antennaria	parlinii ssp fallax	Plantain-leaved Pussytoe
Apocynum	androsaemifolium	Spreading Dogbane
Aquilegia	canadensis	Wild Columbine
Arabis	glabra	Tower Mustard
Aralia	hispida	Bristly Sarsaparilla
Aralia	nudicaulis	Wild Sarsaparilla
Aralia	racemosa	Spikenard
Arctostaphylos	uva-ursi	Bearberry
Aster	cordifolius	Heart-leaved Aster
Aster	macrophyllus	Large-leaved Aster
Aster	umbellatus	Flat-topped Aster
Betula	alleghaniensis	Yellow Birch
Betula	papyrifera	White Birch
Calamagrostis	canadensis	Blue-Joint Grass
Carex	arctata	Drooping Wood Sedge
Carex	communis	Fibrous Rooted Sedge
Carex	crinita	Fringed Sedge
Carex	peckii	Peck's Sedge
Chamaedaphne	calyculata	Leatherleaf
Chimaphila	umbellata ssp cisatlantica	Pipsissewa
Cinna	latifolia	Drooping Wood Reed
Claytonia	caroliniana	Carolina Spring Beauty
Clematis	virginiana	Virgin's Bower
Clinopodium	vulgare	Wild Basil
Clintonia	borealis	Yellow Clintonia
Conyza	canadensis	Horseweed
Coptis	trifolia ssp groenlandica	Goldthread
Cornus	canadensis	Bunchberry
Cornus	rugosa	Roundleaf Dogwood
Corydalis	sempervirens	Pale Corydalis
Cystopteris	fragilis	Fragile Fern
Danthonia	spicata	Poverty Grass
Deschampsia	flexuosa	Crinkled Hair Grass
Diervilla	lonicera	Northern Bush-honeysuckl
Drosera	rotundifolia	Round-leaved Sundew
Dryopteris	intermedia	Intermediate Wood Fern
Dryopteris	marginalis	Marginal Wood Fern
Elymus	trachycaulus ssp trachycaulus	Wheat Grass
Epilobium	angustifolium	Fireweed
Erythronium	americanum	Trout Lily
Euthamia	graminifolia	Narrow-leaved Goldenrod
Fagus	grandifolia	American Beech
Fragaria	virginiana ssp glauca	Common Strawberry
Fraxinus	americana	White Ash

Langmaids Island (134 Species)
Plant Composite List - 18/09/92

Site Inspections: 01/08/91, 10/08/91, 23/05/92

GENUS	SPECIES	COMMON NAME
Galium	triflorum	Fragrant Bedstraw
Gaultheria	procumbens	Redberry Wintergreen
Ilex	verticillata	Winterberry
Iris	versicolor	Large Blue Flag
Juniperus	communis	Dwarf Juniper
Lechea	intermedia	Intermediate Pinweed
Linnaea	borealis ssp longifolia	Twinflower
Lonicera	canadensis	Fly Honeysuckle
Lycopodium	annotinum	Stiff Club-moss
Lycopodium	clavatum var clavatum	Staghorn Club-moss
Lycopodium	dendroideum	Round-branched Club-moss
Lycopodium	lucidulum	Shining Club-moss
Lycopodium	obscurum var obscurum	Tree Club-moss or Ground
Lycopus	uniflorus	Northern Bugleweed
Lysimachia	terrestris	Yellow Loosestrife
Maianthemum	canadense	Canada Mayflower
Maianthemum	racemosum	False Solomon's Seal
Medeola	virginiana	Indian Cucumber Root
Mentha	arvensis ssp borealis	Wild Mint
Mitchella	repens	Partridgeberry
Monotropa	uniflora	Indian Pipe
Myrica	gale	Sweet Gale
Nemopanthus	mucronatus	Mountain Holly
Onoclea	sensibilis	Sensitive Fern
Oryzopsis	asperifolia	White Grass
Osmunda	cinnamomea	Cinnamon Fern
Ostrya	virginiana	Ironwood; Hop-hornbeam
Panicum	acuminatum/implicatum	Panic Grass
Picea	glauca	White Spruce
Pinus	resinosa	Red Pine
Pinus	strobus	White Pine
Poa	saltuensis	Weak Blue Grass
Polygonatum	pubescens	Hairy Soloman's Seal
Polygonum	cilinode	Fringed Bindweed
Polypodium	virginianum	Common Polypody Fern
Populus	grandidentata	Large Tooth Aspen
Populus	tremuloides	Trembling Aspen
Prunus	pensylvanica	Pin Cherry
Prunus	serotina	Black Cherry
Prunus	virginiana	Choke Cherry
Pteridium	aquilinum	Bracken Fern
Pyrola	elliptica	Shinleaf
Quercus	rubra	Red Oak
Ranunculus	abortivus	Kidneyleaf Buttercup
Rhus	typhina	Staghorn Sumac
Ribes	cynosbati	Prickly Gooseberry
Ribes	glandulosum	Skunk Currant
Salix	humilis	Prairie Willow
Sambucus	canadensis	Common Elderberry
Saxifraga	virginiensis	Early Saxifrage
Scirpus	cyperinus	Cyperus Bulrush
Scutellaria	lateriflora	Mad-dog Skullcap
Silene	antirrhina	Sleepy Catchfly
Solidago	canadensis	Canada Goldenrod
Solidago	nemoralis	Gray Goldenrod
Sorbus	americana	A.Mountain Ash
Spiraea	alba	Narrow-leaved Meadowsweet

