



**Amity Beach Area Structure Plan** 

**Prepared for:** 

**Amity Beach Developments Ltd.** 

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### 1.0 INTRODUCTION

Lac La Biche County's motto, "Welcoming by Nature", refers not only to the many recreational opportunities on the lake itself, but also the bounty of forests, wetlands, and prairie within its boundary. From this, Lac La Biche County experiences strong economic growth. Dominant activities within the County include agriculture, forestry and oil and gas. The County also has affordable land for industrial, commercial and residential development.

According to the Lac La Biche County Municipal Census 2013, the population of the County is 12,220. Significant growth in country residential and resort recreational developments have taken place near the County's many lakes and environmental features, specifically within the vicinity of the hamlets of Lac La Biche, Plamondon and Beaver Lake.

### 1.1 PURPOSE

The intent of this Area Structure Plan (ASP) is to guide the future development of the location known as Amity Beach. The proposed development is a lakeshore community comprised of twenty-one (21) single-family residential lots, each approximately 0.2 ha (0.5 ac) in size.

This ASP will provide an overview of the land use pattern, transportation layout, and servicing concept. It will also demonstrate how the open space features will be incorporated and how natural features currently existing on the site will be preserved.

### 1.2 PLAN AREA LOCATION

Amity Beach is located along Campsite Road, approximately 6.0 km northeast of Plamondon. The study area is a single property, 12.8 ha (31.6 ac) in size, and legally described as Lot 1, Plan LACLABI or RL-1-68-16-W4M. The Location of the plan area is shown in Figure 1.

### 1.3 PUBLIC CONSULTATION

In preparation of the Amity Beach ASP the first of two public consultation meetings was held on March 1<sup>st</sup>, 2016. A second meeting is scheduled to be held on July 27<sup>th</sup>, 2016. The purpose of these meetings is to provide an informal opportunity for stakeholders and the general public to learn of and ask questions about the proposed development. All recorded comments and feedback are collected and reviewed for the purpose of informing the content of the Amity Beach ASP.



# FIGURE 1 LOCATION

AMITY BEACH AREA STRUCTURE PLAN

> C.o.T.# 132 134 909 LAC LA BICHE COUNTY

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### 2.0 FACTORS INFLUENCING DEVELOPMENT

### 2.1 POLICY CONTEXT

This Area Structure Plan has been prepared in conformance with the Municipal Government Act, the Lower Athabasca Regional Plan and the Lac La Biche Municipal Development Plan.

### 2.1.1 LOWER ATHABASCA REGIONAL PLAN (LARP)

The Lower Athabasca Region Plan (LARP) was approved by the Government of Alberta in August 2012. It encourages robust growth, vibrant communities and a healthy environment within the region over the next fifty (50) years. It provides guidance regarding land use management for the region through various desired outcomes.

This ASP supports the following LARP outcomes:

Outcome 3: Landscapes are Managed to Maintain Ecosystem Function and Biodiversity

This ASP supports Outcome 3 by promoting conservation of vegetation and wildlife corridors where feasible, and minimizing land disturbance impacts to the area's biodiversity. The site is designed to utilize the natural topography of the site for natural storm drainage while reducing impacts of various swamps, fens and bogs located within the site.

Outcome 5: Infrastructure Development Supports Economic and Population Growth

The proposed development also supports Outcome 5 by providing housing to support the population growth within the County.

### 2.1.2 LAC LA BICHE COUNTY MUNICIPAL DEVELOPMENT PLAN (MDP)

The Lac La Biche Municipal Development Plan, Bylaw 13-020, was adopted in September 2013. This Plan provides a framework for future growth and development of Lac La Biche County in an orderly, economical and sustainable way. Under the MDP, the subject property is designated as Residential-Estate (see Image 1).

The Amity Beach Area Structure Plan supports the residential objectives as outlined in Section 4.1 of the MDP including supporting residential development that is orderly, efficient and attractive; and supporting a mix of housing types and forms to ensure a diverse housing supply within the County.

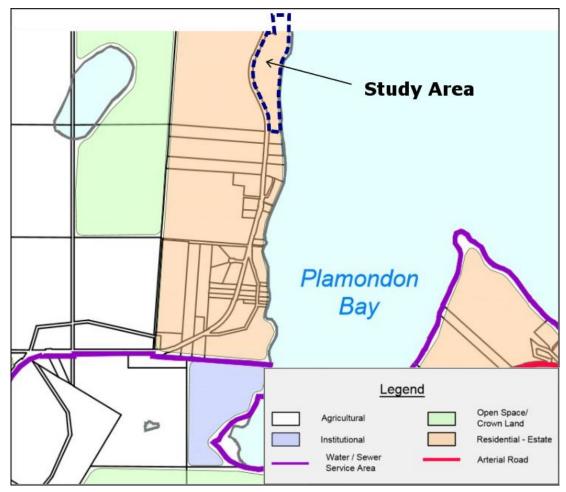


Image 1: Study area as shown in the MDP Future Land Use Map

### 2.1.3 LAC LA BICHE COUNTY LAND USE BYLAW (LUB)

The Lac La Biche County Land Use Bylaw 12-024 was adopted in August 2012. The purpose of the Bylaw is to regulate and control the use and development of land and buildings within Lac La Biche County to achieve the orderly and economic development of land. It is a tool used to execute the vision of the County's Municipal Development Plan. Under the Land Use Bylaw, the subject property is designated as Country Residential District (CR) (see Image 2), which will accommodate the proposed residential development consisting of twenty-one (21) lots, approximately 0.2 ha (0.5 ac) in size.

