



11213 Winterburn Rd NW
Edmonton, AB T5S 2B2

Office (780) 809 8191
Fax (780) 809 8190
Site aspenlandgroup.com

January 7, 2025

Lac Ste. Anne County
Box 219, 56521 Range Road 65
Sangudo, AB T0E 2A0

Sent via email: tvanderwell@lsac.ca

Attention: Tanya Vanderwall
Senior Development Officer

Reference: Incomplete Development Letter
Development Permit Application and Redistricting Application
File No.: 5305351001,2001,3001 & 5305362001,3001,3002
SE, SW, NW 35-53-05 W5M & SW, NW 36-53-05 W5M
Lac Ste. Anne County

Dear Ms. Vanderwall:

Aspen Land Group Inc. (Aspen) has been retained by 214313 Enterprises Ltd., also known as T&T Sand and Gravel Ltd.(T&T) to prepare a response to the Incomplete Development Letter received on August 12, 2025 regarding the development permit renewal application and redistricting application for the Bamber Pit located within SE, SW, NW 35-53-05 W5M and SW, NW 36-53-05 W5M.

We have a summary of the history of the Bamber Pit, additional information required for the redistricting application, along with the Council's requested information following the second reading to Bylaw 22-017-02-2025.

1.0 Pit History

The Bamber Pit is comprised of lands located on NE 26-053-05-W5M, SW, NW 36-053-05-W5M and SE, SW, SE 35-053-05-W5M. The Bamber Pit boundary crosses the municipal boundary line between Parkland County and Lac Ste. Anne County. Following the receipt of a Development Permit (07-D-231) from Parkland County and Environmental Protection and Enhancement Act (EPEA) Registration No. 248371-00-00 from Alberta Environment and Protected Areas (AEPA); T&T first opened the Bamber Pit in 2009 within the NE 26-053-05-W5M. Pit access/egress was established in the southeast corner of the property onto Range Road 51. Throughout operations, the haul route was from the pit access along Range Road 51 to Highway 16 as per the Haul Road Use Agreements with Parkland County. As operations progressed and

the deposit within the NE 26 was exhausted, T&T applied for an expansion of pit operations into the SW, NW 36-053-05-W5M and SE, SW, SE 35-053-05-W5M with Lac Ste. Anne County (LSAC) and AEPA. Following the submission of applications to LSAC and AEPA, Development Permit No. 193193-16-D0012 was issued on November 28, 2018, with an expiration date of five (5) years from the date of all regulatory approvals are issued, while EPEA Registration No. 248371-00-01 was issued on March 5, 2020. Given that the Registration was issued prior to the receipt of the Development Permit, the expiry date was effectively March 5, 2025. As a result, T&T submitted a development permit renewal application to extend the expiry date in accordance with Condition 21 of Development Permit No. 193196-16-D0012 in November 2023.

Proposed Changes to Operations

The operations of the development with this renewal application remain the same, aside from:

- The removal of areas of non-economical extraction, which have been identified as Mining Blocks 26 and 31 through 35, and
- The request to changes to the hours of operations.

The proposed changes to the hours of operation are being requested to ensure better alignment with Development Permit No. 07-D-231 issued by Parkland County (Attachment B). T&T is requesting that the hours of operation including extraction, reclamation, and processing (crushing) of materials be specified as:

- 6:00 am Monday to 6:00 pm Saturday

Hours for hauling would be maintained as per the Road Use Agreement with Parkland County:

- 8:00 am to 6:00 pm Monday to Friday
- 8:00 am to 4:00 pm Saturday

Changes to the Land Use Bylaw

Following the review of the development permit extension/renewal application, it was determined that at the time Development Permit No. 193196-16-D0012 was issued, the Land Use District was Agriculture '1' (AG1), at which time Gravel Extraction and Crushing was listed as a discretionary use. In between the time the Development Permit was issued and the renewal application was submitted, the Land Use Bylaw was amended, which included the inclusion of the Aggregate Resource Extraction and Processing (AR) Land Use district, while the discretionary use of gravel extraction and crushing was removed from the Agriculture '1' (AG1) District. When this change to the Land Use Bylaw occurred, the Land Use District for the subject property remained unchanged. As a result, in order for LSAC administration to process the development permit renewal application, T&T was requested to prepare and submit a Land Use



Redesignation Application. The Land Use Redesignation Application was accepted by LSAC administration on May 1, 2025.

2.0 Additional Requested Information

The following information is in response to the additional information requested by Council with the requested items as presented in the August 12, 2025, letter outlined in italics and the corresponding information directly, while supporting documentation has been provided in the attachments to this letter.

1. An Environmental Impact Assessment report prepared by a qualified professional

The Environmental Impact Assessment (EIA), along with the additional information requested by LSAC administration was included for review with the initial Development Permit Application. The EIA was completed by a qualified professional, Millennium EMS Solutions Ltd. (MEMS), in May 2018. Aside from changes to the Wetland Policy and Classification System, this EIA still remains reflective of the conditions of the site. A copy of the EIA is included in Appendix E of the "Bamber Pit #2" Pit Operations Update, dated February 2019, which is located within Attachment A.

2. Traffic Impact Assessment

There have been no proposed changes to the haul route or truck traffic from when the pit was established in 2009. The haul route from the pit will continue to be from the pit entrance located in the southeast corner of the pit onto Range Road 51 and south to Highway 16. This haul route is located within Parkland County. T&T continues to work with Parkland County to enter into an annual Industrial Haul Agreement. A copy of their 2025 Road Use Agreement has been included in Attachment B.

Given that this is an established haul route, that there no proposed increase or changes to the haul route and that an existing Road Use Agreement is in place, T&T request this requirement be reconsidered.

3. Proposed haul route: including but not limited to: Range Road 51 and 52 and intersection with Highway 16 and capacity to handle proposed increase in traffic/loads

There are no proposed alternative haul routes. The haul route will remain along Range Road 51 from the pit entrance to Highway 16. This haul route is described in the 2025 Industrial Haul Agreement between Parkland County and T&T provided in Attachment B. For clarity, there will be no traffic from the pit on Range Road 52.



4. *Extraction plans, and the anticipated increase/decrease in annual extracted volume versus the current operation.*

Extraction remains relatively consistent with the previous permitted extraction plan. There are no proposed increases to the mining area only removal of non-economical mining blocks will occur. At this time, it is anticipated that Mining Blocks, 25, and 31 through 35 will not be excavated.

While production is market driven, T&T does not anticipate a major increase/decrease to extraction volumes from the current operation. A copy of the extraction plan can be found in Figure 3 in Appendix A of the "Bamber Pit #2" Pit Operations Update, dated February 2019, which is located within Attachment A.

The request for the change of hours, does not reflect a request to increase the extraction volumes, but is being sought to provide flexibility to produce material during the entire construction season.

5. *A list of all other approvals required (which may include: Provincial water diversion licence for pit dewatering, Federal requirements)*

Municipal Authorizations

Parkland County Authorizations

In addition to the municipal authorizations required by LSAC, the Bamber Pit requires authorizations from Parkland County. T&T currently holds Development Permit 07-D-231 for the extraction and processing operations within the NE 26-053-05-W5M, and Industrial Haul Agreement 2025-H-025 that was entered into August 5, 2025. A Copy of both authorizations has been provided in Attachment B.

Provincial Authorizations

The following provides a summary of provincial authorizations by agency required for the development of the Bamber Pit.

Alberta Environment and Protected Areas

Registration under the Code of Practice for Pits

Under the Code of Practice for Pits (the Code), all pits that result in a disturbance of 5.0 ha or larger require a registration. The Bamber Pit received Registration No. 248371-00-00 on October 13, 2009 for the NE 26-053-05-W5M. The updated activities plan to expand the pit into NW, SW, SE 35-053-05-W5M and NW, SW 36-053-05-W5M, received Registration No. 248371-00-01 was on March 5, 2020. Copies of both Registrations have been included in Attachment C.



Authorizations under the Water Act

Pit Dewatering and Activities within the Groundwater

The Bamber Pit is considered a dry pit, therefore, authorization under the *Water Act* is not required. Additionally at this time there are no proposed plans for off-site dewatering of surface collected water.

Should the management of surface water collection methodology change to include off-site dewatering, an application under the *Water Act* will be made. No water will be diverted off-site without the appropriate authorization.

Aggregate Washing

The *Water Act* requires a licence for the consumptive use of water. As the proposed operations does not include washing of aggregate, a Licence under the *Water Act* is not required.

Wetland Disturbance and Compensation

As part of the EIA prepared by MEMS, a Wetland Desktop Review was completed. In the 2018 Desktop Assessment, MEMS identified a number of wetlands in the proposed boundary. While disturbance of these features required and still do require authorization under the *Water Act*, an application was not submitted as operations were not anticipated to impact the wetlands in the near future.

Since the completion of the 2018 Desktop Assessment, AEPA has refined the Wetland Policy. As a result, T&T has retained Vertex Professional Resources Ltd. (Vertex) to prepare and submit an application under the *Water Act* for the disturbance to wetlands. No disturbance will occur to wetlands until the appropriate authorization has been received. Any authorization received by AEPA will be forwarded to the LSAC for their records.

Alberta Culture, Multiculturalism, and Status of Women

The Listing of Historical Resources identifies lands that contain or are believed to contain historical resources, and primarily include archaeological and paleontological sites, Aboriginal traditional use sites of a historic resource nature, and historic structures. The Alberta Historical Resources Act (HRA) may require proposed activities likely to threaten the integrity of a historical resource to be preceded by a Historical Resources Impact Assessment (HRIA). In July 2016, T&T retained Western Heritage to complete a Statement of Justification for Alberta Culture. Following Western Heritage's evaluation of the development, they recommended that the proposed development proceed. As a result, Clearance was provided on September 1, 2016. A copy of Western Heritage's Evaluation and Clearance from Alberta Culture is provided in Attachment D.



Alberta Transportation

Roadside Development Permit

An Alberta Roadside Development Permit (RSDP) is required for operations located within 300 metres of a provincial highway or within 800 metres of a highway intersection. As the Bamber Pit is situated 2.4 km north of Highway 16, it falls outside these regulated boundaries and an RSDP is not required for the operation.

Royalty Agreement

The Bamber Pit includes portions of the undeveloped road allowance for Range Road 51. Prior to entering the undeveloped road allowance, T&T will enter into a royalty agreement with Alberta Transportation for the aggregate within the undeveloped road allowance.

Federal Authorizations

Migratory Birds Convention Act and Migratory Birds Regulation

The federal *Migratory Birds Convention Act and Migratory Birds Regulation* seek to protect seasonally migrant birds across Canada. To protect and conserve migratory birds and their nests, operations will avoid vegetation and tree clearing (should it be required) during migratory birds nesting seasons, generally between April 15 and August 31, as outlined by the areas Nesting Period Zone (Environment and Climate Change Canada (ECCC) 2025).

Species at Risk Act

The federal *Species at Risk Act* (SARA) serves to conserve wildlife species, aid in the recovery of species currently at risk and protect vulnerable species from being impacted by human activity. Species, as well as its habitat, designated as extirpated, endangered, threatened or special concern species, must be protected. As potential tree clearing, vegetation removal, and ground disturbance will be required, operations will mitigate any disturbance to any species or its habitat if they are determined to reside in the vicinity of the project.

Fisheries and Oceans Canada

The federal Fisheries and Oceans Canada (DFO) serve to safeguard waters and manage Canada's fisheries and oceans resources. As the pit does not contain waterbodies aside from wetlands, this project does not fall within the governance of *The Fisheries Act*.

Canadian Navigable Waters Act

The *Canadian Navigable Waters Act* (CNWA) serves to protect waters on which the public has the right to travel, and effects the ownership of waters, interference with navigable bodies, and the planning of navigation. As there are no navigable waters within the pit boundary, the project does not fall within the governance of this act.



6. Reclamation plan shall be prepared by a qualified professional

As there are no changes to the previously permitted extraction and operations, the corresponding reclamation plan remains consistent with previous plans. The reclamation plan was prepared by MEMS, while the reclamation description details were prepared by Grant Woynarowich, B.Sc., P.Ag. Environmental Consultant with Gdubblu Consulting Ltd. The reclamation details are described in Section 4.0, while the reclamation plan can be found on Figure 4 in Appendix A of the "Bamber Pit #2" Pit Operations Update, dated February 2019, which is located Attachment A.

7. Operations, safety and emergency response plan

Please see Attachment E for the Emergency Response Plan from the T&T Sand & Gravel Ltd. HSE Manual.

8. Site plans showing the storm drainage plan including surface and groundwater management measures, and direction of drainage

Details regarding surface and ground water management is provided in Sections 3.5 and 3.6 of the Environmental Impact Assessment of Proposed 'Bamber #2 Pit Operations prepared by MEMS in 2018. A copy of the EIA is located in Appendix E of the "Bamber Pit #2" Pit Operations Update, while site plans showing current and reclaimed surficial drainage are provided on Figure 2 and 4 within Appendix A of the "Bamber Pit #2" Pit Operations Update, dated February 2019, which is located Attachment A.