Langmaids Island (134 Species)
Plant Composite List - /09/92

Site Inspections: 01/08/91, 10/08/91, 23/05/92

GENUS	SPECIES	COMMON NAME
Streptopus	roseus	Rose Twisted Stalk
Symphoricarpos	albus	Snowberry
Taraxacum	officinale	Common Dandelion
Taxus	canadensis	Canadian Yew
Thalictrum	pubescens	Tall Meadow-Rue
Thuja	occidentalis	N. White Cedar
Tiarella	cordifolia	Foamflower
Tilia	americana	American Basswood
Triadenum	fraseri	Marsh St. John's Wort
Trientalis	borealis	Starflower
Trillium	erectum	Red Trillium
Trillium	grandiflorum	White Trillium
Trillium	undulatum	Painted Trillium
Tsuga	canadensis	Eastern Hemlock
Vaccinium	angustifolium	Late Low Blueberry
Vaccinium	myrtilloides	Velvetleaf Blueberry
Verbascum	thapsus	Common Mullein
Veronica	arvensis	Corn Speedwell
Viburnum	lantanoides	Hobblebush
Viola	cucullata	Marsh Blue Violet
Woodsia	ilvensis	Rusty Woodsia

Langmaids Island (3 Species)

Introduced Species Composite List 06/10/92

Site Inspections: 01,10/08/91, 23/05/92

I	GENUS	SPECIES	COMMON NAME
*	Taraxacum	officinale	Common Dandelion
*	Verbascum	thapsus	Common Mullein
*	Veronica	arvensis	Corn Speedwell

I = INTRODUCED SPECIES

Langmaids Island (3 Species)
are Plant Composite List 23/10/92

Site Inspections: 1,10/08/91, 23/05/92

GENUS	SPECIES	COMMON NAME	NR	PR	RR	RU
Antennaria	parlinii ssp fallax	Plantain-leaved Pussytoe				X
Lechea	intermedia	Intermediate Pinweed				X
Symphoricarpos	alous	Snowberry				X