### 2.1.4 SITE CONTEXT AND CURRENT LAND USE

Currently there is a single structure, an abandoned foundation in the northern portion of the property, as well as the deconstructed remains of several buildings that used to be on the site. There are two (2) cultivated areas on the property, one (1) located to the center and the other towards the north (see Image 3). A large proportion of the land remains as undisturbed vegetation consisting of tree stands and wetlands. The sandy beach along the property has become a popular access point for the lake.

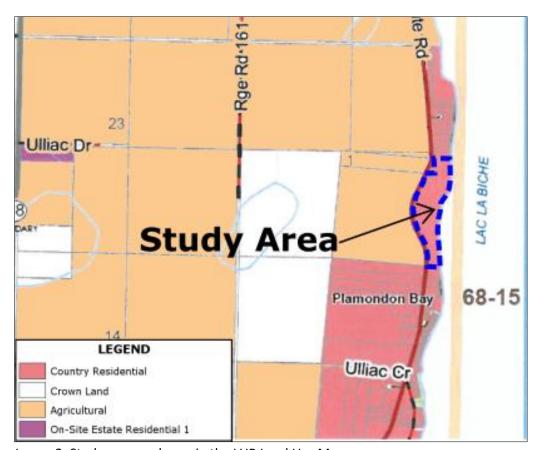


Image 2: Study area as shown in the LUB Land Use Map

### 2.1.5 HISTORICAL RESOURCES IMPACT ASSESSMENT

Historical Resources Act clearance<sup>1</sup> was granted to the subject area on June 8<sup>th</sup>, 2015 subject to Section 31 of the Resources Act which states that "a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the minister of the discovery". The clearance states

<sup>&</sup>lt;sup>1</sup> Historical Resources Application submitted under separate cover

that a chance discovery of historical resources on the subject land is to be reported to the contacts identified within the listing of Historic Resources.

### 2.1.6 SURROUNDING LAND USES

Located adjacent to the Amity Beach site are acreage properties to the north and south (see Image 3). Toward the northwest of the study area, opposite of Campsite Road there is a large section of farmland. The non-agricultural portions of lands to the west are dominated by contiguous forest and isolated stands of trees. Approximately 3.0 km north of the property along the east side of Campsite Road is the Plamondon White Sands Resort, a combination of small cabins and RV campsites. Further south along Campsite Road are approximately fifteen (15) lakefront properties, many with docks on the lake.

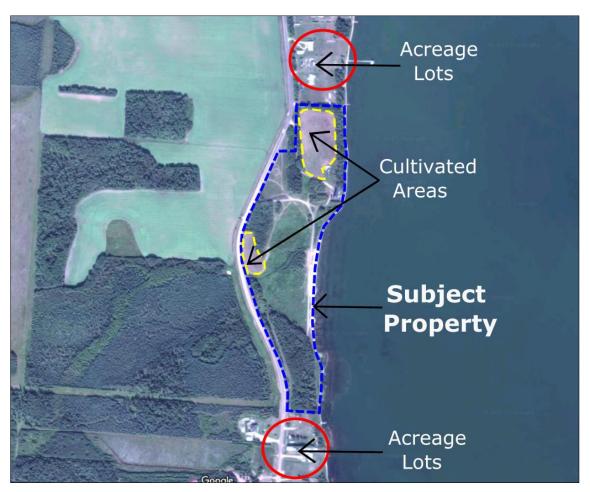


Image 3: Subject property and surrounding land uses

### 2.1.7 NATURAL CONSTRAINTS

A number of constraints were considered in order to identify areas not suitable for residential development. Included among non-developable lands were all areas presenting a slope of fifteen (15) percent or greater; a high water table of less than 2.1 m; and areas designated as wetland. Given the variable topography, and the sizable and slow-draining wetland in the center of the property, the developable portions are limited to areas of higher elevation presenting relatively flat terrain along the west property boundary. The proposed development concept acknowledges the above mentioned constraints as well as a minimum geotechnical setback distance as recommended by a slope stability assessment. All constraint areas have been designated as either Environmental Reserve (ER) or as Environmental Reserve Easement (ERE).