9. A hydrogeology report prepared by a qualified hydrogeologist

The hydrogeology report has been prepared by MEMS on June 1, 2017. A copy of the report can be found in Appendix D of the Environmental Impact Assessment of Proposed 'Bamber #2 Pit Operations prepared by MEMS in 2018. A copy of the EIA is located in Appendix E of the "Bamber Pit #2" Pit Operations Update, which is located in Attachment A.

10. Noise study and description of measures to be taken to minimize noise to neighboring properties

MEMS completed a Noise Study in 2017 to provide mitigations for the pit. Following the open house, T&T retained Vertex to provide additional recommendations. Vertex's August 2, 2025, letter provides additional mitigations to mitigate noise to surrounding residences. Some of the measures that will be taken to minimize noise to neighboring properties will include a sound berm, acoustic shrouds, and white noise reversing alarms. Full details can be found in the Acoustic Barrier Letter included in Attachment F. The 2017 MEMS report can be found in Appendix F of the "Bamber Pit #2" Pit Operations Update, which is located Attachment A.



11. *Dust control measures*

Dust control measures are outlined in Section 3.1 in the Environmental Impact Assessment of Proposed 'Bamber #2 Pit Operations prepared by MEMS in 2018 and in Section of 3.6 of the "Bamber #2" Operations – Update, prepared by Grant Woynarowich, B.Sc., P.Ag. Environmental Consultant with Gdubblu Consulting Ltd. Environmental Impact Assessment (Attachment A). A copy of the EIA is located in Appendix E of the "Bamber Pit #2" Pit Operations Update, which is located Attachment A.

In addition to the above-mentioned details, Grant Woynarowich, B.Sc., P.Ag. with Vertex prepared the August 2, 2025 letter in response to concerns raised regarding Silica dust the open house. A copy of this letter was included in Appendix E of the Public Consultation Summary included in Attachment G of this letter.

12. *Complete application – indicate what page/appendix are locate (not list "same as before")*

The information in this Letter Package is intended to provide all the requested information required for a complete application. Please refer to Attachment H for a filled-out copy of the Development Permit Application Aggregate form.

3.0 Additional Information

While not specifically requested in the Incomplete Development Letter, the following documents have also been provided to ensure that both the redistricting application and development permit applications are considered complete:

- The 2025 Public Engagement Summary – Attachment G
- The Alberta Energy Regulator Abandoned Well Search Results – Attachment I
- Certificates of Title – Attachment J

If you require further information, please contact the undersigned at lfoy@aspenlandgroup.com.

Sincerely,

This information redacted
as per the provisions of the
Access to Information Act /
la Loi sur l'accès à l'information

P t i f P i
Lesley Foy, P.Ag.
Senior Agrologist
Aspen Land Group Inc.

cc: John Thomas, T&T Sand Gravel Ltd.



Enclosures

- Attachment A: Bamber Pit #2 Pit Operations Update, dated February 2019
- Attachment B: Industrial Haul Agreement and Development Permit with Parkland County
- Attachment C: EPEA Authorizations
- Attachment D: Western Heritage's Evaluation and Clearance from Alberta Culture
- Attachment E: T&T Sand & Gravel Ltd. HSE Manual
- Attachment F: Acoustic Barrier Letter
- Attachment G: Public Consultation Summary – Lac Ste. Anne County Proposed Re-Zoning
- Attachment H: Development Permit Application – Aggregate – Lac Ste. Anne County
- Attachment I: AER Abandoned Well Search Results
- Attachment J: Certificates of Title





Attachment A:

Bamber Pit #2 Pit Operations Update, dated February 2019

Environmental Protection and Enhancement Act (EPEA)
EPEA Code of Practice for Pits,
"Bamber #2" Pit Operations - Update
NW, SW & SE 35-053-05 W5M
NW & SW 36-053-05 W5M

Prepared for:
214131 Enterprises Ltd.
Box 5317
Devon, Alberta
T9G 1Y1

Prepared by:
Gdubblu Consulting Ltd.

February 2019
File # 01-2019



February 25, 2019

Alberta Environment and Parks
Lower Athabasca Region
Twin Atria Building
#111, 4999 – 98th Ave.
Edmonton, AB, T6B 2X3

To Whomever it May Concern:

**Re: EPEA Application Update for 214131 Enterprises Ltd.
Bamber #2 Pit, Multiple Quarter Sections.**

On behalf of 214131 Enterprises Ltd. (operating as T&T Sand and Gravel., we are submitting the updated pit plan which includes the expansion into Lac Ste Anne County.

An electronic copy is enclosed for your review and includes the following:

- the Updated EPEA Application and associated;
- Land titles and Leases;
- LSAC Development Permit and additionally requested documents;
- Public Notice and Statements of Concerns;
- Any additional supporting documents requested during the County approval process.

If there are any questions or concerns, please contact the undersigned, at (780) 975-5577.

Yours truly,

This information redacted as per
Protection of Privacy Act (POPA)
This information redacted (POPA)
This information redacted (POPA)
This information redacted (POPA)
This information redacted (POPA)
This information redacted (POPA)
Protection of Privacy Act (POPA)
Grant Woynarowich, B.Sc, P.Ag.
Environmental Consultant

Enclosures



Table of Contents

	Page
Table of Contents.....	i
List of Tables	ii
List of Figures	ii
List of Appendices	ii
Distribution List	ii
1.0 INTRODUCTION	1
1.1 Project Overview	1
1.2 Location and Context.....	1
1.3 Landowners.....	1
1.4 Municipal land Use Zoning	2
2.0 EXISTING CONDITIONS.....	2
2.1 Topography	2
2.2 Hydrogeology	2
2.3 Soils.....	2
2.4 Surface Water	3
2.5 Vegetation.....	3
2.6 Wildlife.....	3
2.7 Land Use	4
3.0 PIT ACTIVITIES AND OPERATIONS	5
3.1 Proposed Pit Activities and Operations.....	5
3.2 Pit Excavation and Development Setbacks	5
3.3 Pit Development Stages, Excavation Phases and Projected Schedule.....	6
3.4 Pit Infrastructure and Equipment.....	6
3.5 Pit Access	7
3.6 Noise Emissions and Controls.....	7
3.7 Dust Emissions and Controls	8
3.8 Erosion and Sediment Controls.....	8
3.9 Pit Access Controls.....	9
4.0 RECLAMATION PLAN	9
4.1 Reclamation Objective	9
4.2 Conservation and Reclamation Activities	9
4.3 Progressive Conservation and Reclamation.....	Error! Bookmark not defined.
4.4 Reclamation Contours and Grading.....	9
4.5 Revegetation.....	10
4.6 Weeds and Weed Control	10
4.7 Monitoring and Maintenance	10
5.0 SECURITY.....	10
6.0 LIMITATIONS OF LIABILITY AND CLOSURE	11



7.0 REFERENCES 12

List of Appendices

- Appendix A Figures (Activities Plan)
- Appendix B Code of Practice for Pits; Schedules 1, 2 and 3
- Appendix C Land Titles and Lease Agreements
- Appendix D LSAC Development Permit and Supporting Documents
- Appendix E Environmental Impact Assessment – LSAC
- Appendix F Supporting Reports
- Appendix G Public Notice and Statements of Concern
- Appendix H Additional Supporting Information

Distribution List

- Client 1 copy
- AEP 1 electronic submission
- Author 1 copy (file)

1.0 INTRODUCTION

Gdubblu Consulting Ltd. (Grant Woynarowich) was retained by was retained by 214131 Enterprises Ltd. (operating as T&T Sand and Gravel (T&T)) to prepare a Environmental and Protection and Enhancement Act (EPEA) application and a development permit for T&T's "Bamber #2" aggregate pit operation as required under Alberta Environment and Parks (AEP) Code of Practice for Pits (2004)".

This registration is for the continued operation and eventual reclamation of a "dry" sand and gravel pit on a property leased exclusively by T&T. This report describes the activities and operations for T&T's "Bamber #2" Pit (hereinafter referred to as the "Project" or the "Pit").

1.1 Project Overview

The Project involves existing and proposed soil, overburden and aggregate excavations for Pit operations on properties containing sand and gravel from glacial origins. After extraction, aggregate is crushed and screened to improve its engineering properties for use in the construction materials industry. The Pit has an estimated gravel quantity of 11,780,000 m³ which Lac Ste. Anne County is able to draw revenue from in the form of a CAP Levy. The current levy rate is \$0.40 per tonne, this will equate to roughly \$2.94-\$4.8 million in tax revenue to the Lac Ste. Anne County (LSAC) based on calculated gravel estimates. There is currently an employee of T&T who resides in Alberta Beach, and pending market demand, there could be increased employment opportunities for residents of Lac Ste. Anne County.

This application seeks authorization from Lac Ste. Anne County for the opening up, operation and reclamation of the Pit on lands residing within its boundaries. This application describes the Project as it pertains to the pit, access roads, and associated infrastructure.

All updated and reviewed figures illustrating the Pit are included; both existing and conceptual site conditions; operation and reclamation plans in Appendix A. Schedules 1, 2 and 3 of the Code of Practice for Pits including the detailed security estimate are included in Appendix B. Appendix C contains the Land titles and Lease agreements. The Lac Ste. Anne County development permit and supporting documents are located in Appendix D; while the Environmental Impact Assessment requested by LSAC is in Appendix E; and Supporting Standalone Reports are in Appendix F; the Public Notice and Statements of Concern are in Appendix G; and any additional supporting information is located in Appendix H.

1.2 Location and Context

The original Project property is located within Parkland County with the expansion crossing into Lac St. Anne County, approximately 80 km west of Edmonton, north of Highway 16 (Figure 1). The Pit is located on the northeast quarter of section 26, Township 53, Range 5, west of the 5th Meridian. And the expansion quarters encompassing the NW, SW & SE of section 35 as well as the NW & SW of section 36 Township 53, Range 5, west of the 5th Meridian.

1.3 Landowners

The proposed Pit expansion is located on lands owned by Kim and Barbara Bamber. Current land title and lease agreements is included in Appendix D.



1.4 Municipal land Use Zoning

The current Project (NE 26) is located within Parkland County. The 'Parkland County Land Use District Map' designates the project and all lands immediately surrounding the Project for 2 miles, as "Agricultural General District". The northern border of the NE-26 quarter section is the division between Parkland County and Lac Ste. Anne County. The proposed Pit area in sections 35 and 36 are adjacent to lands zoned as 'Agricultural 2' (AG2) to the north and west, and 'Agricultural 1' (AG1) lands to the east, respectively. Table 1 lists a detailed breakdown of zoned land uses within a two mile radius. As part of the development permit application process, T&T Sand & Gravel will also be submitting a redistricting application to amend the current land use to Aggregate Resource Extraction & Processing.

2.0 EXISTING CONDITIONS

2.1 Topography

The site is dominated by undifferentiated coarse textured (sand, loamy sand, sandy loam material over moderately fine textured till. Typical to this type of surface lithology; the project is hummocky with a low to medium relief landforms and gentle (3-6%) to moderate (6-15%) slopes (ASIC 2001).

2.2 Hydrogeology

Initially, saturated layers were intercepted during testing activities, approximately 6 m below the ground surface. During the first few years of operations in the Northeast of 26, no groundwater has been encountered and has not influenced the excavation methods for the aggregate material.

Three groundwater wells are located in the NE 35, assumed to be servicing the acreages there. The two most recently drilled are registered to a Carrie (GIC Well ID: 460405) and a Glesner (GIC Well ID: 1640390). The Glesner well has its screen depth at 23.1 to 26.2 mbgl within shale layers identified on the lithology description. The Carrie well has its perforation depth at 51.8 to 57.9 mbgl also within shale layers identified on the lithology description. Copies of these Water Well Drilling Reports are located in Appendix H: Supporting Documentation. There are no mentions of sands or gravels in the lithology of the wells, but are likely above the 7 mbgl where the lithology begins.

A hydrogeology report was requested by LSAC as part of the development permit application and is included in Appendix F: Supporting Reports.

2.3 Soils

The current pit is located in the Black-Dark Gray Soil Zone of central Alberta (ASSWG 1993). Soils information obtained from AGRASID indicated that the soil map unit (SMU) is COZCzbl2/H11. These soils consist of Orthic Black Chernozems and Orthic Gray Luvisols developed on moderately fine textured till. Topsoil is averaged at 20 cm, subsoil is approximately 35 cm and overburden has an average depth of approximately 4 m. The total soil depth is approximately 4.55 m.

