

BYLAW NO. 07/061

BEING A BYLAW OF THE REGIONAL MUNICIPALITY OF WOOD BUFFALO TO AMEND THE TIMBERLEA AREA STRUCTURE PLAN BYLAW 01/020

WHEREAS Section 633 of the Municipal Government Act, R.S.A., 2000, Chapter M-26 and amendments thereto authorizes Council to enact a bylaw adopting an Area Structure Plan.

AND WHEREAS Section 191(1) of the Municipal Government Act, R.S.A., 2000, Chapter M-26 and amendments thereto authorizes Council to adopt a bylaw to amend an Area Structure Plan.

NOW THEREFORE, the Regional Council of the Regional Municipality of Wood Buffalo, in the Province of Alberta, in open meeting hereby enacts as follows:


1. THAT the Timberlea Area Structure Plan (Bylaw 01/020) is hereby amended to change part of Lot 1, Block 17. Plan 052 3653 as shown on Schedule "A", attached hereto and forming part of this bylaw.
2. THAT the Timberlea Area Structure Plan (Bylaw 01/020) is further amended by replacing Schedule "B" of Bylaw 05/026 and incorporating Schedule "B", attached hereto and forming part of this bylaw.
3. THAT the Timberlea Area Structure Plan (Bylaw 01/020) is further amended by replacing Section 4.3.1(a)(b)(c) with the following new provisions:
 - a. A maximum of 1367 single detached residential lots shall be permitted within the area shown as Schedule "A";
 - b. A minimum of 833 of the single detached residential lots shall be designated as R1, or other similar district having a minimum lot width of 12.2m;
 - c. A maximum of 296 manufactured home residential lots shall be permitted within the area shown on Schedule "A";
4. THAT the Chief Administrative Officer shall be authorized to consolidate this bylaw.
5. THAT this bylaw shall be passed and become effective when it receives third reading and is signed by the Mayor and Chief Legislative Officer.

READ a first time this 28th day of August, A.D. 2007.

READ a second time this 11th day of September, A.D. 2007.

READ a third and final time this 11th day of September, A.D. 2007.

SIGNED and PASSED this 13th day of September, A.D. 2007.



MAYOR



CHIEF LEGISLATIVE OFFICER

"Schedule B – Bylaw 07/061"

Timberlea Consortium Inc.

TIMBERLEA AREA STRUCTURE PLAN AMENDMENT

AUGUST 2007



DOCUMENT CONTROL

Client:	Timberlea Consortium Inc.
Project Name:	
Report Title:	Timberlea Area Structure Plan Amendment
IBI Reference:	EO-2698
Version:	7
Digital Master:	J:\pre-integration\old_J\2698\Area Structure Plan\PTR-2698_timberlea-asp-plan-r07_2007-08-29.doc
Originator:	James Bryndza
Reviewer:	Bob Spooner
Authorization:	[Name]
Circulation List:	
History:	

TABLE OF CONTENTS

- 1.0 INTRODUCTION..... 1**
- 1.1 Amendment Purpose..... 1
- 1.2 Background..... 1
- 1.3 Amendment Proponent..... 1
- 2.0 DEVELOPMENT CONTEXT..... 1**
- 2.1 Location..... 1
- 2.2 Local Market Conditions/Community Need..... 1
- 3.0 LAND USE & PLANNING 2**
- 3.1 Policy Context..... 2
 - 3.1.1 Timberlea Area Structure Plan Bylaw No. 01/020 2
 - 3.1.2 Land Use Bylaw 99/059 2
- 3.2 Surrounding Land Uses..... 2
- 3.3 Land Ownership..... 2
- 4.0 DEVELOPMENT CONCEPT 2**
- 4.1 Development Objectives..... 2
- 4.2 Land Use Concept..... 3
 - 4.2.1 Change in Location of Park Frontage & Configuration..... 3
 - 4.2.2 Increase of Residential Use & Park Encroachment..... 3
 - 4.2.3 Relocation of Parkettes..... 3
 - 4.2.4 Reconfiguration of Medium Density Residential Site..... 4
 - 4.2.5 Reconfiguration of Local Roads..... 4
 - 4.2.6 Addition of Laneway..... 5
 - 4.2.7 Population Density..... 5
- 5.0 SERVICING & IMPLEMENTATION 5**
- 5.1 Water Distribution System..... 5
- 5.2 Stormwater Management System..... 6
- 5.3 Sanitary Sewer System..... 6