### 2.1.8 TOPOGRAPHY AND NATURAL FEATURES

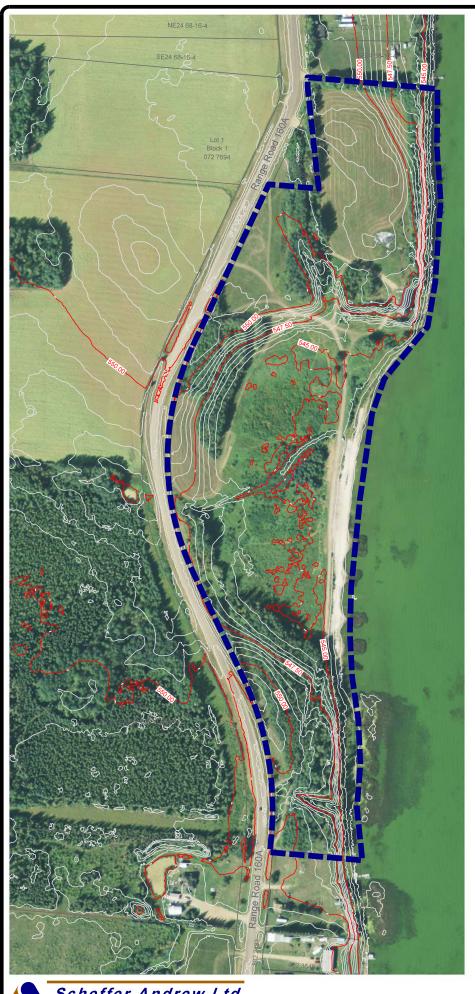
The property presents variable topography (as shown in Figure 2) and the points of highest elevation follow, more or less, Campsite Road along the west property boundary. Moving eastwards from Campsite Road the ground surface slopes downward, by roughly 5.0 m, towards the low-lying wetland that occupies the middle-central portion of the property. The north portion, identified as one of the "cultivated areas" in Image 3, is relatively flat except towards the east property line which slopes steeply to the shore of the lake. The densely treed south portion is less developable, but there are some areas of relatively flat terrain towards Campsite Road which will support the development of five (5) residential lots as shown in the concept plan.

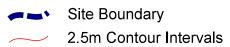
### 2.1.9 SLOPE STABILITY ASSESSMENT

In October, 2015, Hagstrom Geotechnical Services completed a slope stability assessment<sup>2</sup> for the purpose of determining appropriate setback distances for new structures. The work consisted of a review of existing borehole information, and a detailed inspection of the slopes along Lac La Biche Lake. The field inspection results indicated that all slopes are less than 4.5 m high, and a review of a detailed surface contour plan shows that slope angle ranges from twenty-seven (27) to forty-two (42) degrees. Based on this information, the assessment recommends that a setback distance of 10.0 m, as measured from the crest of the slope<sup>3</sup>, be

<sup>&</sup>lt;sup>2</sup> Slope Stability Assessment report submitted under separate cover.

<sup>&</sup>lt;sup>3</sup> The crest of slope is defined as a transition line where the slope changes from greater than 8.0 degrees to less than 8.0 degrees in inclination.





# FIGURE 2 TOPOGRAPHY

AMITY BEACH AREA STRUCTURE PLAN

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made a condition for future development. Additionally, Section 61 of the Lac La Biche County Land Use Bylaw requires that this suggested minimum setback distance be increased to 15 m in locations where the slope is equal to or greater than 15 percent.

The assessment also recommends that vegetation on slopes should be protected and unvegetated areas should be seeded to grass. Infilling works and artificial watering should not be directed on the slope or the slope crest, and swimming pool developments will be prohibited throughout the subdivision due to potential for leakage.

### 2.1.10 PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

The objective of the Phase I ESA<sup>4</sup> was to determine whether any past or present land use, either off site or on site, may have a potential to cause environmental impairment to the subject property. There are currently no buildings on site, although at the time of assessment an A-frame shelter was under construction and connecting to the local power lines. The deconstructed remains of several former buildings are also present on site. The property consists of naturally vegetated areas and agricultural lands, with a large wetland in the center of the property. There are no apparent potential sources of environmental impairment relating to the site from historical and/or current off-site land uses.

The Tetra Tech EBA report recommends investigating the remaining outfall piping to the lake to determine its previous use. Tetra Tech also recommends the following for consideration:

- Prior to the removal of the remains of the demolished buildings, the remains should be inspected to determine whether they contain hazardous building materials.
- If buried debris or staining are encountered during future investigation or ground disturbance a qualified environmental professional should be contacted.
- ➤ If soils containing organics are encountered during future investigation or ground disturbance, they should be removed from building footprints and not be reburied; a qualified environmental professional should be contacted.
- Any disturbance to surface waterbodies should be done in accordance with the Alberta Water Act.
- If encountered during future development, any existing water wells or septic systems should be appropriately decommissioned according to the relevant regulations.

<sup>&</sup>lt;sup>4</sup> Phase I ESA report submitted under separate cover.

### 2.1.11 BIOPHYSICAL ASSESSMENT

Tetra Tech was retained by the landowners to conduct a biophysical assessment<sup>5</sup> on the subject property. The assessment was undertaken to identify, classify and assess the health of wetlands, identify the dominant vegetation and soils, and to note wildlife activity on site and in proximity to the proposed site development.