NR = NATIONALLY RARE
PR = PROVINCIALLY RARE
RR = REGINALLALY RARE
RU = REGIONALLY UNCOMMON

Langmaids Island
Bird List - 30/06/92

Site Inspection: 23/05/92

GENUS	SPECIES	FIRST NAME	LAST NAME	NR	PR	RR	RU
Dumetella	carolinensis	Gray	Catbird				
Parus	atricapillus	Black-capped	Chickadee				
Corvus	brachyrhynchos	American	Crow				
Colaptes	auratus	Common	Flicker				
Myiarchus	crinitus	Crested,Great	Flycatcher				
Branta	canadensis	Canada	Goose				
Bonasa	umbellus	Ruffed	Grouse				
Larus	argentatus	Herring	Gull				
Cyanocitta	cristata	Blue	Jay				
Megaceryle	alcyon	Belted	Kingfisher				
Gavia	immer	Common	Loon				
Anas	platyrhynchos	---	Mallard				
Sitta	canadensis	Red-breasted	Nuthatch				
Seiurus	aurocapillus	---	Ovenbird				
Corvus	corax	Common	Raven				
Turdus	migratorius	American	Robin				
Actitis	macularia	Spotted	Sandpiper				
Melospiza	melodia	Song	Sparrow				
Zonotrichia	albicollis	White-throated	Sparrow				
Hirundo	rustica	Barn	Swallow				
Catharus	guttatus	Hermit	Thrush				
Mniotilta	varia	Black-and-white	Warbler				
Dendroica	pensylvanica	Chestnut-sided	Warbler				
Dendroica	caerulescens	Blk.-throated Blue	Warbler				
Dendroica	virens	Blk-throated Green	Warbler				
Dendroica	fusca	Blackburnian	Warbler				
Dendroica	coronata	Yellow-rumped	Warbler				
Picoides	pubescens	Downy	Woodpecker				

NR = NATIONALLY RARE
PR = PROVINCIALLY RARE
RR = REGIONALLY RARE
RU = REGIONALLY UNCOMMON

Langmaids Island (1 species)
Bird Composite List - 2[illegible]9/92

Site Inspection: 23/05/92

GENUS	SPECIES	FIRST NAME	LAST NAME	NR	PR	RR	RU
Branta	canadensis	Canada	Goose				X

NR = NATIONALLY RARE
PR = PROVINCIALLY RARE
RR = REGIONALLY RARE
RU = REGIONALLY UNCOMMON

Langmaids Island (3 Species)
Mammal Composite List - 28/0[illegible]92

Site Inspections: 01/08/91, 23/05/92

GENUS	SPECIES	COMMON NAME
Erethizon	dorsatum	Porcupine
Procyon	lotor	Raccoon
Tamiasciurus	hudsonicus	Red Squirrel

Langmaids Island (4 Species)
Herpetofauna Composite List - 24/09/92

Site Inpections: 01,09/08/91, 23/05/92

COMMON NAME	SCIENTIFIC NAME
American Toad	Bufo americanus
Wood Frog	Rana sylvatica
Green Frog	Rana clamitans melanota
Northern Ringneck Snake	Diadophis punctatus edwardsi

Langmaids Island (1 Speci...)
Rare Herpetofauna Composite List 24/09/92

Site Inspections: 01,09/08/91, 23/05/92

COMMON NAME	SCIENTIFIC NAME	NR	PR	RR	RU
Northern Ringneck Snake	Diadophis punctatus edwardsi				X