The northern 5 quarters had a topsoil survey completed in October of 2014 with 64 locations advanced. With the majority of the area undergone some improved pasture cultivation with a distinct Ap horizon (plow layer), typical soils were Eluviated Black Chernozems (with gleyed variations) and Dark Gray Luvisols (with gleyed variations). Two of the locations were a mineral gleysol with a surface peat of 35 cm, the peat material depth was included in the topsoil average. The topsoil for the expanded area ranged from 12-40 cm with some deep Ae layers, and averaged 24 cm.



A slight increase from the original application area within the NE 26 quarter section. The subsoil layer remained consistent with the previous application at 35 cm and an average overburden depth increased to approximately 5.2 m

The previous application had stated and been approved as *“based on sloping requirements set by Alberta Environment Code of Practice for Pits, internal slopes will be reclaimed to be no steeper than 10:1 in the northern portion of the Pit and no steeper than 3:1 in the southern portion of the Pit.”* Since the staging of the project area intends to reach the property boundaries the 3:1 slope is the default reclamation target. It is T&T's intention to maximize the area of aerable land to the landowner; upon expiration of the gravel resources. For a basis of minimum reclamation targets, the CLI map boundaries have been included in the figures and cross sections. T&T's reclamation goal of maximizing aerable land for the landowner will exceed the CLI requirements.

2.4 Surface Water

No major water bodies are located within the vicinity of the Pit. There are several dugouts located throughout the project area, the landowner utilizes them for watering cattle within the pasture quarters. Visible on Figure 2; the dugouts are located approximately central in the SW-35, south-central in the SE-35 and southwest in the SW-36 quarter sections.

2.5 Vegetation

The Pit is located within the Dry Mixedwood subregion, which is characterized by aspen white spruce forest (Strong and Leggatt 1992). More specifically vegetation at the Pit consists of pasture species and an aspen / white spruce / willow stands. An ACIMS rare plant search was performed for the project area in February of 2018, and no rare or sensitive species were found. A vegetation, wetlands and rare plant desktop assessment was completed as part of the Environmental Impact Assessment (EIA) requested by LSAC and is included in Appendix E.

2.6 Wildlife

Due to previous and current land uses and minimal or fragmented cover on the project property, there are reduced opportunities for long term wildlife use or wildlife habitat. The LSAC requested EIA also has a wildlife component which is summarized in Appendix E.

According to the Canada Land Inventory, wildlife capabilities ratings for the Project property are as follows

Ungulates:

- Class 3, Subclass MG- land in this class comprises of 70% of the Project area. Lands in Class 3 impose slight limitations to ungulate (deer, moose, elk) production. The subset M modifier indicates poor soil moisture, either excessive or deficient. The subset modifier G refers to the landforms on site, they are lacking the proper distribution or interspersion for optimum ungulate habitat.
- Class 5, Subclass MN- land in this class comprises of 20% of the Project area. Lands in Class 5 have moderately severe limitations on the production of ungulates. The subset M modifier indicates poor soil moisture, either excessive or deficient. The subset modifier N indicates adverse soil which is described as having excessive salinity, lacking essential trace elements, and having characteristics or an abundance of toxic elements in the soil.
- Class 3, Subclass FM- land in this class comprises of 10% of the Project area. Lands in Class 3 impose slight limitations to ungulate production. The subset modifier F indicates low fertility,



where the soils are lacking the necessary nutrients for optimum plant growth. . The subset M modifier indicates poor soil moisture, either excessive or deficient.

Waterfowl:

- Class 6, Subclass TF- land in this class comprises of 100% of the project area. Lands in Class 6 have severe limitations to the production. The subset modifier T indicates that the site has adverse topography and the subset modifier F indicates low fertility, that is poorly suited to use by waterfowl.

Ungulate populations may be evident in the wooded areas of the property and those to the east and south of the property. With the location of the wooded area to the immediate south, wildlife would in most situations, be in transit to the surrounding areas that provide greater coverage.

Based on a search of the Fish and Wildlife Management Information System (FWMIS, 2018) data base using the Fish and Wildlife Management Internet Mapping Tool (AEP 2018), the Project area is not located within or near any Key Wildlife and Biodiversity Zones (KWBZ), nor does it contain any sensitive wildlife ranges. In addition, the Project area does not fall within any provincial Environmentally Significant Areas which are areas that have been identified as important to the long-term maintenance of biodiversity, physical landscape features, and/or other natural processes in Alberta (Fiera 2014).

2.7 Land Use

The Project is currently an active pit authorized under EPEA approval 248371-00-00. Current land use in the surrounding area is primarily agricultural. There is a third party gravel pit operator 1.2 km south of the project area within the southern portion of quarter section 23.

Table 1: Surrounding Land Use	
Land Use Type	Legal Site Description
Agricultural 1 (AG1) ¹	SE 2-054-05 W5M, SW, E 1/2 1-054-05 W5M, SE 12-054-05 W5M, 6-054-04 W5M, 7-054-04 W5M, E 1/2 36-053-05 W5M, 31-053-04 W5M, 32-053-04 W5M
Agricultural 2 (AG2) ¹	33-053-05 W5M, 34-03-05 W5M, SE 3-054-05 W5M, W 1/2, NE 2-054-05 W5M, NW 01-054-05 W5M, 11-054-05 W5M, W 1/2, NE 12-054-05 W5M
Urban Municipalities ¹	NE, W 1/2 3-054-05 W5M
County Residential Ranch (CRR) ^{1,2}	SE 2-054-05 W5M, SE 1-054-05 W5M, SW 31-053-047 W5M, NW 34-053-05 W5M, NW 5-054-04 W5M
Public Recreation (PR) ¹	N 1/2 10 054-05 W5M
General Agriculture ³	13, 14, 21, 22, 23, 24, 25, 26, 27, 28- 053-05 W5M, 19, 30-053- 04 W5M

¹ Land uses taken from County of Lac Ste. Anne Land Use Districts (2014);

² Country Residential Ranches occupy portions of listed quarter, not entire quarter;

³ Land Use taken from Parkland County Land Use District Map (2015)



John Thomas and 214131 Enterprises Ltd. delivered letters to local residences in the area; as notice for an open house at the Fallis Community Hall on April 29, 2015. This was to act as a precursor to submitting a development permit to the Lac St. Anne County and open lines of communication with adjacent and potentially affected area residences. Attached in Appendix G, are copies of the documents as well as a letter from a concerned landowner (one of the acreages in the NE 35 quarter section). Most of the concerns that the landowner expresses, are addressed as part of a typical COP application, while others, are general in nature.

In July of 2016, a Historical Resource Value assessment was completed for the Pit and area around it to search for potential historical artefacts and sites of cultural significance. This assessment was carried out by Western Heritage and it was determined that the proposed development area exhibits low potential to contain intact archaeological deposits and there are no known sites within the footprint that would be disturbed. This entire report can be found in Appendix F.

3.0 PIT ACTIVITIES AND OPERATIONS

3.1 Proposed Pit Activities and Operations

Overburden depths within the expanded pit area are on average 5.8 meters in depth. The aggregate depth found below the overburden averages 7.7 meters in depth. The aggregate deposit to overburden ratio, based on the average depths, is 1.3 : 1. Within the 5 northern quarter sections and the areas quantified by boreholes, there is an estimated 11.7 million cubic meters of sand and gravel. To facilitate the ongoing Pit activities and operations, stripped overburden material is placed directly within depleted Pit areas. While some soil materials have been placed in stockpile, ongoing operations will be progressively replacing soil material(s) on areas that have been filled and contoured. These lands will be returned to the crop rotation by the landowner (as can be seen along the southern property boundary of Figure 2).

The annual operational period is expected to be from six to seven months, as weather permits. All Pit operations (stripping, hauling, processing, reclamation etc.) are estimated to be 12 hours/day (6am-6pm) Monday to Friday, 8 am- 4pm Saturday and no activity Sunday over a two-three week period (three times per summer or as local market/contract fulfillment demands) as per the agreement with Parkland County (Appendix H).

Within the 5 northern quarter sections and the areas quantified by boreholes and a topographic survey, there is an estimated 11.7 million cubic metres of sand and gravel. Aggregate materials are estimated at: SE 35: 3,868,000 m³; SW 35: 1,149,000 m³; NW 35; 1,430,000 m³; SW 36: 3,478,000 m³ and NE 36: 1,780,000 m³. For an estimated total of: 11,705,000 m³.

3.2 Pit Excavation and Development Setbacks

Development setbacks of the Project area will include a 3 m buffer along the property lines as required within the COP. As T&T is showing in the southern quarter section, and the average 4 meters of overburden there, is of sufficient volume of material to meet the reclaimed sloping requirements of the project area. i.e. no more than 3:1 on property lines and varying ratios based on local CLI ratings for internal slopes. There is a natural gas pipeline that runs along the northern and western boundary of NW 35 (St. Anne Natural Gas Co-op, Licence #21597-17, but due to the existing "line of sight" setback and buffers, pit activities will be at a minimum 300 m away. No issues are anticipated.

3.3 Pit Development Stages, Excavation Phases and Projected Schedule

As with most small gravel pit operations, T&T plans to operate on an intermittent schedule as the local market/contract demands. T&T projects that the project has a lifespan of 15-25 years. The pit development in the southern quarter (NE 26) has; and will continue to progress, in stages of approximately 130 m by 130m (1.4 – 1.7 ha) yielding approximately 84,000 m³ of aggregate per phase respectively. There are 139 phases of mining planned, in order to minimize surface disturbance and reduce the visual impact on the area for the local residents. Having many small phases provides adequate room on each property line for the required 3 metre setback. The stages were developed in a sequence in which overburden can be directly placed for progressive reclamation and continued operations within the project area. The Pit opening will likely start in the SE 35 quarter section, following the progression from the ongoing operations and develop from there. The maximum disturbance size for the proposed area will be 6 ha, which would include one active phase, one stockpile phase, and the previously mined parcel being reclaimed via direct placement. Over the course of mining, 210.45 ha will be disturbed but never more than 6 ha at one given time. The EPEA approval, as required by the COP, will be updated every 5 years. Alternatively, as development of the pit progresses and the conditions of the pit change, this would require an alteration from the planned sequence, and an additional update will be submitted to AEP.

The initial operations area for the pit is located in the south eastern most corner of NE 26, adjacent to the site access. Overburden and topsoil/subsoil will be directly placed following the progressive reclamation system, outlined in Section 3, while aggregate material will be stockpiled on the pit floor. Stockpiling and processing will be carried out in mining stage 4 and 6 for aggregate removed from NE 26 (Figure 4). Material removed from the proposed mining area will be processed and stockpiled in the southern portion of mining stage 21 behind an earthen berm to reduce the visual and acoustic footprint of Pit process.

Parking of vehicles at the Pit will be in the SE corner of NE 26-053-05 W5M near the access to the site. Once the mine phase progresses into the new application area, parking of vehicles will occur in operation phase 23 (Appendix A, Figure 3).

3.4 Pit Infrastructure and Equipment

Aggregates that are excavated will be crushed and screened onsite. The primary processing and stockpile area is situated within the operating portion of the Bamber #2 project area. T&T utilizes a Norberg 300 hp cone crusher and a Sandia 3800 cone crusher for its crushing operations. Stockpiles will remain active until all finished product is hauled offsite. The processing and stockpile area(s) will transition through the stages as areas are excavated and reclaimed behind. Equipment and vehicles used at different phases of operation within the project area may include; mobile crushing and conveying systems and supporting infrastructure, gravel trucks, motor-scrapers, excavators, and bulldozers. Crushing and conveyor equipment will be situated in the pit bottom, but will shift within the COP boundary as the pit evolves, develops and the “Active Mining” shifts with the properties. T&T will ensure, when possible, that equipment will be situated so that the mufflers are directed appropriately into excavation walls or material stockpiles within the pit and all engines are properly encased and to utilize any other aides to assist in dampening engine noise when reasonable. Asphalt, aggregate washing and concrete production will not be a part of the pit operation.

Once the upper limit of the sand and gravel deposit is exposed, it is excavated by front-end loader or bulldozer or both, depending on deposit compaction. Periodically, multiple pieces of equipment may



be in operation at the same time. When pit opening has advanced further, only 1 or 2 pieces of Pit equipment are expected to be in operation at any one time besides the haul truck traffic. Typically, fuel is transferred to machinery utilizing slip tanks from service trucks; during operation fuel storage onsite may be required. Any fuel on site will have secondary containment and absorbent materials and fabrics will be available in case of spills and/or leaks. Any contaminated material will be contained, removed from site, and disposed of appropriately. A copy of the Emergency Spill Procedure for T&T has been included in Appendix D. Receptacles for used oil and filters will be adjacent to the parking/ operations area. All receptacles will have secure lids and secondary containment. Spill kits will be present on site to absorb any spilled oil.

Permanent haul roads will not be constructed within the proposed pit area, as there are many stages and the construction of permanent roads would not be practical. Haul routes will shift as the Pit progresses through its 139 stages, so temporary roads will be created and altered as required. Upon final reclamation, no roads will remain inside the Application area.