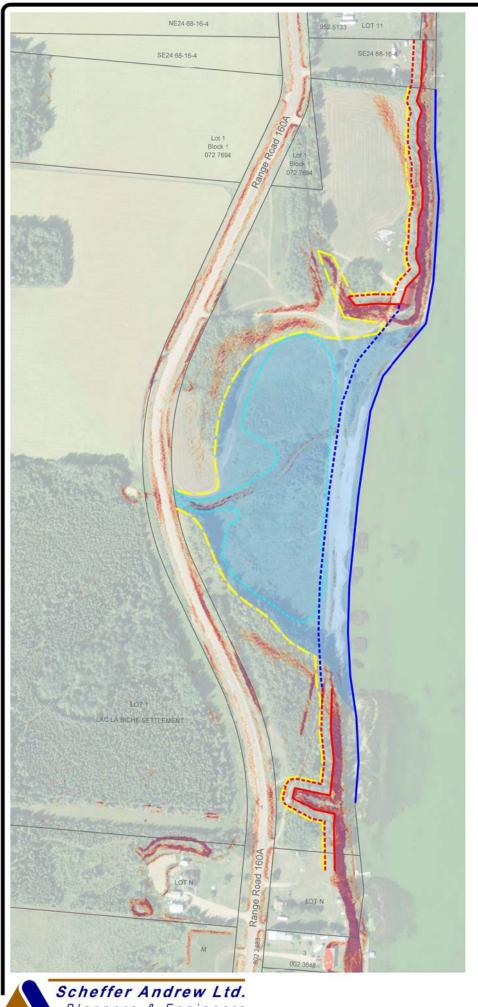
<u>Wetlands</u>: One (1) wetland was identified, classified as a seasonal freshwater marsh and wooded deciduous swamp complex according to the *Alberta Wetland Classification System*, and a lacustrine shore marsh and riparian lacustrine swamp complex according to the *Canadian Wetland Classification System*. There is no plan for development within the wetland footprint, so no direct impact to the wetland is expected. However, should future impacts be incurred to the wetland, loss of wetland area (or construction within a wetland) may require approval under the Alberta *Water Act*, the *Alberta Wetland Policy*, and potentially the *Public Lands Act* if construction activities include disturbing, altering, infilling or draining the wetland.

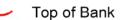
Riparian Zones: A riparian setback assessment was done according to Lac La Biche Policy No. PI-63-003 to determine setback distances from Lac La Biche. Tetra Tech performed an assessment of the Site according to Lac La Biche County's Riparian Setback Matrix and Riparian Setback Matrix Model Developer's Guide, and recommends a setback distance of 31.0 m (see Figure 3) from bed and shore along the beach portion of the riparian zone and a setback distance along the upland portion of the riparian zone of Lac La Biche will need to be determined by a Professional Geotechnical Engineer. Tetra Tech recommends that the lands located within the setbacks be designated as either Environmental Reserve (ER) or Environmental Reserve Easements (ERE) to ensure that development does not occur in these areas.

<u>Wildlife</u>: Four (4) wildlife species of management concern were identified on site: American White Pelican, Barn Swallow, Great Blue Heron, and Western Grebe. At the time of the assessment, no nesting sites were visually located. If nesting sites are found on or near the site, mitigation plans should be prepared. No rare plants were identified in the area. Several of the wildlife species listed as having potential to be found within or near the site are listed as species of management concern.

A map illustrating natural features is presented in Figure 3. In order to prevent negative impacts to biological features on site, Tetra Tech recommends that best management practices are followed as stated in Section 5.0 of the Biophysical Assessment report. Recommendations include:

<sup>&</sup>lt;sup>5</sup> Biophysical Assessment report submitted under separate cover.





10m Geotechnical Setback

Approximate Shoreline

31m Biophysical Setback

High Water Table

Wetland

# Slopes

15%

20%

25%

> 30%

**Development Limit Line** (offset 2.0m for clarity in this figure)

# FIGURE 3 **CONSTRAINTS**

**AMITY BEACH** AREA STRUCTURE PLAN

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- Every opportunity to minimize the size of the project footprint should be taken to reduce impacts to native plant communities;
- Natural drainage patterns should be retained; and
- ➤ Habitat clearing activities (e.g., vegetation clearing, flooding) in upland areas of the Boreal ecozone should be avoided during the period of May 7<sup>th</sup> to August 20<sup>th</sup> to prevent disturbance of nesting bird species. Similarly, clearing in wetland areas should be avoided during the period from April 20 to August 25. Vegetation/habitat clearing between September 1<sup>st</sup> and February 28<sup>th</sup> generally does not require a pre-disturbance nest survey. Clearing during the winter months may require an owl nest survey in this region and Tetra Tech recommends consultation with the AEP Area Biologist. If clearing during the breeding bird period cannot be avoided, a pre-disturbance nest survey should be completed by a professional biologist within seven days of clearing in order to determine if nesting bird species are found on Site.