TABLE OF CONTENTS (CONT'D)

5.4 Shallow Utilities..... 6

5.5 Road Network 7

6.0 IMPLEMENTATION..... 7

6.1 Timing of Staging..... 7

6.2 Co-operative Planning..... 7

7.0 SUMMARY 7

8.0 REFERENCES..... 8

After Page

EXHIBIT 1: TIMBERLEA AREA STRUCTURE PLAN AS AMENDED BY BYLAW 05/026 -----1

EXHIBIT 2: LOCATION PLAN -----1

EXHIBIT 3: LAND USE CONCEPT -----3

EXHIBIT 4: APPROVED LAND USE AND POPULATION STATISTICS BYLAW 05/026 -----3

EXHIBIT 5: PROPOSED LAND USE AND POPULATION STATISTICS -----3

EXHIBIT 6: WATER DISTRIBUTION SYSTEM -----5

EXHIBIT 7: STORMWATER MANAGEMENT SYSTEM -----5

EXHIBIT 8: STORMWATER BASIN PLAN (IBI) -----5

EXHIBIT 9: SANITARY SEWER SYSTEM (IBI) -----5

EXHIBIT 10: ROAD NETWORK -----5

EXHIBIT 11: PEDESTRIAN NETWORK -----5

EXHIBIT 12: TRANSIT ACCESS -----5

EXHIBIT 13: DEVELOPMENT PHASING -----5

APPENDIX A – Letter from Thurber

1.0 INTRODUCTION

1.1 Amendment Purpose

The purpose of this Area Structure Plan Amendment is to describe proposed changes to the North Central Timberlea area of the Timberlea Area Structure Plan (ASP), which will guide and enable the immediate and orderly development of these lands.

1.2 Background

The Timberlea Area Structure Plan, Bylaw #01/020, was last amended on May 9, 2006 through Bylaw No 06/016. **Exhibit 1** illustrates the approved Timberlea ASP, which through an earlier amendment, approved by Bylaw 05/026, affected lands owned by the Consortium.

This Plan Amendment has been prepared in conformance with the guidelines for the preparation of Area Structure Plans set out by the Regional Municipality of Wood Buffalo (RMWB).

1.3 Amendment Proponent

This Area Structure Plan Amendment has been prepared by IBI Group on behalf of Timberlea Consortium Inc.

2.0 DEVELOPMENT CONTEXT

2.1 Location

The Timberlea lands are located in the northwest sector of the Urban Service Area of Fort McMurray. As highlighted in **Exhibit 2**, the Amendment area is located north of Millenium Drive in the northwest of the approved Timberlea ASP.

The lands included in this Amendment are legally described as Plan 0523653, Block 17, Lot 1.

The Amendment area encompasses lands totalling 32.9 ha.

2.2 Local Market Conditions/Community Need

As identified by the Athabasca Regional Issues Working Group, the Urban Service area of Fort McMurray is experiencing urban growth pressures as a result of the influx of population due to current economic conditions. In particular, the demand for housing continues to be as significant as the population growth has outpaced land development activity and the provision of housing. As a result, there is an immediate need for lands available for residential development. This influx of population has also reinforced the need for additional school space and commercial development to service the immediate local residents.

3.0 LAND USE & PLANNING

3.1 Policy Context

This Amendment has been prepared in the context of applicable development policies and objectives governing this area. There are no deviations from the Wood Buffalo Municipal Development Plan.

3.1.1 TIMBERLEA AREA STRUCTURE PLAN BYLAW NO. 01/020

This Area Structure Plan Amendment is generally in conformance with the objectives and policies of the Approved Timberlea Area Structure Plan, updated by Bylaw No. 06/016.

3.1.2 LAND USE BYLAW 99/059

IBI Group, on behalf of Timberlea Consortium Inc., has made a concurrent application to redistrict the subject lands. The two applications, the redistricting and this ASP amendment, will bring the two bylaws into conformity with each other.