NR = NATIONALLY RARE
PR = PROVINCIALLY RARE
RR = REGIONALLY RARE
RU = REGIONALLY UNCOMMON

Langmaids Island (1 species)
Butterfly List - 03/10/92

Site Inspection: 01/08/91

GENUS	SPECIES	FIRST NAME	LAST NAME
Danaus	plexippus		MONARCH

Langmaids Island (4 Species)
Dragonfly List - 04/10/92

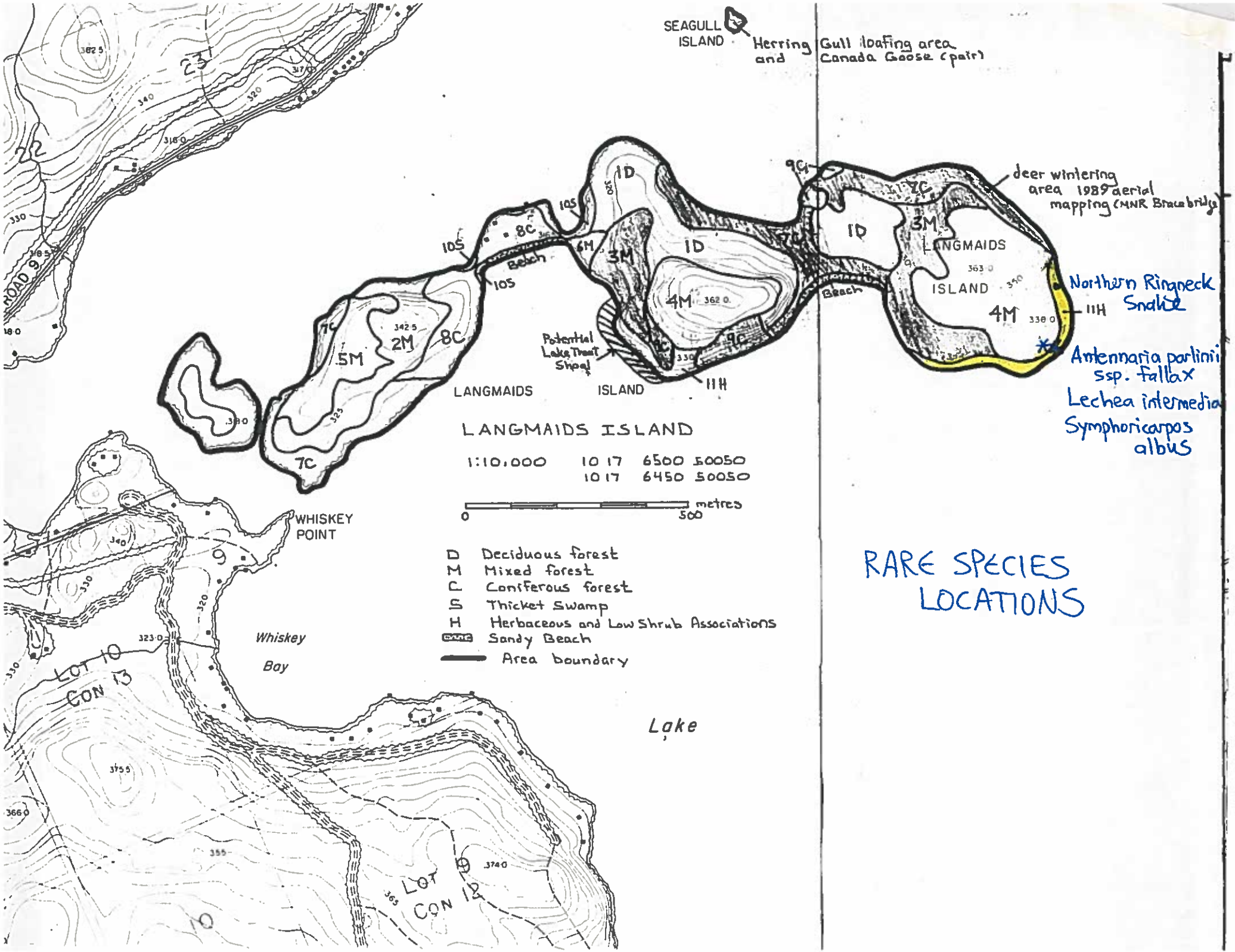
Site Inspection: 01/08/91

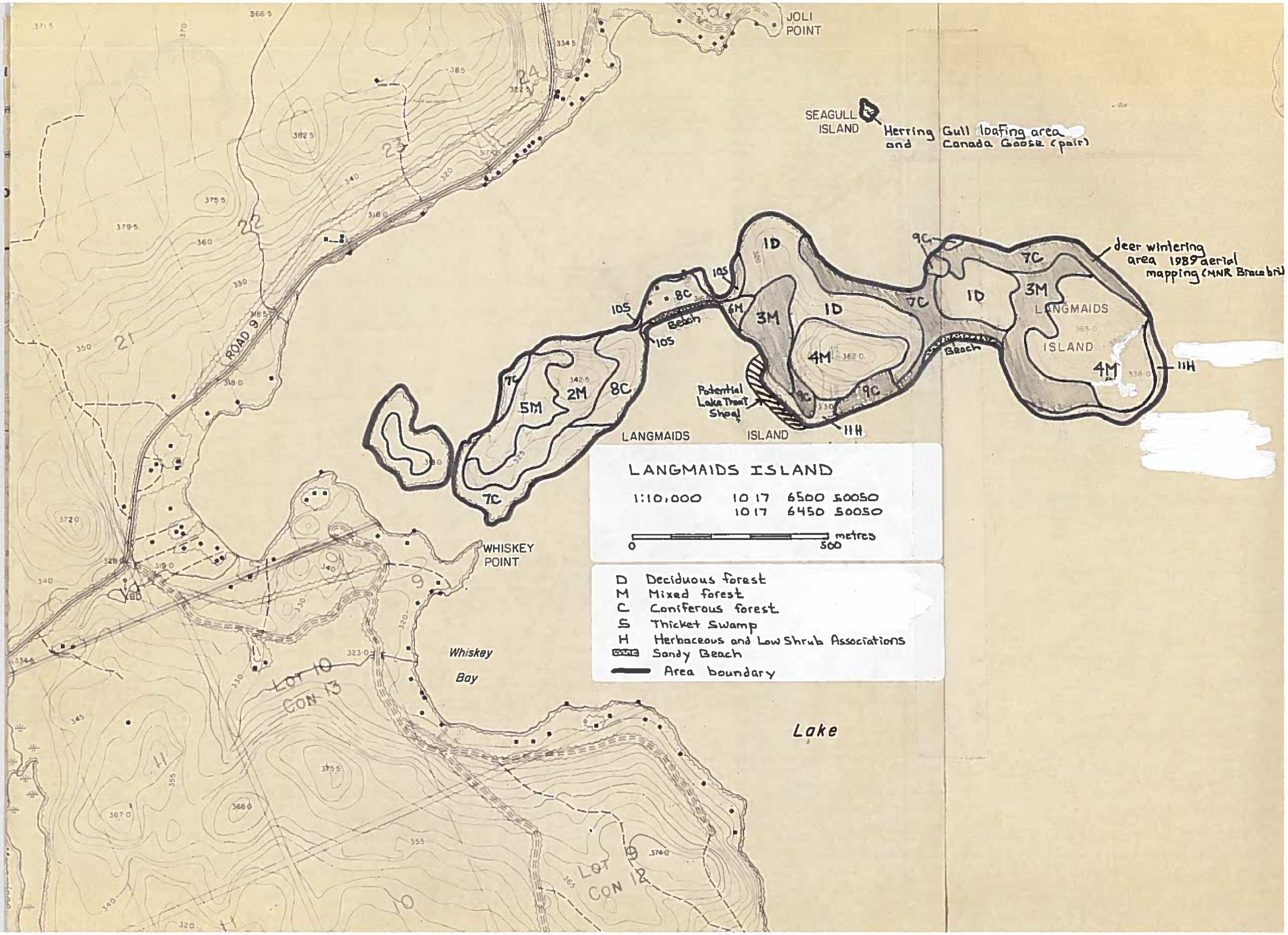
GENUS	SPECIES	COMMON NAME
Lestes	rectangularis	Slender Spread-wing
Aeshna	canadensis	Canadian Blue Darner
Aeshna	umbrosa	Common Paddle-tail
Sympetrum	vicinum	Little Red Skimmer

Langmaids Island (14 Species)
Mushroom Composite List - 0[illegible]0/92

Site Inspections: 1,9/08/91

GENUS	SPECIES	COMMON NAME
Chlorosplenium	aeruginosum	Blue-green Stain
Amanita	brunnescens	Clef-foot Amanita
Amanita	muscaria	Fly Agaric
Amanita	virosa	Destroying Angel
Collybia	butyracea	Buttery Collybia
Humidicutis	marginatus	Orange-gilled Waxy Cap
Hypsizygus	tessulatus	Elm Oyster
Lactarius	deceptivus	Deceptive Milky
Oudemansiella	radicata	
Boletus	edulis	Edible Bolete
Leccinum	insigne	Aspen Scaber Stalk
Leccinum	subglabripes	Yellow Tubed Scaber Stalk
Fomes	fomentarius	Tinder Polypore
Ganoderma	applanatum	Artist's Conch Polypore