The complete Biophysical Assessment has been submitted under separate cover to the municipality.

### 2.1.12 RIPARIAN SETBACK MATRIX MODEL

Minimum development setback distances from the lake were determined through the use of a Riparian Setback Matrix Model, as is required by Lac La Biche County. The model is intended and employed to protect source water by taking adequate precautions to prevent the most common forms of pollution. The model takes into consideration ground slope (setback distance increases with steepness), height of bank (setback distance increases with height), water table depth (setback distance decreases with depth) and vegetative cover (setback distance varies depending on plant species and coverage). In the case of this ASP and the proposed concept plan, the Riparian Setback Matrix Model was used to determine the required setbacks from Lac La Biche.

### 2.1.13 LAC LA BICHE WATERSHED MANAGEMENT PLAN

The study area falls within the Watershed Management Planning Area. Drafted in 2009, the Watershed Management Plan (WMP) outlines both short and long-term recommendations for the maintenance and protection of water quality, riparian areas, wetlands, and wildlife. The Amity Beach ASP acknowledges the objectives and recommendations of the WMP, particularly as these relate to riparian areas and wetlands. The WMP observes that these types of wetland features serve important ecological functions and are increasingly under threat from development pressures. The existing wetland (a seasonal freshwater marsh) located at the

center of the subject site has been incorporated into the concept plan and designated as environmental reserve for the purpose of protecting and preserving this ecosystem, and to strictly limit development to areas outside of its footprint.

In addition to protecting the physical space occupied by the wetland, the proposed multi-lot development sets the goal of preserving the pre-development drainage pattern in a post-development scenario. For this purpose, the developer has partnered with qualified environmental scientists and geotechnical engineers who have studied the subject site and prescribed minimum setback distances separating the proposed residential lots from the wetland and other surrounding natural features that serve to accommodate drainage pathways linking Lac La Biche with the surrounding drainage basin. The stormwater management concept presented in Figure 5 shows existing and post-development drainage patterns, as well as the location of a sedimentation pond that is designed to capture and discharge stormwater at a rate that approximates pre-development flow pattern. The sedimentation pond has been provided as a measure to mitigate any increase in volume/velocity of stormwater runoff, as a result of the development, from affecting the wetland below. Altogether, by setting sufficient development setback distances, preserving the wetland, and maintaining pre-development drainage flows, the ASP succeeds in achieving the goals of the WMP as they relate to the subject site.

### 2.1.14 RESOURCE EXTRACTION

Information received from the Alberta Energy Regulator (AER) on February  $9^{th}$ , 2015 indicated that there are no active or suspended sour or natural gas facilities, oil pipelines or resource extraction facilities located within the plan area. A search of the AER Abandoned Well Map reveals the presence of an abandoned Sweet  $H_2S$  well located in NE 23-068-16W4. Relative to the ASP study area, this abandoned well is the nearest oil facility and is located approximately 1.8 km away to the west.

Still father away, an operational natural gas pipeline was identified on the map. The pipeline is partially found within NW 14-68-16-4, and is located more than 2.5 km from the ASP area from its nearest point. These features are not expected to impact this plan or future development on the site.

### 3.0 DEVELOPMENT CONCEPT

The vision for the development is to promote an environmentally sustainable lakeshore community, in keeping with the subject property's current land use designation, while focusing on retaining the natural and environmental integrity of the area by minimizing environmental

impact and promoting environmental conservation in public and private spaces. The proposed lot configuration as shown in development concept (see Figure 4) has been largely shaped by the presence environmentally sensitive lands from which future residential development is setback. Altogether, 6.66 ha (16.46 ac), representing fifty-two (52) percent of the subject property, has been dedicated as environmental reserve.

### 3.1 OBJECTIVES

The intent of the landowner is to develop this property into a lakeshore community comprised of twenty-one (21) single-family residential lots, each between 0.5 and 0.75 ac in size (see Table 1). The anticipated density of this development is 0.22 units/ha with a projected total population of thirty-five (35) people (see Table 2).

The objectives of the proposed development include the following:

- ➤ To show an appropriate future land use scenario consistent with the County's vision as described in the Municipal Development Plan;
- > To provide a logical and appropriate lot design given the irregular shape of the site;
- > To recognize, respect and complement the existing character of the community at large;
- > To recognize the value of the natural environment;
- To provide adequate and efficient servicing to the residential lots.

### 3.2 BUILDING CONDITIONS

The following conditions set minimum standards for development, in terms of building construction and land use, for all residential lots within the Amity Beach subdivision. These conditions shall form part of the sales agreement between the current landowner and the purchaser at the time of sale of all future residential lots.