3.2 Surrounding Land Uses

Development in the immediate vicinity of this Amendment area consists primarily of residential uses with accompanying supportive uses such as parks, schools and wastewater treatment. Development has been moving north and the subject lands are the next logical progression for building in the area.

3.3 Land Ownership

Timberlea Consortium Inc. under agreement of purchase with Alberta Social Housing Corporation (ASHC) currently owns the lands within the Area Structure Plan Amendment Area. Through this sales agreement with ASHC, Timberlea Consortium Inc. is endeavouring to develop these lands as a residential community.

4.0 DEVELOPMENT CONCEPT

The following describes in detail this Amendment to the Timberlea Area Structure Plan.

4.1 Development Objectives

The main objective of this Amendment is to provide a framework for the ultimate development of these lands as an attractive and efficiently designed residential community, responding to current and anticipated market conditions, current municipal policies and guidelines and the unique physical characteristics of this parcel. This Amendment also addresses engineering design and transportation planning issues

4.2 Land Use Concept

The Land Use Concept for this Amendment is presented in **Exhibit 3**. Corresponding approved and proposed Land Use and Population statistics are presented in **Exhibit 4** and **Exhibit 5** respectively. This Amendment proposes to amend the Timberlea ASP as revised by Bylaw 05/026 as follows:

4.2.1 CHANGE IN LOCATION OF PARK FRONTAGE & CONFIGURATION

This Amendment and in reference to **Exhibit 3**, proposes a minor reconfiguration of the park fronting on Millenium Drive and the local road along the west boundary of the park. The reconfiguration will delete frontage from the local road, through the narrowing of a walkway accessing the park from the west local road. The change is favourable because it addresses the requirement that the park have at least 50% frontage on roadways.

4.2.2 INCREASE OF RESIDENTIAL USE & PARK ENCROACHMENT

The insertion of seven (7) lots within the park illustrated within **Exhibit 3** is a response to an over sizing by the Timberlea Consortium Inc. of a stormwater management facility located to the west of this Amendment area. In years past, the Consortium was requested by the Municipality to accommodate an enlargement of a storm water management facility to the benefit of other development interests. This accommodation resulted in additional expense being borne by the Consortium owners. Through discussions with the Municipality in cost recapturing these additional expenses, the Consortium owners have agreed with the Municipality that as part of the resolution of the recovery of these costs, parkland dedication obligations of the Consortium Group would be lessened to affect a repayment of the over sizing of the storm water management facility for others.

The MR obligations of Timberlea Consortium Inc. by Deferred Reserve Caveat total 10.413 ha. Cumulative MR dedications up to and including Timberlea Consortium Inc.'s Timberlea Phase 6 amount to 6.88 ha, leaving a residual MR obligation of 3.533 ha to the lands subject to this ASP Amendment. The proposed land use details a major park of 3.01 ha. and two (2) smaller MR parcels backing onto the environmental area at the north end of the Amendment Area, and one (1) MR area in the west, with areas of 0.07 ha, 0.097 ha., and 0.08 ha. Respectively, for a total MR dedication of 3.257 ha., representing a deficiency of 0.276 ha. The deficiency is the result of the insertion of the seven (7) residential lots which is calculated at approximately 0.276 ha.

4.2.3 RELOCATION OF PARKETTES

One (1) parkette accessing the environmental lands to the north of the Amendment lands, illustrated on **Exhibit 3**, and within the north edge of the Amendment lands has been relocated laterally.

The parkette, located in the northeast of the Amendment lands was shifted westward from its prior location, with its new location still providing a view opposite to a roadway to the south, but also provide for a more even distribution of parkettes along the north boundary to interface with the environmental lands.

4.2.4 RECONFIGURATION OF MEDIUM DENSITY RESIDENTIAL SITE

The reconfiguration of the medium density residential site as illustrated on **Exhibit 3** will not materially change the area of the medium density site, but will change how access is provided to the site. Access to the medium density residential site will be solely from the collector road, Millenium Drive, thus serving to eliminate vehicular access to the site through local roads for access and disturbance to the low density residential area adjacent. Access to the site from Millenium Drive is no different than has been envisioned for the Pacific Place medium density residential triangular parcel which obtains access directly to Millenium Drive and is adjacent these Amendment area lands.