Areas that are returned to agricultural uses may require soil preparation and seeding equipment (bulldozers, tractors, subsoilers and broadcast or seed-drills). These pieces of equipment will be brought onto site as required for reclamation purposes.

3.5 Pit Access

Access to the Pit is gained via Range Road 51 off of Highway 16 to the north. Range Road 551 has been upgraded and maintained in joint partnership in accordance with the development permit from Parkland County. There is an access road along the southern edge of the Property which allows haul trucks to reach the aggregate stock piles.

Prior to the start of the intermittent mining, as identified in Section 2.3, T&T notifies the landowners that are affected by the operations either by phone or by letter, providing office and cell phone numbers as contacts for local operations. T&T initiates dust control measures on range road 51, as per Section 2.7 below, prior to and during operations. T&T ensures that employees and any contractors, adhere to the conditions of the development permit pertaining to hours of operations and truck haul.

T&T regularly contacts affected landowners during continuous operations to see if there are any issues or concerns.

3.6 Noise Emissions and Controls

A range of appropriate noise control methods are deployed for the noise levels associated with Pit excavation operations. Noise mitigation measures proposed for use as part of Pit activities and operations:

- Stockpile sites used for screening;
- use manufacturers' noise-reducing accessories for equipment and vehicles when available;
- orient equipment to direct noise away from the receptor location;
- equipment locations at lower elevations below grade (in-Pit excavations);



- operator awareness when operating mobile equipment;
- limit duration of an activity or operation in a particular location; and
- keep equipment maintained for efficiency and reduction of noise.

In addition to the above, a discussion of the potential noise of the Pit operations was completed by Millennium staff. Taking into account the operating sound level of the equipment used on site, mean air temperature and humidity during the operation period, and applied setback distances to be implemented on site, it is anticipated that noise levels of the pit will marginally louder than regular conversation (60-65 dB) at the receptor. This information has been presented in Appendix E.

Upon recommendation of the Planning and Development Board, acoustic monitoring can be set up during the time of operation to measure the level of noise and to see whether further mitigation measures are required.

3.7 Dust Emissions and Controls

Two primary fugitive dust sources onsite result from crushing and screening of aggregates along with equipment and vehicle travel within the Pit. Other dust sources may include new soil and overburden stockpiles, as well as Pit excavation and working areas. Dust emission mitigation measures are proposed for use as part of Pit activities and operations:

- regular water spray use (or biodegradable suppressant) on unpaved access roads;
- water spraying and sweeping of paved driveway and access;
- stockpile sites used for screening;
- equipment location at lower elevations below grade (in-Pit excavations);
- operator awareness when operating mobile equipment and vehicles;
- limit duration of an activity or operation in a particular location;

3.8 Erosion and Sediment Controls

Due to the nature of the pit excavation and the topography, any storm water overland flow is contained within the pit and the disturbed area(s). The project remains a “dry pit” with slight accumulations following snow melt and precipitation events. This precipitation percolates into the pit bottom and away from ongoing operations within a short period. Any silt or sediment-laden surface runoff within the Pit excavation will infiltrate into the sand and gravel deposit. When and where appropriate, erosion and sediment controls, such as staked bales or silt fencing, will be deployed and maintained as required before starting any stripping or excavation operations. Soil material stockpiles will be/are seeded with a cover crop to limit weed infestation and to minimize erosion from season precipitation. The required 20:1 slopes for reclamation will help to ensure erosion is minimized as they are gradual. Steeper slopes of the active pit face will be monitored and maintained as necessary. Due to the coarse textured nature of the soil and aggregate deposit, the pit is not anticipated to hold water or contribute to overland flow since these types of soils have a high infiltration rate.



3.9 Pit Access Controls

Signage and fencing is been installed at property access (either previously installed property fence, or improved fence/gate for T&T operations). Signage, fencing and operating behind soil material berms serve as both a hazard warning and safety advisory concerning unauthorized entries or trespass onto the Project properties. Typical T&T signage includes the operating company identification and office contact phone number for operations management. Since the operation of the pit is intermittent and equipment is transported off site for use at other locations, there is little requirement for emergency response during periods of non-activity. Any such concerns would be an issue of trespass.

3.10 Waste and Refuse Management

As with other pits operated by T&T Sand And gravel, a private contractor will be deployed and responsible for supplying onsite bins for garbage collection as well as the installation and upkeep of portable toilet facilities. These facilities will be located adjacent to the parking area/operations area in the SE corner of NE 26, adjacent to the parking area.

4.0 RECLAMATION PLAN

4.1 Reclamation Objective

Conservation or Reclamation for Pit activities and operations, as indicated in the Activities plan, are developed to achieve equivalent land capability. That is, returning the disturbed land to a similar, but not necessarily the same, land use or uses after final reclamation work is complete. The COP process as well as the proposed Reclamation Security (Appendix C) promotes a staged development and subsequent reclamation to minimize the ongoing "scar" on the lands. T&T proposes to reclaim this land for the agricultural uses (crop rotation / hay or pasture land for the landowner). As shown along the south boundary of the NE 26 quarter section, the landowner is already incorporating his agricultural rotation on recently reclaimed lands.

4.2 Conservation and Reclamation Activities

Through each successive development phase of the current Pit, topsoil and subsoil layers, estimated at 20 cm and 35 cm respectively, will be stripped and stockpiled in separate piles when preparing designated Pit excavation areas. T&T will be targeting complete replacement of topsoil and subsoil, however due to stripping and mechanical limitations (80%) will be acceptable lower limit when completing the property assessment prior to the Reclamation Certificate application is submitted. The topsoil for the expanded area ranged from 12-40 cm with some deep Ae layers, and averaged 24 cm. A slight increase in average depth from the original application within the NE 26 quarter section. The subsoil layer remained consistent with the previous application at 35 cm. Before sand and gravel excavations start, the overburden layer (on average, 5.8 m thick) is also excavated in lifts and direct placed in depleted Pit areas for pit contouring and reclamation purposes.

4.3 Reclamation Contours and Grading

Conceptual contours and grades for final reclamation work are indicated on the Activities plans presented in Appendix A. Base contours within the operations area will be graded to match the reclamation plan.



4.4 Revegetation

Revegetation will be staged with reclamation activities, see the area at the south and west extent of the project area, this has already been returned to the landowners crop rotation. Seed mixes and fertilizer application rates are to be determined at the time of reclamation in consultation with the landowner. A seed mix of 60% *Medicago sativa* (Alfalfa), 30% *Bromus riparius* (Meadow brome), and 10% *Phleum pratense* (timothy-grass) will be implemented for improved pasture or an appropriate crop for the landowners rotation, whichever they desire upon reclamation.

Once topsoil and subsoil has been placed, the seed bed will be prepared by first discing, then harrowing the area to reduce soil compaction that may have been caused by reclamation. A tractor with a drill seeder will then be implemented to seed the area.

4.5 Weeds and Weed Control

Project properties will be monitored for noxious and restricted weeds as defined by Alberta's "Weed Control Act" and County bylaws. Herbicide may be applied to control weeds in accordance with the latest edition of the *Environmental Code of Practice for Pesticides (Alberta Environment 1997)* and the *Code of Practice for Pesticides*. Presence of weeds on site are continuously monitored and mitigated throughout the year as part of pit operations.

4.6 Monitoring and Maintenance

A monitoring program will be developed and implemented to assess the success of reclamation. It will be developed to ensure consistent, objective assessment until the desired plant community is established. Success will be measured compared to applicable reclamation criteria and the requirements set by regulatory approvals. Monitoring activities will assess the following:

- success of mitigative measures;
- landscape characteristics (e.g., subsidence, drainage); and
- erosion and sediment controls;

Post-reclamation monitoring will be conducted in late summer / fall to assess any revegetation work and will continue until vegetation has established. This will also include a weed assessment to determine if any further actions are required prior to completing the Reclamation Certificate application. The assessment and application is usually completed two years following revegetation (as per requirements) and depending upon the degree of disturbance and revegetation complexity.

5.0 SECURITY

Cost of reclamation for the Pit and Activities plan is determined using the following references:

- Alberta Roadbuilders and Heavy Construction Association (ARHCA), Equipment Rental Guide, 2018 Edition, providing current contractors rates; and
- The Caterpillar Performance Handbook (January 2014) Edition 47.



6.0 LIMITATIONS OF LIABILITY AND CLOSURE

This report has been prepared for the exclusive use of 214131 Enterprises Ltd. and authorized users for specific application to this Project. The work was conducted in accordance with the scope of work prepared for this project as well as verbal and written requests from 214131 Enterprises Ltd. and generally accepted reclamation work practices. No other warranty, expressed or implied, is made.

Gdubblu Consulting Ltd. notes that conservation and reclamation activities outlined as part of the activities plans have inherent limitations. No detailed site assessment on a given property (or properties) can wholly eliminate uncertainty regarding the potential for recognized conditions in connection with a property (or properties).

214131 Enterprises Ltd. and AEP may rely on this report for specific application to this Project. This report and supplementary information was prepared with the intention of fulfilling AEP requirements for a completed update under the EPEA Code of Practice for Pits (2004).

Please contact the undersigned at **This information** with any questions or review comments.
d d

Yours truly,

Gdubblu Consulting Ltd.

Prepared by:

This information redacted as per
This information redacted as per
This information redacted as per
This information redacted as per
This information redacted as per
This information redacted as per
Protection of Privacy Act (POPA)

Grant Woynarowich
Environmental Consultant

7.0 REFERENCES

Abacus Datagraphics. Accessed in April 2015. <http://www.abacusdatagraphics.com/abadata.asp>

Alberta Environment. 1997. Environmental Code of Practice for Pesticides Alberta Environment. Queens Printer. Edmonton, Alberta. 20 pp.

ASIC (Alberta Soil Information Centre). 2001. AGRASID 3.0: Agricultural region of Alberta soil inventory database (Version 3.0). Edited by J.A. Brierley, T.C. Martin, and D.J. Spiess. Agriculture and Agri-Food Canada, Research Branch; Alberta Agriculture, Food and Rural Development, Conservation and Development Branch. Available at URL: <http://www.abacusdatagraphics.com/abadata.asp>

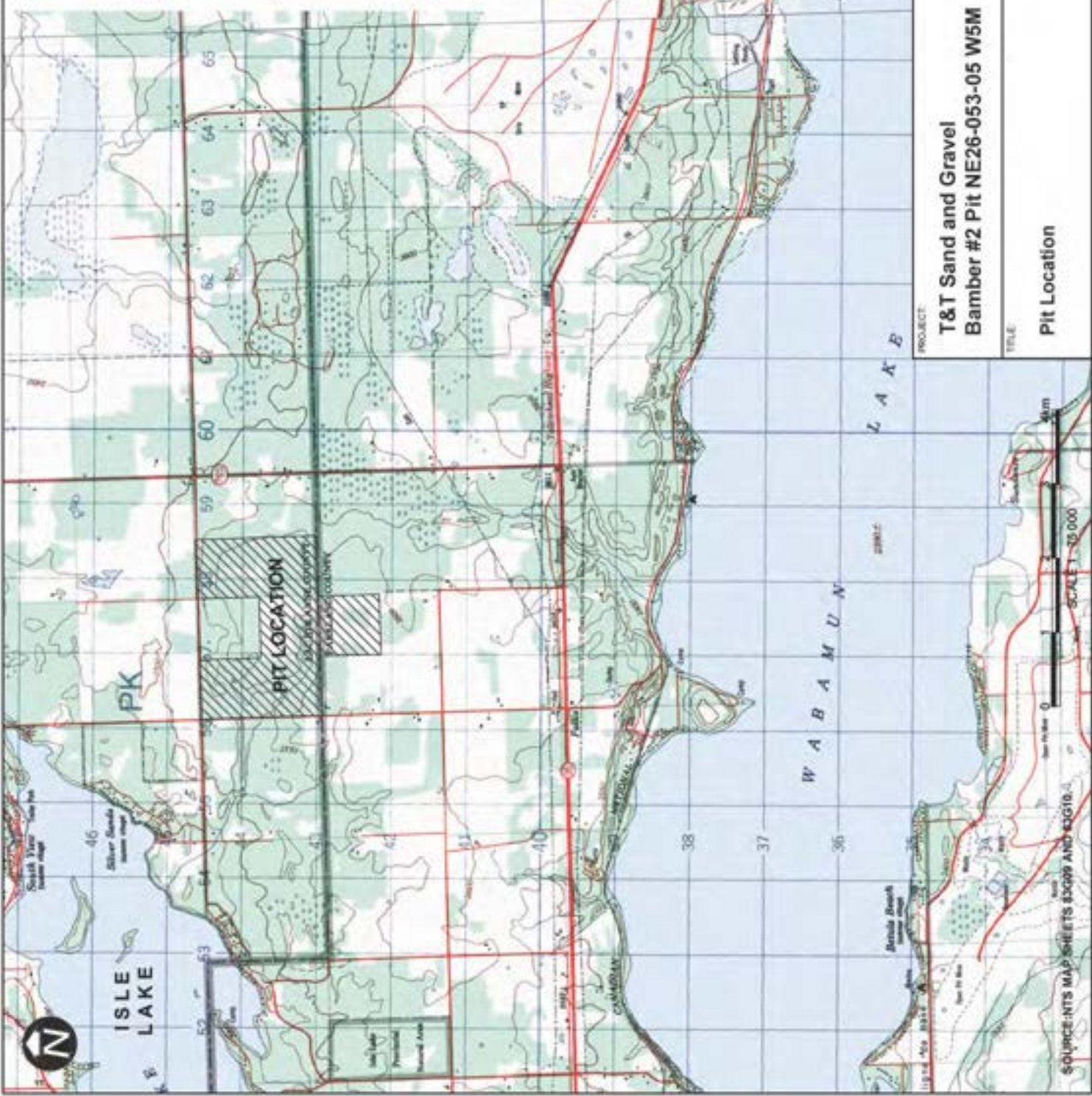
ASSWG (Alberta Soil Series Working Group). 1993. Alberta soil names: Generation 2. User's handbook. L.J. Knapik and J.A. Brierley (eds.). Alberta Research Council, Edmonton. 142 pp + map.