- 1. The combined floor area of any principal dwelling shall not be less than 1,200 sq.ft.
- 2. The type of dwelling permitted on a residential lot shall be limited to a Dwelling, Single Detached, as defined in the Lac La Biche County Land Use Bylaw No. 12-024. The single detached dwelling may be constructed on-site ('stick-built'), or may be a modular home constructed off-site. A modular home shall be constructed from prefabricated components, and is similar in terms of appearance and profile to a conventional 'stick-built' dwelling. Single detached dwellings do not include manufactured homes or Mobile Homes, as defined by Land Use Bylaw No.12-024.
- 3. A recreational vehicle, defined as a portable structure designed to be towed by a motorized vehicle, shall be allowed to be situated on a residential lot for a temporary period (not exceeding two (2) years). The use of a recreational vehicle shall be limited to the purpose of

- providing temporary accommodations for the resident(s) of the property while the principal dwelling is under construction. Not more than one (1) recreational vehicle shall be allowed on a lot.
- 4. A recreational vehicle, defined as a portable structure designed to be towed by a motorized vehicle, shall be allowed to be situated on a residential lot for the purpose of providing temporary (not more than fourteen (14) days) accommodations for guests. The recreational vehicle shall act as a secondary dwelling and shall not be allowed to be the sole dwelling on a lot. Not more than one (1) recreational vehicle shall be allowed on a lot.

### 3.3 ENVIRONMENTAL RESERVE

For the purpose of promoting environmental protection and maintaining wildlife connectivity throughout the site much of the land that is occupied by trees, natural vegetation, wetland and other natural vegetation has been dedicated as Environmental Reserve (See Figure 4). The dedication of environmental reserve space is supported by MDP Policy 9.4.2 – "environmentally significant areas defined at the preparation stage" – which requires that all wetlands and other environmentally significant areas that are subject to environmental reserve dedication be defined and subjected to a scientific review.

With the exception of Lot No.14, all rear yards abutting the environmental reserve and municipal reserve lands have been dedicated as environmental reserve easements to a depth of 7.6 m, a distance equal to the minimum rear setback in the Country Residential District (CR). environmental reserve easements were also placed along side yards of Lots No.1 and No.2 to prevent future development from taking place within 7.6 m of the small drainage ravine located between these two (2) lots. The use of environmental reserve easements is in keeping with MDP Policy 9.4.4 — "environmental reserve easements", which requires that environmental reserve easements be considered in instances where land is not suitable for development due to the presence of a geographic constraint.

### 3.4 MUNICIPAL RESERVE

Figure 4 shows the location of 0.62 ha (1.53 ac) parcel of land dedicated as municipal reserve space. In accordance with MDP Policy 10.4.3 – "municipal reserve adjacent to waterbodies or watercourses" the municipal reserve parcel has been established in a location that links the proposed multi-lot residential subdivision with the shoreline ER parcel to create public access to the waterbody. The size and configuration of the municipal reserve parcel has been determined by its public access function.