4.2.5 RECONFIGURATION OF LOCAL ROADS

As part of and in support of the above-mentioned amendments, a reconfiguration of local roads is proposed within this Amendment as illustrated on **Exhibit 3**.

The local road located west of the major park is proposed to be amended so as to not provide an offset to the local road to the south of Millenium Drive, but to facilitate a standard four-way intersection. This new configuration will improve safety for both vehicular and pedestrian traffic.

The local road configuration to the east of the multi-family residential site was explained above as part of the reconfiguration of this medium density residential site. In addition to rationalizing access to the medium density residential site by negating access from local roads, the reconfiguration will increase the offset distance between two local roads intersecting with Millenium Drive making traffic conditions safer.

The reconfiguration of the multi-family site has resulted in a geometric revision impacting and resulting in the shortening of the cul-de-sac to the north of the multi-family site while still maintaining the original Timberlea ASP development concept of a cul-de-sac in this area.

The addition of laneways to provide a variation in single-family housing forms has resulted in the shift of lot fabric within the Amendment area. The inclusion of laneway product is an effort towards addressing the ever-increasing concern of too much vehicular parking along local streets, by providing alternate parking in the rear for residents.

The relocation of the Southeast access from the Amendment area opposite Plan 0624590 proposes to affect a cross-intersection with an existing access across Millenium Drive. The location of the middle access has been moved to allow acceptable spacing between road intersections along Millenium Drive.

Insertion of the foregoing accesses to Millenium Drive and the elimination of roadway access to the east to the 2006-WB-US-017 lands are included in this Amendment. Approval of 2006-WB-US-017 affected an elimination of the northerly most roadway access to this Amendment area in favour of a walkway access. The elimination of the south local connections from the east to the Amendment lands from 2006-WB-US-017 has been replaced with the direct accesses noted above to Millenium Drive.

4.2.6 ADDITION OF LANEWAY

A laneway extends along the east boundary of the ASP Amendment area. As a result of a concern expressed by the Municipality on the length of this laneway, which terminates at Millenium Drive in the south, a laneway has been extended west between the residential lots to the local road to provide a secondary access to this laneway. In order to accommodate this laneway connection, a residential lot has been lost.

4.2.7 POPULATION DENSITY

This proposed Amendment does not significantly impact the proposed development density or the combination of low density and medium density residential with the integrated open space system. **Exhibit 4** outlines the approved land use and population statistics for the area, approved through the Timberlea Area Structure Plan Amendment Bylaw 05/026. **Exhibit 5** illustrates the proposed land use and population statistics as a result of this Amendment. A separate **Exhibit 6** outlines the land use and population statistics within the Amendment Area.

5.0 SERVICING & IMPLEMENTATION

Updated drawings for servicing, **Exhibit 7** Water Distribution System, **Exhibit 8** Stormwater Management, System, **Exhibit 9** Stormwater Basin Plan, **Exhibit 10** Sanitary Sewer System, **Exhibit 11** Road Network, **Exhibit 12** Pedestrian Network, **Exhibit 13** Transit Access, and **Exhibit 14** Development Phasing from those contained within Bylaw 05/026 illustrating the proposed changes follow.

Servicing stubs installed on Millennium Drive as illustrated on the Engineering Drawings for Phase 3D/Millennium Drive will require realignment to match the proposed road realignments under this submission. Phase 3 design drawings will be updated using redline drawings.

Clarification has been provided on the water table issues referenced within the "Timberlea 366 Acre Subdivision Geotechnical Investigation, January 10, 2005" prepared by Thurber Engineering has been addressed, see **Appendix A**.

5.1 Water Distribution System

The water network is serviced off the existing Devonian development along Parson's Creek Drive and Rainbow Creek Drive.

A 400 mm diameter watermain is installed on Paquette Road between Parson's Creek Drive and Rainbow Creek Drive. Please note the current North Timberlea Water Network Analysis (NTWNA) (Focus August 17, 2004), shows a 300 mm watermain within Paquette Road, north of Parson's Creek Drive. This line was upsized to a 400 mm watermain as per the RMWB request.

North of this intersection of Paquette Road and Rainbow Creek Drive, a 300 mm watermain is to loop along Millennium Drive and onto the existing Millennium Drive adjacent to Morgan Heights development. A 250 mm watermain is constructed along Rainbow Creek Drive. A 200 mm watermain is required within the Area Structure Plan Amendment.