Hamilton, W.G., Price, M.C. and Langenberg, C.W. (compilers), 1999; Geologic Map of Alberta, Alberta Geologic Survey, Alberta Energy and Utilities Board, Map Number 236, scale 1:1,000,000.

Strong, W.L., and K.R. Leggat. 1992. Ecoregions of Alberta. Alberta Forestry, Lands, and Wildlife, Land Information Division, Resource Information Branch, Edmonton, AB.



APPENDIX A: FIGURES



SCALE 1:3 000 000

**T&T Sand and Gravel
Bamber #2 Pit NE26-053-05 W5M**

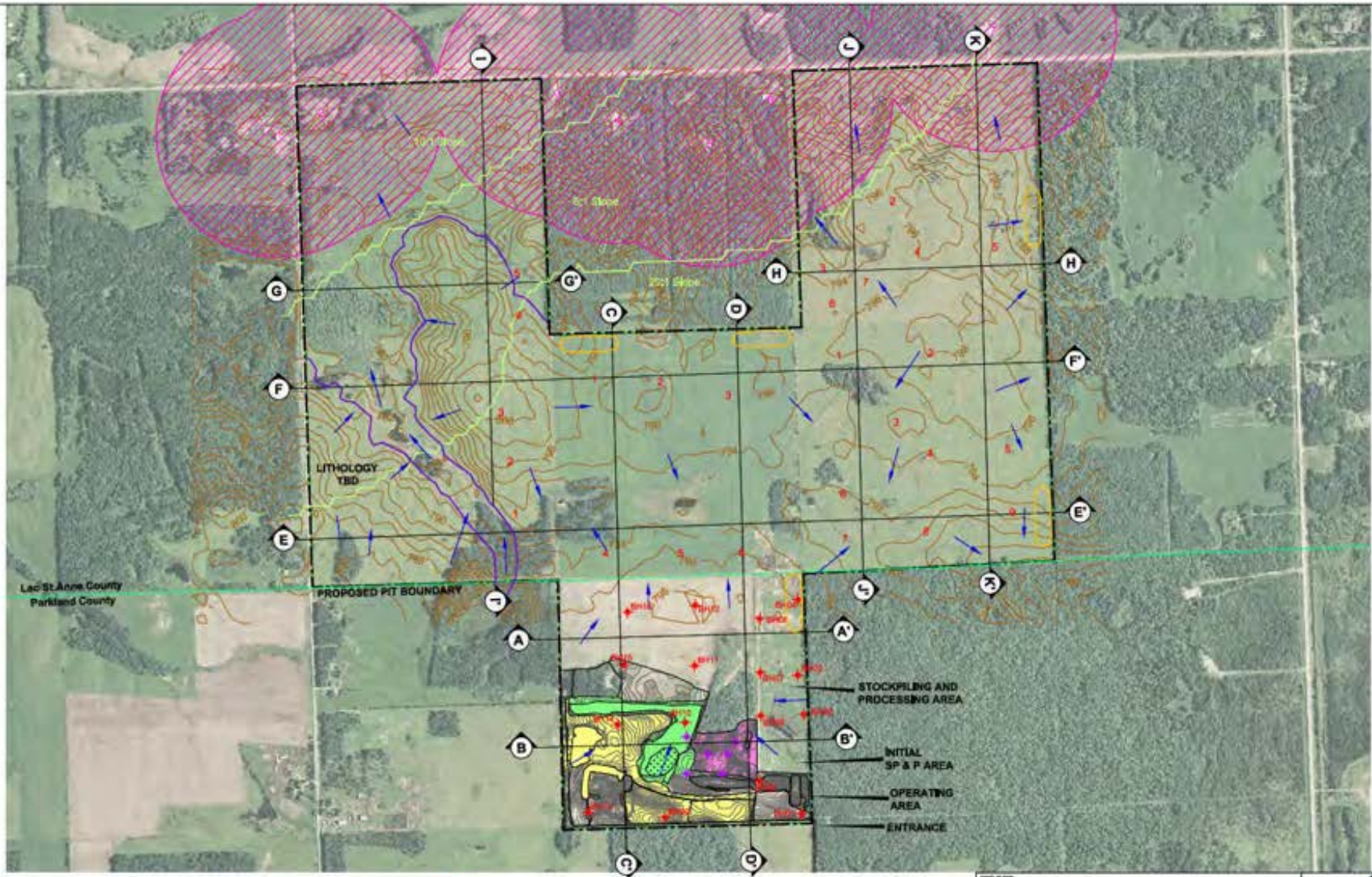
PROJECT
TITLE

Pit Location



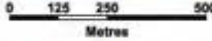
FILE 05-141 Location Map.dwg	FIGURE	1
DRAWN: BS	CHECKED: DW	DATE: Apr 7/15
PROJECT: 05-141		

SOURCE: NTS MAP SHEETS 83G09 AND 83G18-3
SCALE 1:25 000



Legend

- + / x Borehole Location
- - - Proposed Pit Boundary (393,95ha)
- B 3m Lease Buffer
- Cross Section Alignment
- Drainage Direction
- Contour (2m Interval)
- CLI Classification Boundary
- Proposed Topsoil Fill
- Drainage Buffer
- Residential Uses
- 400 m Buffer around Residential Uses
- Existing Conditions (10,40 Ha)
- Redeemed with Topsoil (5,41 Ha)
- Future Mining (3,09 Ha)



Proposed Pit Boundary	
Lac St. Anne County	327.79 Ha
Parkland County	66.15 Ha

COP Development Area	
Lac St. Anne County	210.45 Ha
Parkland County	66.15 Ha

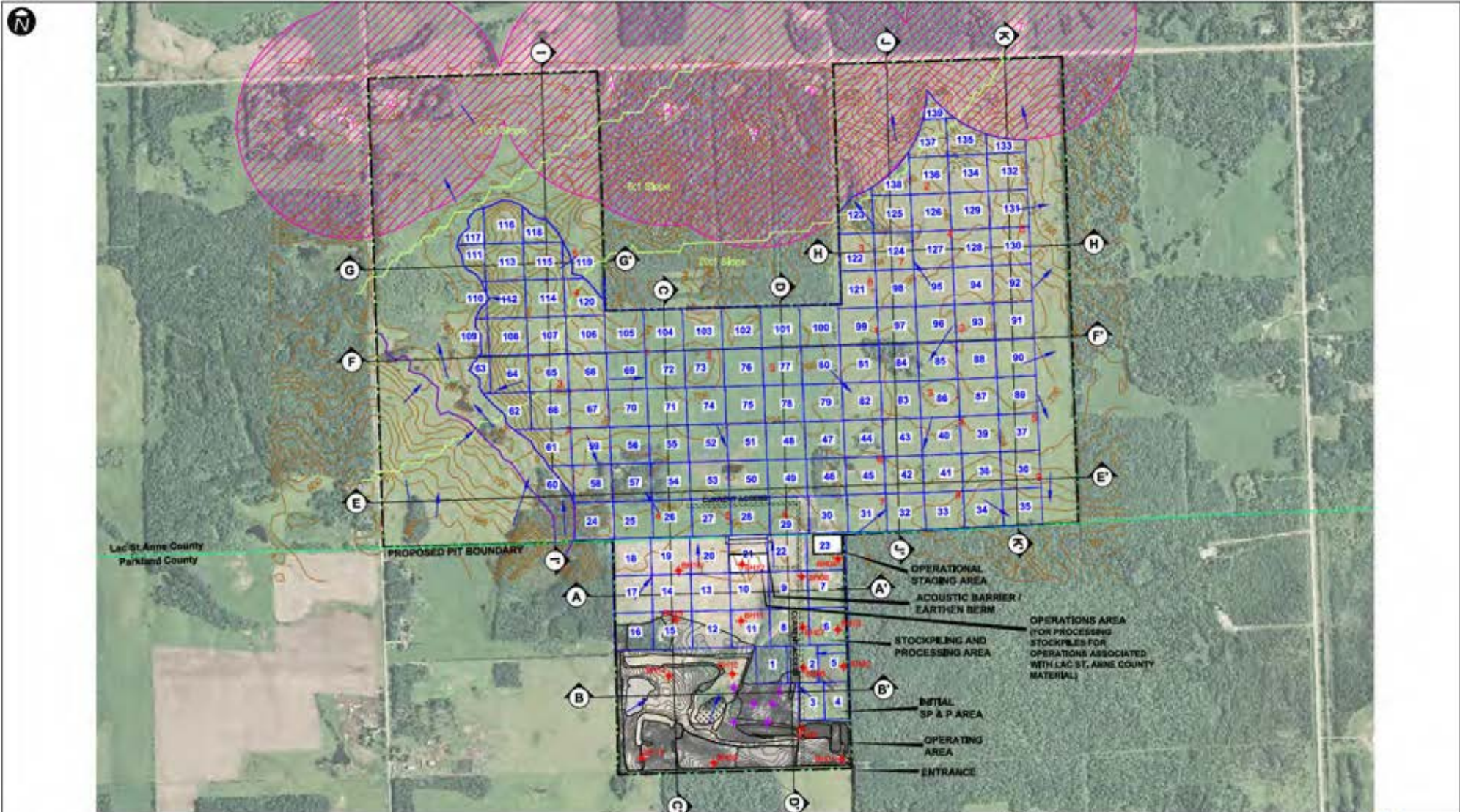
PROJECT
T&T Sand and Gravel - Bamber #2 Pit
 NE-26-053-05 W5M, NW/SW-36-053-05 W5M,
 NW/SW/SE-35-053-05 W5M

TITLE
Existing Conditions

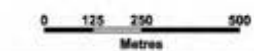
MILLENNIUM
7341, Saskatchewan, Ltd.

DRAWN: RJS/J	FIGURE:
CHECKED: SW	2
DATE: Feb 2012	
PROJECT: 08-02111	

NOTES:
 1. Air photo from Abbotson's Delineation Ltd. dated May 21, 2013 - Sep 22, 2013.