SEAGULL ISLAND
Herring Gull loafing area and Canada Goose (pair)
deer wintering area 1989 aerial mapping (MNR Bracebridge)
Northern Ringneck Snake
Antennaria parlinii ssp. fallax
Lechea intermedia
Symphoricarpos albus
LANGMAIDS ISLAND
1:10,000 10 17 6500 50050
10 17 6450 50050
0 500 metres
D Deciduous forest
M Mixed forest
C Coniferous forest
S Thicket Swamp
H Herbaceous and Low Shrub Associations
Sandy Beach
Area boundary
Potential Lake Trout Shoal
WHISKEY POINT
Whiskey Bay
Lake
LOT 10 CON 13
LOT 9 CON 12
ROAD 9
RARE SPECIES LOCATIONS


LANGMAIDS ISLAND
1:10,000
10 17 6500 50050
10 17 6450 50050
0
500
metres
D Deciduous forest
M Mixed forest
C Coniferous forest
S Thicket Swamp
H Herbaceous and Low Shrub Associations
Sandy Beach
Area boundary
JOLI POINT
SEAGULL ISLAND
Herring Gull loafing area and Canada Goose (pair)
deer wintering area 1989 aerial mapping (MNR Bracebridge)
1D
3M
4M
6M
7C
8C
9C
10S
11H
2M
5M
Beach
Potential Lake Trout Shoal
LANGMAIDS
ISLAND
WHISKEY POINT
Whiskey Bay
Lake
ROAD 9
LOT 10
CON 13
LOT 9
CON 12

"THE BEST OF THE PAST FOR THE FUTURE"

LANGMAID'S ISLAND HERITAGE AREA

BACKGROUND

During the summers of 1990 to 1992 fieldwork was completed to assess candidate areas in Muskoka for their heritage value. A final report was produced in 1994. In total 48 heritage areas and 11 heritage sites were recognized as being significant within Muskoka.

The current District Official Plan policies that pertain to heritage areas were approved in 1991. These policies need to be reviewed and enhanced where appropriate to help deal with land use issues related to the heritage areas. Heritage areas are at the very heart of what makes Muskoka such a unique and vibrant place.

SIGNIFICANCE OF THE AREA

Location: McLean Township, Lake of Bays
Size: 55 hectares
Features: This island is situated just off the mainland north of Baysville. The narrow island is formed by three large hills that rise up to 50m above the elevation of the water. The geology is mainly bedrock-drift complex, with deeper soils on the slopes and lowlands supporting early successional White Birch-Trembling Aspen deciduous forests and late successional Sugar Maple-Yellow Birch-Eastern Hemlock mixed forests. The undeveloped rocky shoreline is mainly coniferous fringe forest. A small rocky island, Seagull Island that is situated between Langmaid's and Joli Point on the mainland is a nesting ground for Canada Geese.

CRITERIA FULFILLED:

Diversity
Quality and Disturbance
Fish and Wildlife Concentrations
Scenic Landscapes

OWNERSHIP & DISTURBANCE

Ownership: The island is privately owned.
Disturbance is minimal, as development has been restricted to a cluster of buildings on the small peninsula separating the western and eastern island sections.

SENSITIVITY

The sensitivity of the site is related to the natural quality of the forested island as wildlife habitat and undisturbed shoreline.

NEXT STEPS

Muskoka is reviewing existing land use policies within the District Official Plan as they relate to heritage areas. Landowner, agency and interest group involvement in the process will help determine appropriate policy for these valuable natural areas, and will help to identify local concerns and issues.

For more detailed information on this area, refer to the Natural Heritage Evaluation of Muskoka, February 1994.