The insertion of 7 residential lots into the park has been offset by the loss of a residential lot required for laneway purposes (Section 4.2.6). The net result of an additional 6 lots has no negative impact on the water network for the Timberlea Area.

Exhibit 4
Approved Land Use & Population Statistics
(Bylaw 05/026)

Description	Units	Area (ha)	Area %
Single Family Residential (R1S/R1)	1,434	65.76	46.5
Manufactured Homes Residential	302	13.39	9.5
Medium Density Residential (Apartment)*	301	3.34	2.4
Medium Density Residential (Townhouse)**	239	5.31	3.8
Municipal Reserve	N/A	10.67	7.6
Roads	N/A	32.32	22.8
Walkways	N/A	1.34	0.9
Lanes	N/A	1.85	1.3
Public Utility Lots	N/A	1.28	0.9
Stormwater Retention Facilities	N/A	6.04	4.3
Total	2,276	141.30	100.0

* 90 units/ha

** 45 units/ha

Description	Units	Population	Unit %
Single Family Residential (R1S/R1)	1,434	5,019	63
Manufactured Homes Residential	302	1,057	13.3
Medium Density Residential (Apartment)	301	723	13.2
Medium Density Residential (Townhouse)	239	837	10.5
Total	2,276	7,636	100

Assumptions

Single Family Residential - 3.5 persons per unit as per RMWB Engineering Standards

Medium Density Residential (Apartment) - 2.4 persons per unit as per RMWB Engineering Standards

Medium Density Residential (Townhouse) - 3.5 persons per unit as per RMWB Comments (RMWB Engineering Standards - 2.4 persons per unit)

Development Density:

54.04 ppgdha

Exhibit 5 Proposed Land Use & Population Statistics

Description	Units	Area (ha)	Area %
Single Family Residential (R1S/R1)	1,367	65.15	46.1%
Low Density Residential (R2)	28	0.90	0.6%
Manufactured Homes Residential	296	13.39	9.5%
Medium Density Residential (Apartment)*	346	3.34	2.4%
Medium Density Residential (Townhouse)**	239	5.31	3.8%
Municipal Reserve	N/A	10.38	7.3%
Roads	N/A	32.38	22.9%
Walkways	N/A	1.34	0.9%
Lanes	N/A	1.89	1.3%
Public Utility Lots	N/A	1.28	0.9%
Stormwater Retention Facilities	N/A	6.04	4.3%
Total	2,276	141.40	100.0%

* 90 units/ha

** 45 units/ha

Description	Units	Population	Unit %
Single Family Residential (R1S/R1)	1,367	4,785	60.1%
Low Density Residential (R2)	28	98	1.2%
Manufactured Homes Residential	296	1,036	13.0%
Medium Density Residential (Apartment)	346	830	15.2%
Medium Density Residential (Townhouse)	239	837	10.5%
Total	2,276	7,585	100.0%

Assumptions

Single Family Residential - 3.5 persons per unit as per RMWB Engineering Standards

Medium Density Residential (Apartment) - 2.4 persons per unit as per RMWB Engineering Standards

Medium Density Residential (Townhouse) - 3.5 persons per unit as per RMWB Comments (RMWB Engineering Standards - 2.4 persons per unit)

Single Family Residential units are actual units based on registered plans, subdivision approvals and subdivision application Phase 8 & 9 (to be submitted).

Development Density:

53.64 ppgdha

Exhibit 6 Proposed Land Use & Population Statistics

Description	Units	Area (ha)	Area %
Single Family Residential (R1)	165	8.770	26.7
Single Family Residential (R1S)	272	8.920	27.1
Low Density Residential (R2)	28	0.900	2.7
Medium Density Residential (R2-1)*	54	1.210	3.7
Municipal Reserve	N/A	3.257	9.9
Roads	N/A	8.683	26.4
Walkways	N/A	0.290	0.9
Lanes	N/A	0.870	2.6
Total	519	32.900	100.0

* 45 units/ha

Description	Units	Population	Unit %
Single Family Residential (R1)	165	578	31.8%
Single Family Residential (R1S)	272	952	52.4%
Low Density Residential (R2)	28	98	5.4%
Medium Density Residential (R2-1)**	54	130	10.4%
Total	519	1,757	100.0%

Assumptions

Single Family Residential - 3.5 persons per unit as per RMWB Engineering Standards

**Medium Density Residential (Apartment) - 2.4 persons per unit as per RMWB Engineering Standards

Single Family Residential units are actual units based on registered plans, subdivision approvals and subdivision application Phase 8 & 9 (to be submitted).