- Legend**
- + / x Borehole Location
 - Proposed Pit Boundary (393.95ha)
 - 3m Lease Buffer
 - Cross Section Alignment
 - Contour (2m Interval)
 - CLI Classification Boundary
 - Drainage Buffer
 - 4 Stages of Development
 - Residential Uses
 - 400 m Buffer around Residential Uses
 - Drainage Direction



Staging Block Size	
Blocks 1,2,5	1.40 Ha/Block
Blocks 3,4	1.17 Ha/Block
Blocks 6-139	Based on 130 m x 130 m 1.77 Ha/Block

PROJECT
T&T Sand and Gravel - Bamber #2 Pit
 NE-26-053-05 W5M, NW/SW-36-053-05 W5M,
 NW/SW/SE-35-053-05 W5M

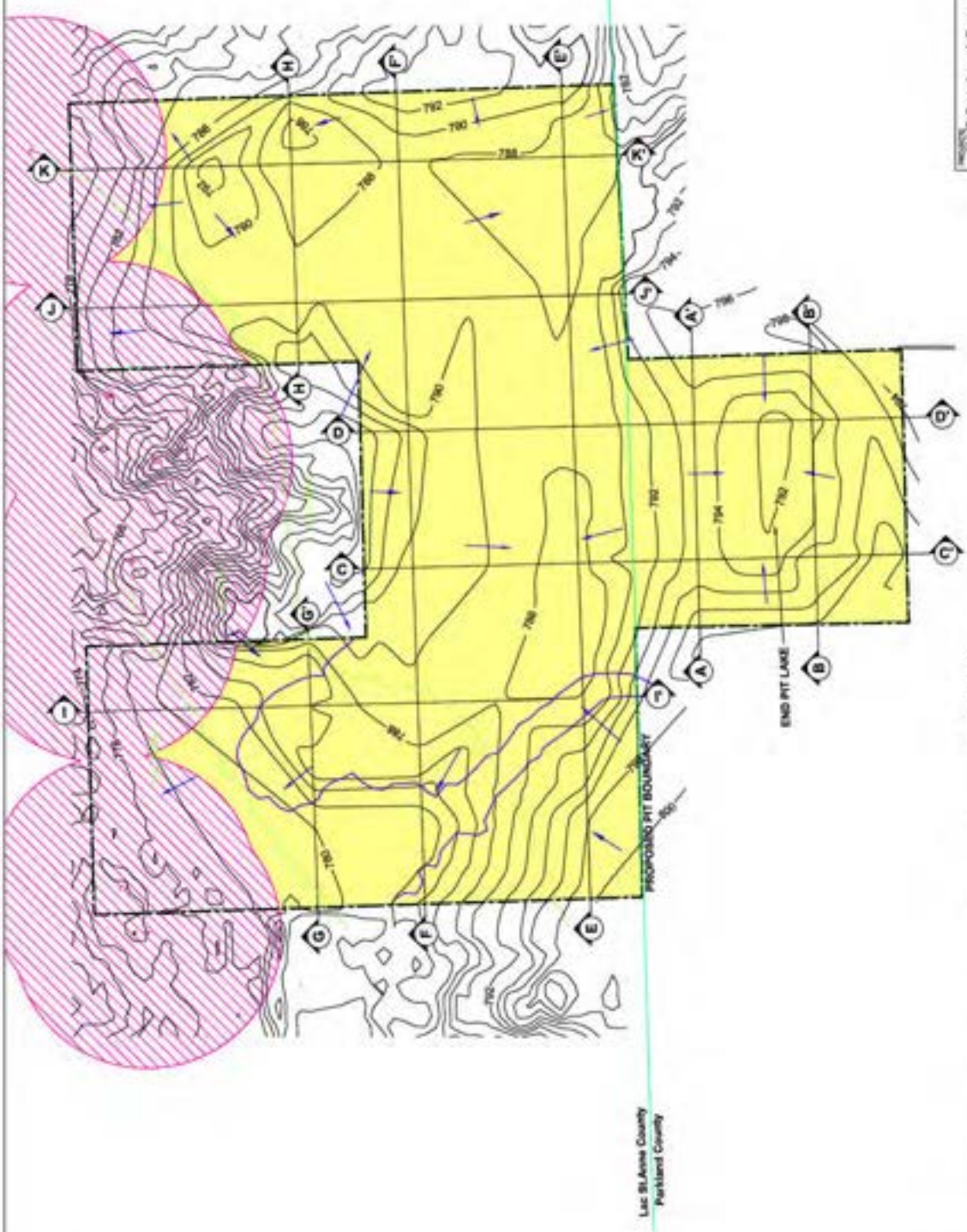
TITLE
Operations and Mine Plan

MILLENNIUM
Environmental Solutions

PROJECT: FE 05 06 141 Bamber 2 2010 Expansion
 DRAWN: RLVJ
 CHECKED: SW
 DATE: Feb 2017
 PROJECT: 26-053-05

3

NOTES:
 1. Air photo from Abitibi/Dominion Geographics Ltd, dated May 21, 2013 - Sep 22, 2015.



T&T Sand and Gravel - Bamber #2 Pit NE-26-053-05 WSM, NW/SW-36-053-05 WSM, NW/SW/SE-35-053-05 WSM		
Reclaimed Conditions		
SHEET NO. 11 OF 11 SHEETS	DATE: 11/23/2011	PROJECT NO.: 11-0001

- Legend**
- Proposed PE Boundary (303.00ha)
 - 3m Lease Buffer
 - Cross Section Alignment
 - Contour (2 m Interval)
 - CI Classification Boundary
 - Drainage Channel
 - Drainage Buffer
 - Reclamation Line
 - 400 m Buffer around Reclamation Line
 - Reclamation Area
1. All data from Millennium Cartographics Ltd. dated May 21, 2011 to Dec 23, 2011.
 2. Contours not shown based on reclamation cross-section data, created by Global Surfer Software.



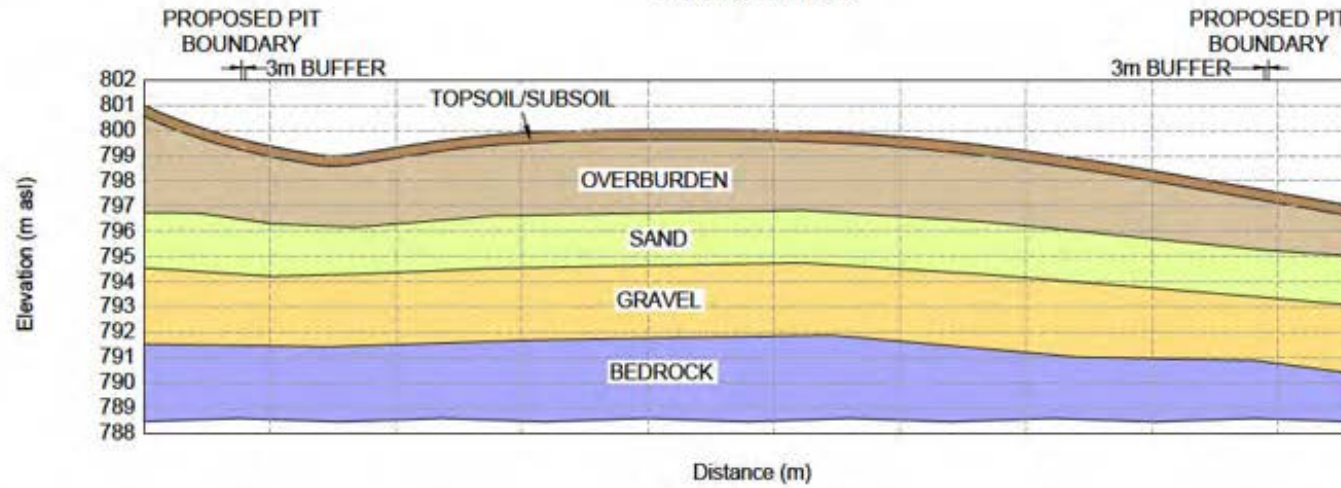
Lac Seul Area County
 Parkland County



A
EAST

A'
WEST

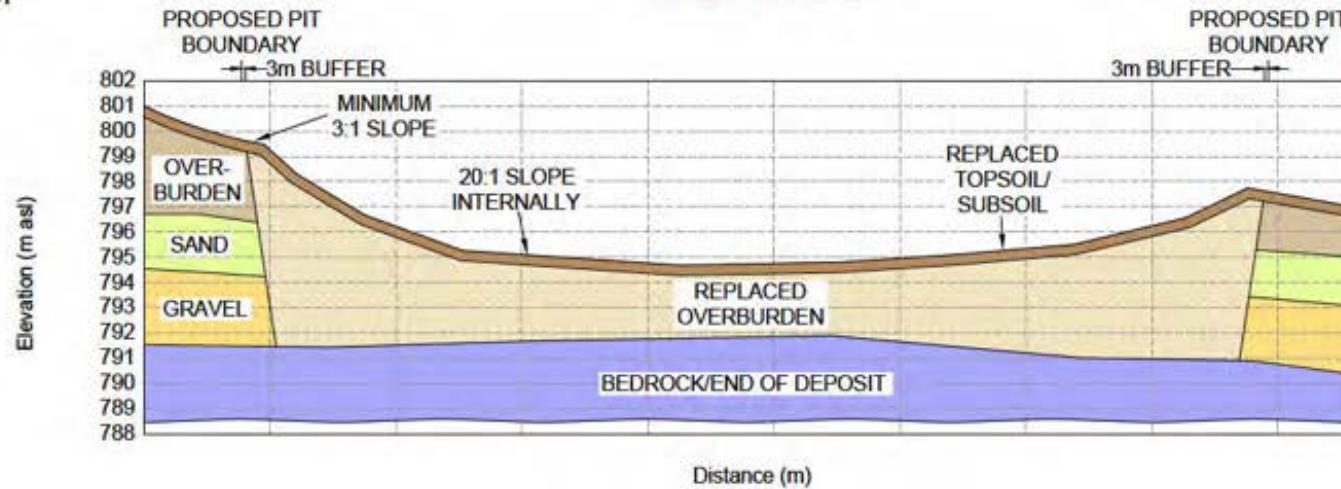
Existing Conditions



A
EAST

A'
WEST

Reclaimed Conditions



20x Vertical Exaggeration

PROJECT:

**T&T Sand and Gravel
Bamber #2 Pit NE26-053-05 W5M**

TITLE:

Cross-Section A-A'



MILLENNIUM
EMS Solutions Ltd.

FILE: 09-141 Bamber 2_2014.DWG

DRAWN: RS

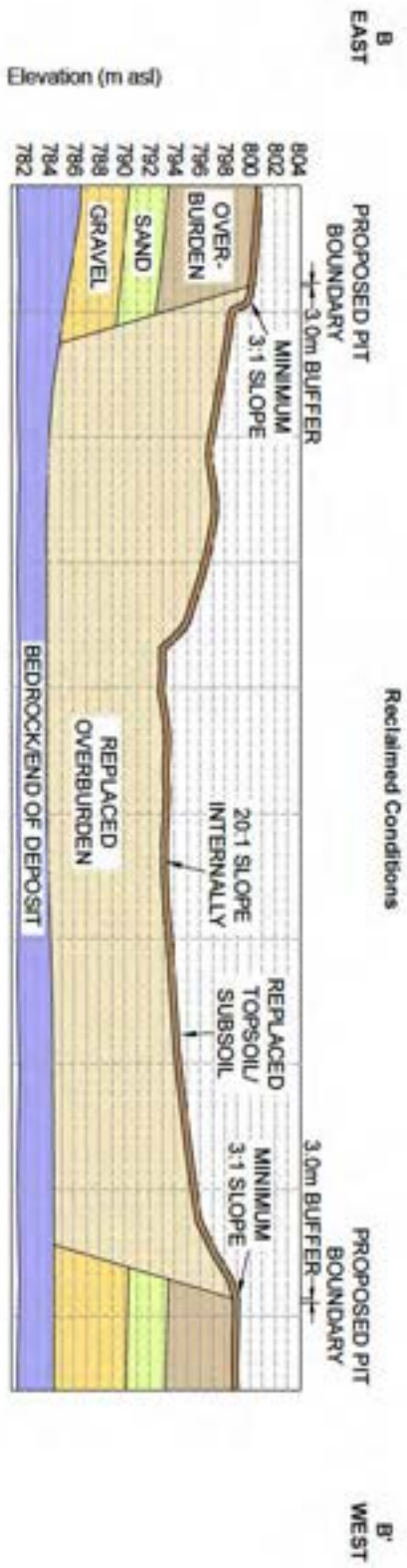
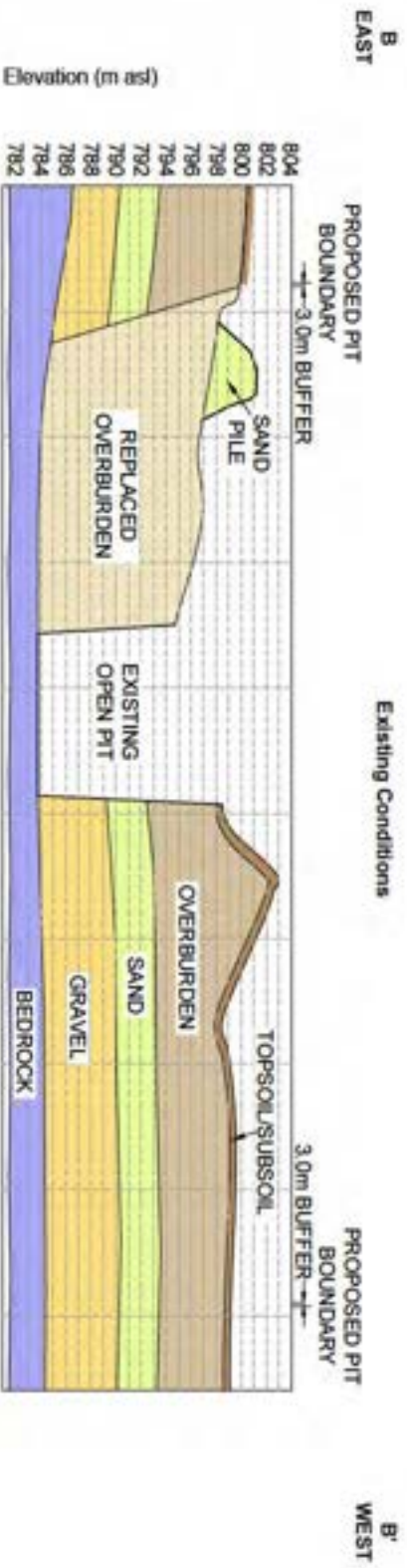
CHECKED: GW