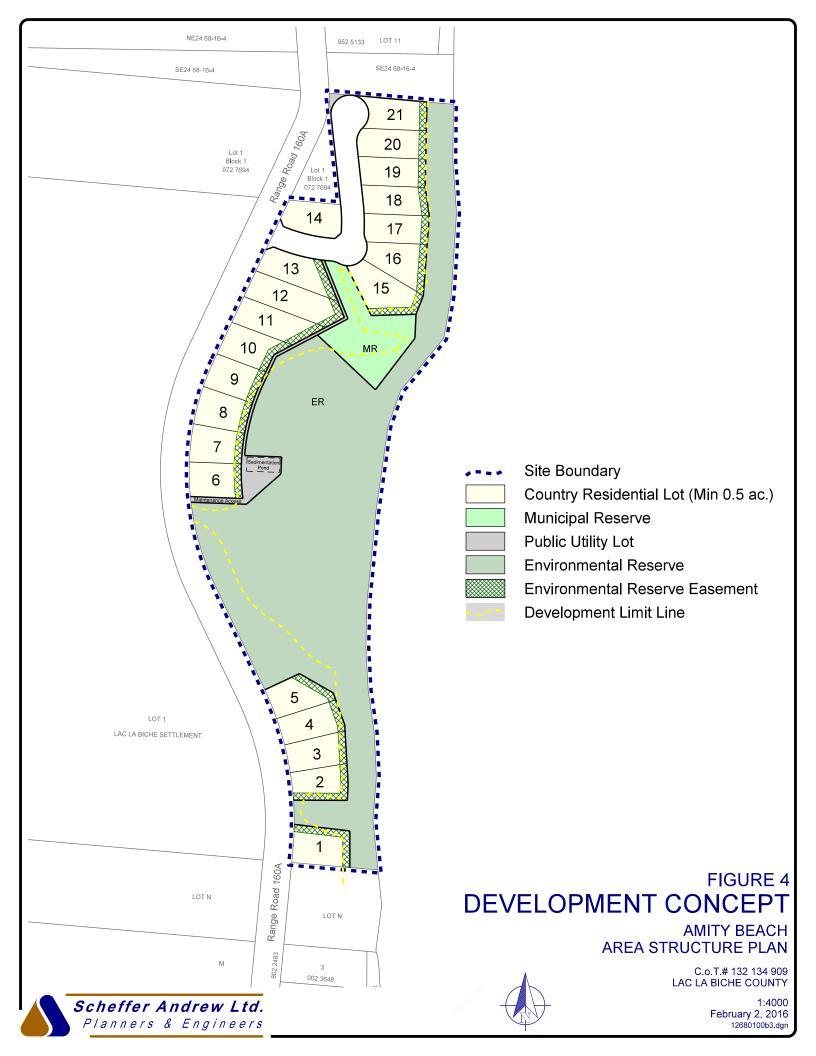


TABLE 1 – LAND USE STATISTICS		
	На	% of GDA
GROSS DEVELOPABLE AREA (GDA)	12.83	100%
Environmental Reserve (ER)	6.66	51.9%
		% of NDA
NET DEVELOPABLE AREA (NDA)	6.17	100%
Municipal Reserve (MR)	0.62	10.0%
Infrastructure		
Internal Roadway	0.66	10.7%
Public Utility	0.28	4.5%
Residential – Single Family	4.61	74.8%

Table 1: Land Use Statistics

TABLE 2 – RESIDENTIAL LAND USE STATISTICS							
	Net Area	Density (unit/ha)	Units	Persons/Unit	Population		
Single- Detached	4.61	0.22	21	2.6*	55		

Table 2: Residential Land Use Statistics

### 3.5 **SERVICING**

### 3.5.1 WATER SERVICING

It is intended to have the potable water supplied by individual water wells. If the results of the pump test and water analysis indicate that there is insufficient water or that quality of the water is not suitable, then water will be transported to the site and stored in individual cisterns. The intended water servicing plan is in keeping with MDP Policy 12.4.6 – "on-site wells and cisterns" which allows for the use of individually serviced on-site water wells or cisterns provided that the developer demonstrate that all lots in a multi-lot subdivision, not already serviced by a municipal water system, are suitable for the use of on-site water wells or cisterns.

### 3.5.2 SANITARY SERVICING

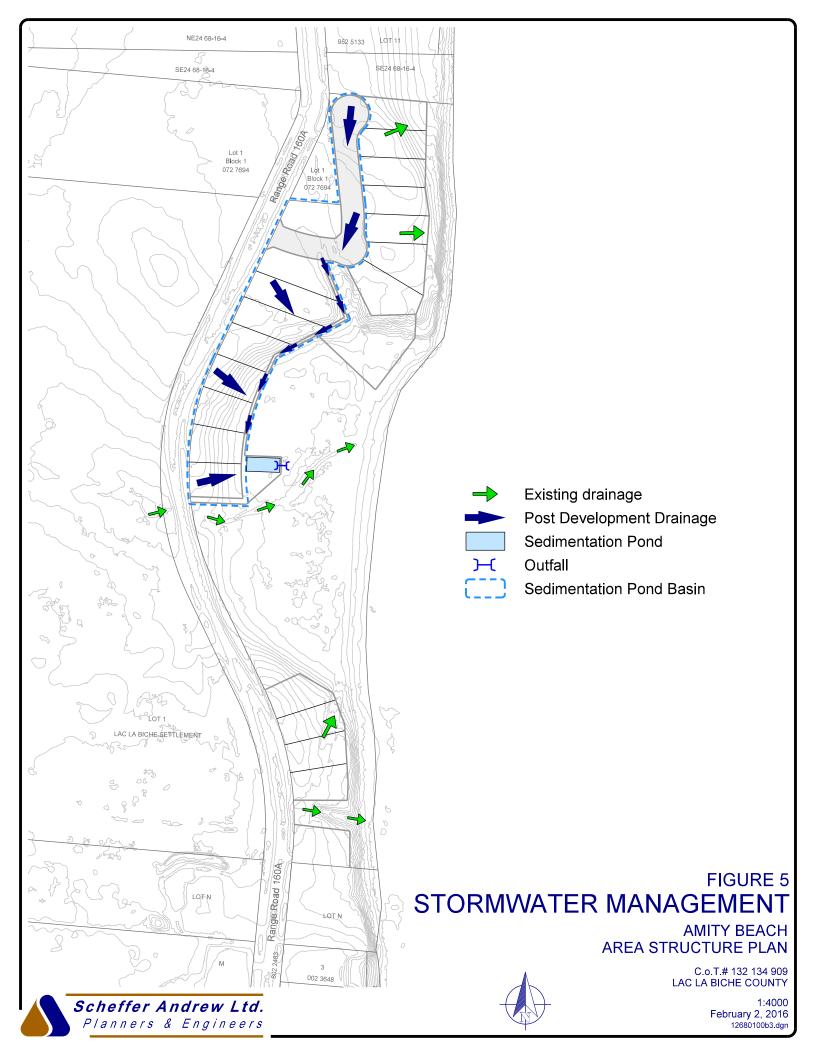
Currently, there is no sanitary servicing infrastructure located near the subject property. In the absence of an existing network to tie into, and given the close proximity of the property to the lakeshore (precluding the installation and use of septic system), sanitary servicing will be

<sup>\*</sup>Source: Statistics Canada - Household size, by province and territory (2011 Census)

provided to the proposed residential lots via holding tanks that are to be individually pumped out.