Development Density:

53.40 ppgdha

5.2 Stormwater Management System

Stormwater Management facilities (SWMF 2B and SWMF 2A) are located within Storm Basin 2 as indicated in the North Timberlea Conceptual Drainage Plan by Focus, dated September 24, 2004 (Exhibit 6C). SWMF 2A is located downstream of SWMF 2B on the eastern side of the basin and will provide the final stormwater management control prior to discharging into Parson's Creek. Storm Basins 1 and 2 vary only slightly from the September 24, 2004 Focus Plan. The minor variations are required to correctly align the basin boundaries with the proposed lot lines.

The southeastern portion of the Plan Area falls into Storm Basin 1 as defined in the September 24, 2004 Focus Report as illustrated in Exhibit 6C. This area will have flows tie to the proposed storm pipe located at the intersection of Paquette Road and Parson's Creek Drive. Flows from this area will be directed to the existing SWMF 1A located to the east side of Storm Basin 1.

Storm Basin 3 is located in the northern most portion of the Plan Area as illustrated in Exhibit 6A. As noted in the September 24, 2004 Focus Plan, this storm basin is to be served by one stormwater management facility.

All pipe sizing will be confirmed at the detailed design stage. Please note the areas contributing to each SWMF has not changed and therefore should not be a concern from a servicing capacity or required storage perspective.

The additional 6 lots have a minimal affect from a basin area and will not be problematic from a sanitary capacity constraint issue.

5.3 Sanitary Sewer System

Sanitary Basin B and C vary slightly from the September 24, 2004 Focus Plan. The minor variations are required to correctly align the basin boundaries with the proposed lot lines.

Sanitary flows for Basin B will be directed via gravity towards the intersection of Paquette Road and Rainbow Creek Drive through connection points along Pine Place 3D and Pine Place 2D. Flows will then be directed southerly along Paquette Road towards the sanitary connection at the intersection of Paquette Road and Parson's Creek Drive.

Sanitary flows for Basin C will be directed via gravity towards the proposed Prospect Pointe Stage 3B through all development east of Paquette Road. Flows from Stage 3B are directed south towards the existing sanitary trunk along Confederation Way.

5.4 Shallow Utilities

The Amendment area will be serviced by power, gas and by the cable utility operators. These services will be extended from nearby existing developments.

5.5 Road Network

The major road network for this Amendment area is comprised of the extension of Millennium Drive from the Rainbow Creek Drive/Paquette Road/Millennium Drive intersection on the east to the existing Millennium Drive/Rainbow Creek Drive to the west (adjacent to the Devonian and Morgan Creek developments). Designed as a major collector, with a 12.5 m carriageway within a 24 m road right-of-way, this is consistent with the Bunt TIA March 2006 Report recommendations as embodied within **Exhibit 6-4** of the Report for this road and will be constructed to the Municipality's Collector Road Standards. The local road network is comprised of through streets and cul-de-sacs with major access points to collector and arterial roads. All of these roads are proposed to be developed in accordance to RMWB standards. The centre-line of internal roads when crossing Millennium Drive will be aligned at the detailed engineering stage.

The road system for these lands is proposed to be developed to accommodate the Municipal transit system.

6.0 IMPLEMENTATION

6.1 Timing of Staging

Based on the logical extension of roads and services within these lands, the intention is to commence development in a staged fashion in 2007, with subsequent phases of development stages ensuing in following years.

6.2 Co-operative Planning

Timberlea Consortium Inc. is planning for the equitable distribution of parks, roads and services to enable the orderly and timely development of these lands.

7.0 SUMMARY

This document describes the land use revisions for the Amendment area to enable the immediate and orderly development of these lands. This Amendment is in response to the need for land available for residential development in the Fort McMurray Urban Service Area due to housing demand.