DATE: Apr 8/15

PROJECT: 09-00141

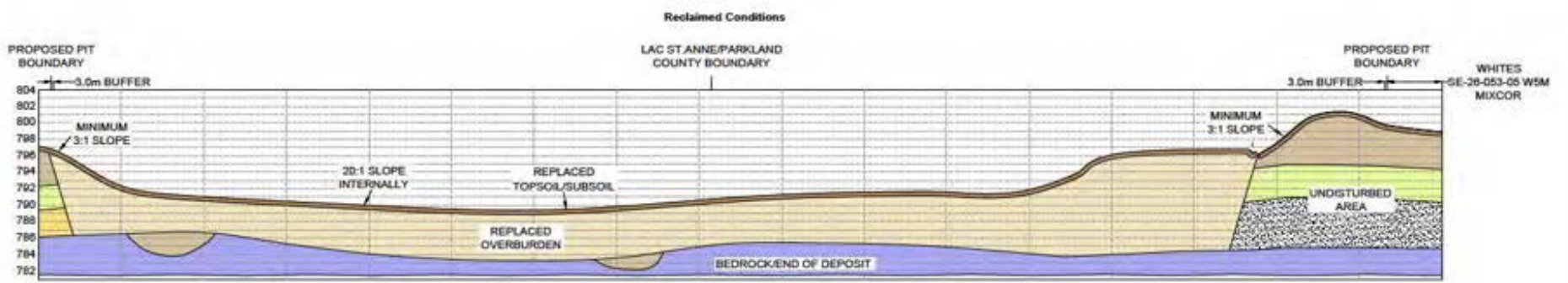
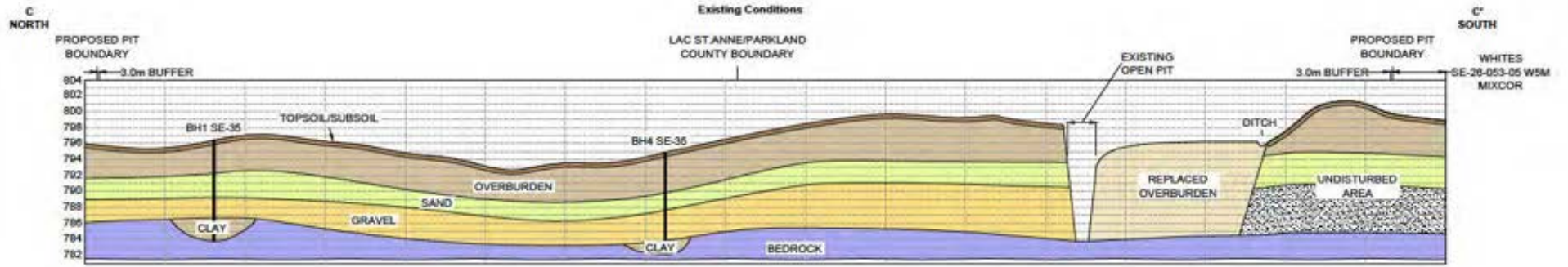
FIGURE:

5



0 40 80 200m
 Scale 1 : 6 000
 10x Vertical Exaggeration

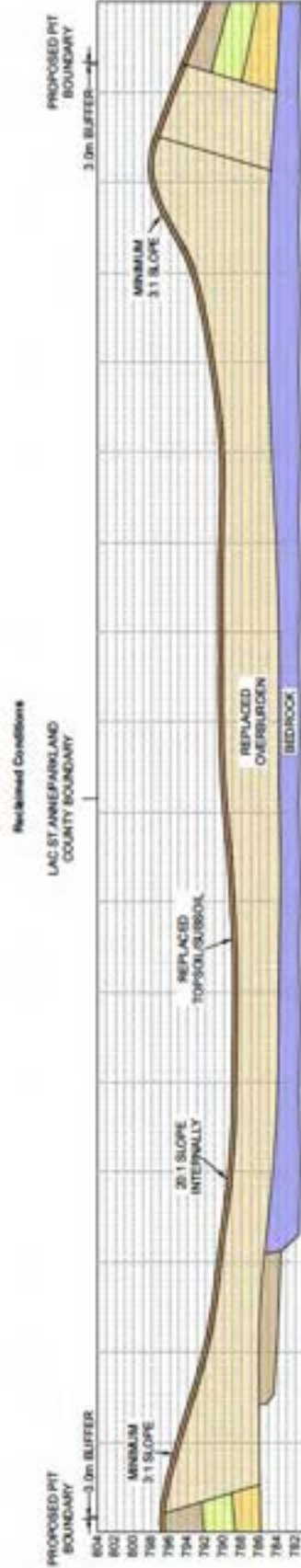
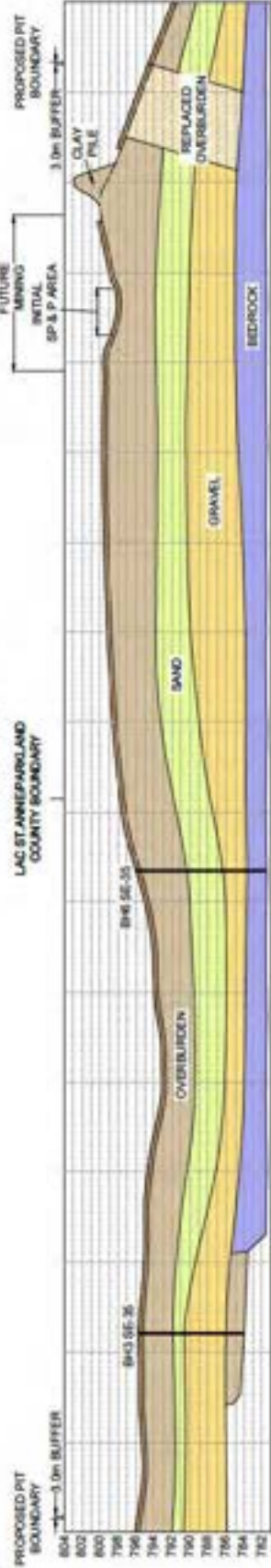
PROJECT T&T Sand and Gravel Bamber #2 Pit NE26-053-05 W5M		 MILLENNIUM <small>Earth Solutions Ltd.</small>
TITLE Cross-Section B-B'		
DRAWN BY DATE PROJECT	FILE: 06-141 Bamber 2, 2514.DWG CHECKED BY DATE: Apr 8/15 PROJECT: 06-03141	FIGURE 6



0 50 100 200m
 Scale 1 : 5 000
 10x Vertical Exaggeration

PROJECT T&T Sand and Gravel Bamber #2 Pit NE26-053-05 W5M		 MILLENNIUM ERM Solutions Ltd FILE: 26-053-05 W5M 2014.DWG
TITLE Cross-Section CC'		
DESIGN: RS	FIGURE:	7
CHECKED: GW		
DATE: Apr 2015		
PROJECT: 260041		

D NORTH D SOUTH



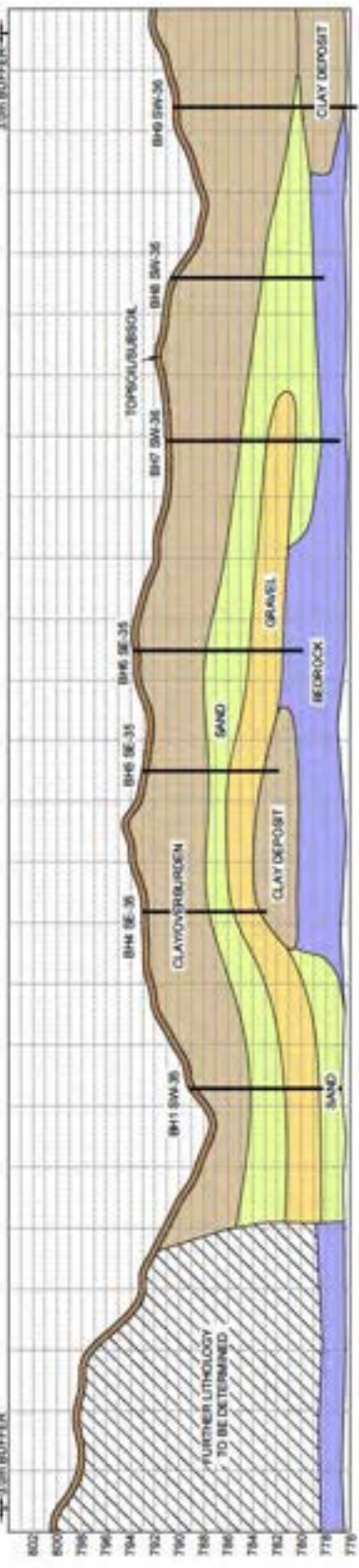
T&T Sand and Gravel
Bamber #2 PIT NE26-053-05 WSM
 Cross-Section DD*

MILLENNIUM
 CONSULTANTS LTD.

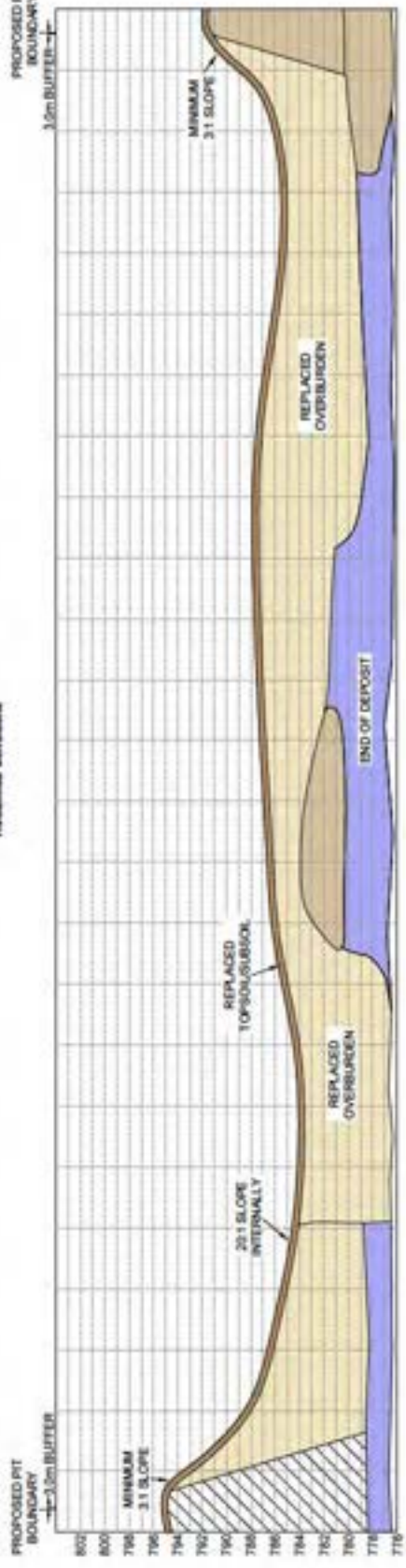
DATE	NO.	BY	CHKD.	APP'D.
2014.05.14	001	J. BAKER	J. BAKER	J. BAKER