### 3.5.3 STORMWATER MANAGEMENT

The general natural drainage pattern for the plan area can be seen on Figure 5. The existing natural surface runoff from the site currently flows in an easterly direction towards the lake. The majority of the post-development runoff within the plan area will be routed into the proposed sedimentation pond (see Image 4). This facility will be sized based on the 1:100 year rainfall event and will maintain the pre-development site drainage pattern. The sedimentation pond will be designed to control and improve the quality of post-development stormwater runoff prior to its discharge into the existing wetland. The proposed stormwater management plan is aligned with MDP Policy 12.5.1(b) – "stormwater management plans" that requires stormwater management plans to reflect best practices to control runoff to pre-development rates.



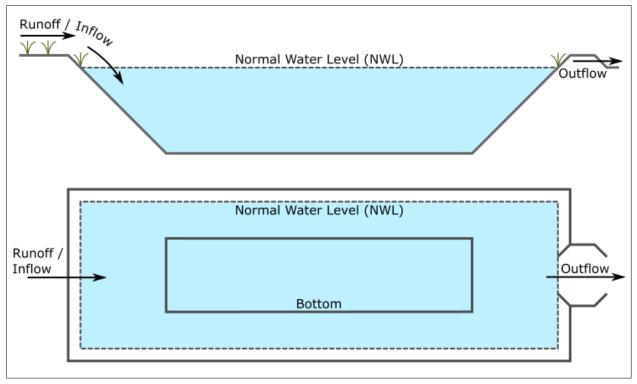


Image 4: A sedimentation pond sized to allow for settlement of suspended sediment of a particular size (typically 20-75  $\mu$ m) at a given flow rate that is based on the modelled storm event (typically one (1) in five (5) year storm lasting four (4) hours).

### 3.6 VEHICULAR AND PEDESTRIAN CIRCULATION

<u>Internal Road</u>: Internal access to the north portion of the subdivision will be provided via a single local road entering from, and exiting to, Campsite Road (see Figure 6). This paved road will provide access to nine (9) of the proposed residential lots and will be finished to County standards in accordance with MDP Policy 12.3.6(a) – "developer responsibility", which required that all internal local subdivision roads servicing multi-lot subdivisions be constructed to meet the County's General Municipal Servicing Standards (GMSS).

Hidden Approaches: The remaining lots that abut Campsite Road will be accessed from shared driveways. The circulation plan shows the locations of six (6) shared approaches and one (1) single approach that connect directly with Campsite Road. Shared approaches are being recommended for the purpose of minimizing the number of access points from Campsite Road. The shared approach design is in keeping with MDP Policy 12.3.10(c) – "development and"

subdivision in proximity of highways", which states that the number of entry and exit points to the County's major and arterial roads must be minimized.

The current posted speed limit on Campsite Road is 65 km/h. The radius (approximately 205.5 m) of the curvature of Campsite Road in the location of Lots 6-10 created some concern over the potential for heightened risk of collision. Here, the roadway geometry did not appear to provide sufficient sight line distance for trough traffic and for vehicles entering/exiting from approaches directing onto Campsite Road, all of which are to be constructed to meet the County's GMSS. A speed limit reduction was suggested as a way to mitigate the potential risk by reducing the minimum required sight distances, as outlined in the Geometric Design Guide for Canadian Roads - Transportation Association of Canada (December, 2011). Having conducted an analysis of the impacts of a speed reduction, the Transportation Services Department of Lac La Biche County agreed to accept the proposed six (6) joint accesses and one (1) single approach on the conditions that the developer install signage at both ends of the subdivision along Campsite Road limiting the maximum allowable speed to 65 km/h and to indicate the locations of hidden approaches. A lower operation speed should be a benefit from both a safety standpoint and in achieving the required sight lines for the subject lots. The department also requires the developer to remove overgrown vegetation in the location of the lots abutting Campsite Road to improve visibility and extend sight lines.

<u>Pedestrian and Emergency Access</u>: The circulation plan provides for an unpaved pedestrian access connecting the local road to the beach. This pedestrian access doubles as one (1) of two (2) emergency accesses, the second of which is located between the cul-de-sac of the local road and Campsite Road. The pedestrian access is a public space that has been designed with the principles of Crime Prevention Through Environmental Design (CPTED) in mind so that both entry and exits points are connected via an unobstructed line-of-sight.

### 4.0 IMPLEMENTATION

Since the property is already zoned Country Residential District (CR), it is the owner's intention to proceed immediately with the process of subdividing the property upon approval of the Area Structure Plan. The landowner will make a single application to subdivide the proposed twenty-one (21) single-family residential lots as presented in the development concept (Figure 4). The pace of development in the plan area will be influenced by many factors, particularly by the local real estate market and the strength of the regional economy. The locations of future dwellings are presented in Figure 7, the Lot Dimension Plan, which will be submitted to Lac La Biche County as part of the subdivision application.