This ASP Amendment conforms to the policies and objectives of the Regional Municipality of Wood Buffalo's development guidelines and planning documents.

Development concept design responds to the technical challenges of the site due to the Amendment lands being the sole remaining lands of the Timberlea Consortium Inc. remaining within the North Central Timberlea ASP area.

8.0 REFERENCES

Regional Municipality of Wood Buffalo. 1999. Land Use Bylaw 99/059.

Regional Municipality of Wood Buffalo. 2001. Municipal Development Plan.

Timberlea Area Structure Plan. Bylaw No. 01/020, as amended by Bylaw NO. 06/016.

Timberlea Area Structure Plan. Bylaw No. 01/020, as amended by Bylaw NO. 05/026.

APPENDIX A

LETTER FROM THURBER

J:\pre-integration\old_J\2698\Area Structure Plan\PTR-2698_timberlea-asp-plan-r07_2007-08-29.doc\2007-09-12\BS



THURBER ENGINEERING LTD.
GEO TECHNICAL • ENVIRONMENTAL • MATERIALS

April 25, 2007

File: 19-4532-4

Timberlea Consortium Inc.
c/o CSM Engineering Ltd.
Suite 102, 9906 Franklin Avenue
Fort McMurray, Alberta
T9H 2K5

Attention: Mr. Cliff Maron, P.Eng.,

**TIMBERLEA NORTH CENTRAL SUBDIVISION (PHASES 4 & 5)
FORT McMURRAY, ALBERTA
GEO TECHNICAL RECOMMENDATIONS FOR GROUNDWATER CONTROL**

Dear Sir:

As requested, Thurber Engineering Ltd. (Thurber) has reviewed previous geotechnical reports and information, related to the Timberlea North Central site. This information consists of the following:

- Thurber's December 23, 2004 test pit observation letter;
- Thurber's January 10, 2005 geotechnical investigation report;
- Thurber's April 4, 2005 updated geotechnical investigation report;
- Thurber's May 9, 2005 development suitability clarification letter; and
- Thurber's May 27, 2005 supplemental geotechnical investigation report.

In addition, CSM Engineering Ltd. had also provided Thurber with the following drawings for review:

- Test hole location plan (Figure 7);
- Original and present ground conditions drawing (Figure 8); and
- Present contour and proposed grading drawing (Figure 9).

Based on the review of the information as listed above (not attached to the letter), the groundwater readings in the standpipes installed at the above noted site from July 2004, February 2005 and May 2005 indicate that groundwater levels as high as 0.7 (TH05-33) to 0.9 (TH04-31) below the original ground surface elevations. We understand that the standpipes installed as part of the 2004 and 2005 geotechnical investigations have since been destroyed during the 2005 - 2006 site



THURBER ENGINEERING LTD.

preparation work. No additional water level readings have been taken since the February 2005 readings.

A review of the site grading drawings provided by CSM Engineering Ltd. (CSM) indicate that site final height will be to 2.0 m higher in selected areas with an average of about 1 m higher than the original ground elevations.

Residential development within the boundaries of Stage 2 is considered to be feasible. However, as water levels were relatively high before grading was completed, there could be isolated areas, notably in the locations of test holes TH05-33 and TH04-31, where water may be encountered during the installation of underground services or during basement excavation construction. We understand that the Regional Municipality of Wood Buffalo's municipal standards require storm sewer laterals to each lot and require that weeping tile (foundation drains) and sumps with discharge into the storm sewer laterals. We also understand that wick drains will be installed under the curbs on all roadways to dissipate any groundwater or surface water runoff that may penetrate into the roadway subgrade.

If the above recommendations are incorporated into the design of the subdivision, the effects of a potentially high water table will be mitigated.

We trust the above meets with your present requirements. If you have any other questions, please contact us at your convenience.

Yours very truly,
Thurber Engineering Ltd.
Dimitri Papanicolas, P.Eng.
Review Principal

A handwritten signature in black ink, appearing to read 'Shawn G. Russell'.

Shawn G. Russell, P.Eng.
Project Engineer
/sdw

Client: Timberlea Consortium Inc.
File: 19-4532-4
e file: 081194532-4 let

Date: April 25, 2007
Page 2 of 2

** TOTAL PAGE .03 **