E EAST
 PROPOSED PIT BOUNDARY
 3.0m BUFFER
 WEST

Existing Conditions



Reclaimed Conditions

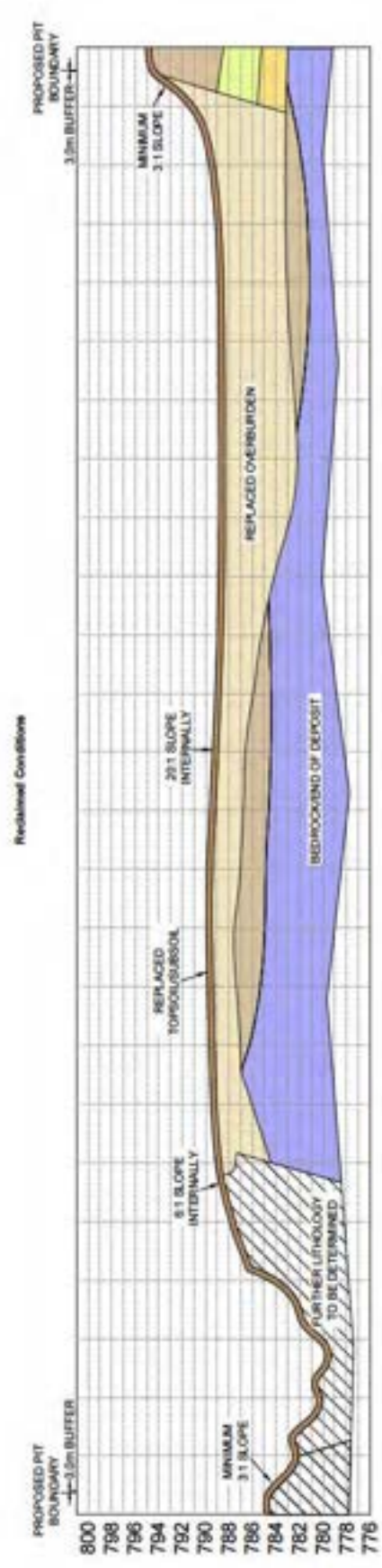
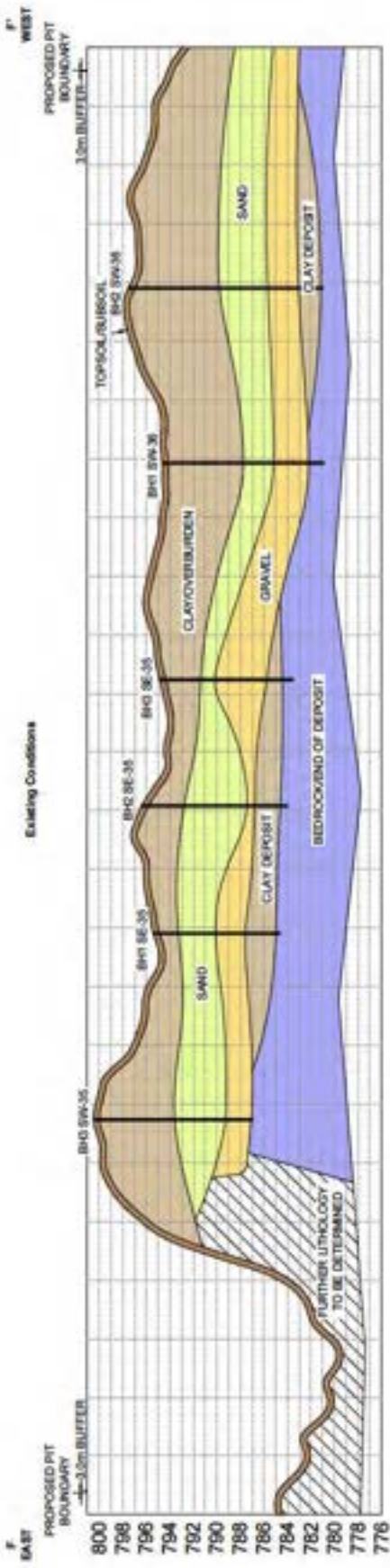


PROJECT: T&T Sand and Gravel
 Bamber #2 Pit NE26-053-05 WSM

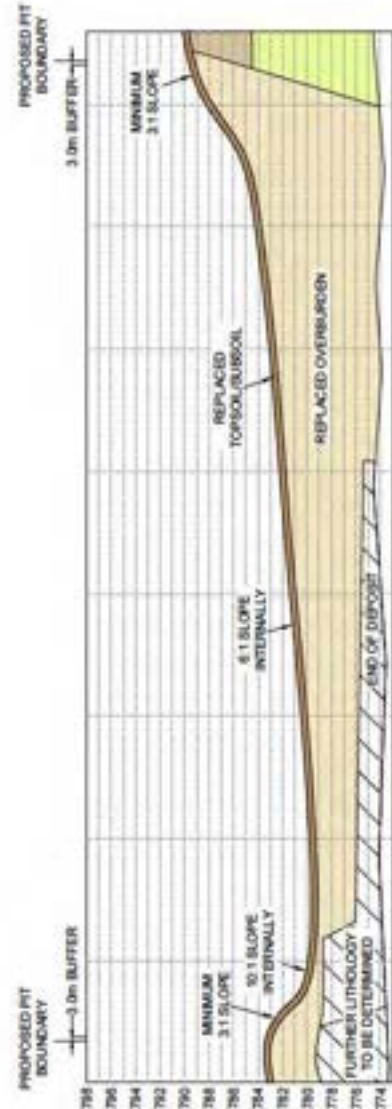
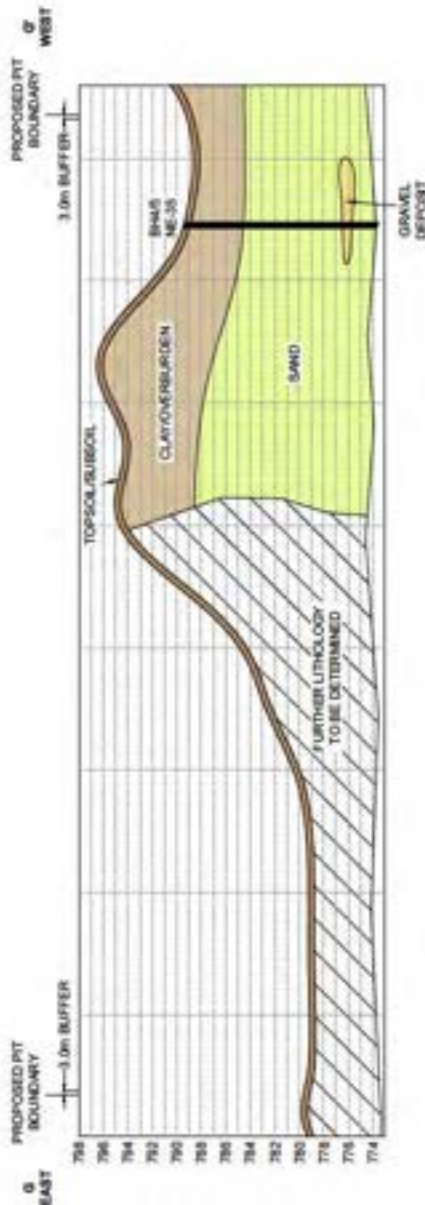
Cross-Section EE'

MILLENNIUM
 CONSULTANTS LTD.

DATE:	FILE NO.:
DESIGNER:	SCALE:
CHECKED BY:	PROJECT NO.:
DRAWN BY:	

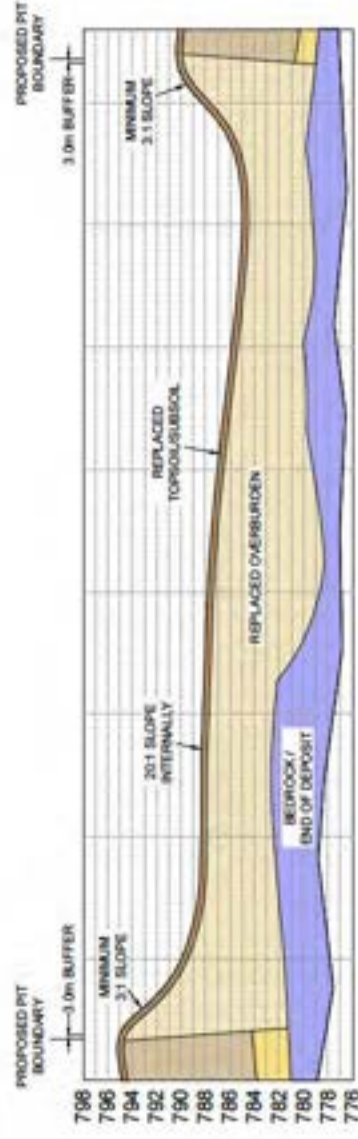
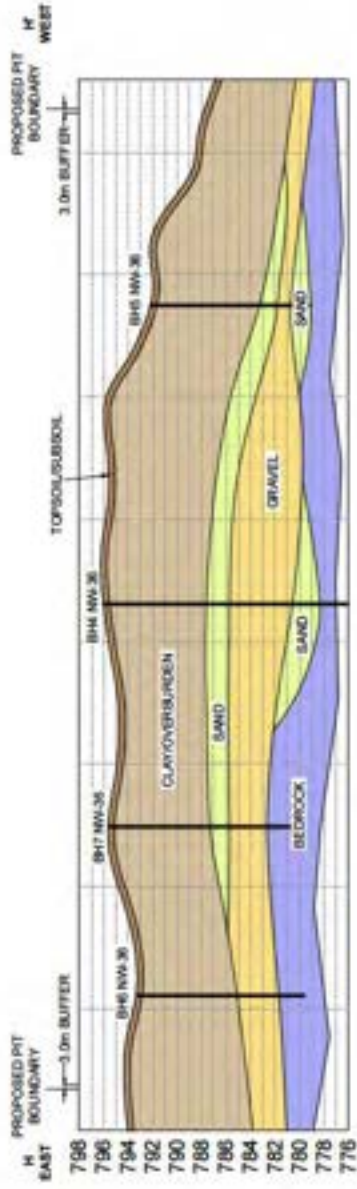


 MILLENNIUM CONSULTANTS LTD.		DRAWN BY: [] CHECKED BY: [] DATE: [] PROJECT: []	10
		T&T Sand and Gravel Bamber #2 Pit NE26-053-05 WSM	
Cross-Section FF			




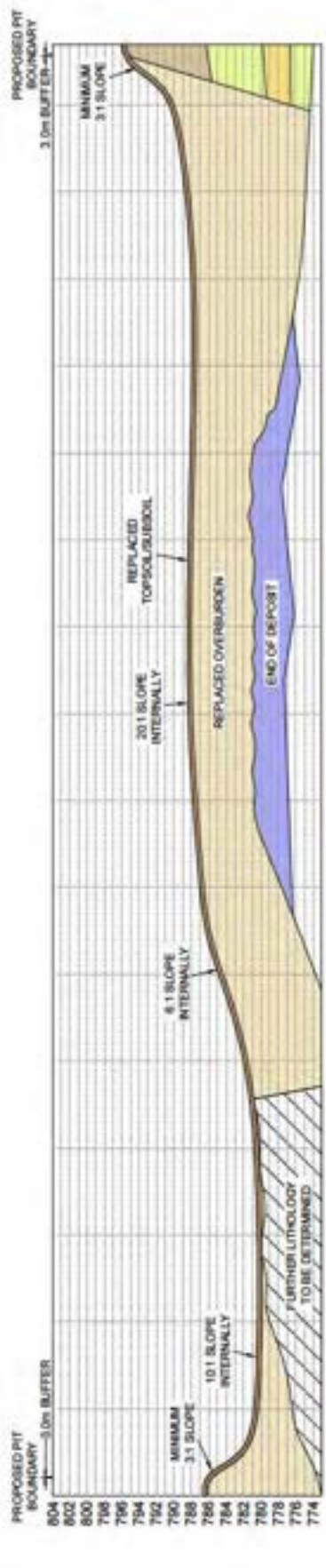
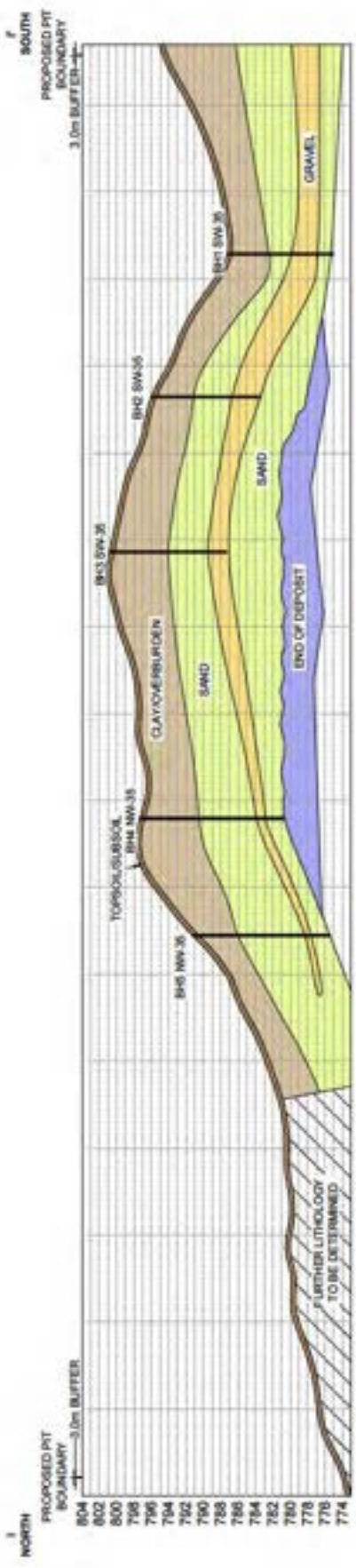
0 40 80 120m
 Scale 1:4 000
 10x Vertical Exaggeration

 MILLENNIUM <small>ENVIRONMENTAL CONSULTANTS LTD.</small>	T&T Sand and Gravel Bamber #2 Pit NE26-053-05 WSM	
	Cross-Section GG'	
<small>PROJECT</small> T&T	<small>DATE</small> 11/01/2011	<small>SCALE</small> 1:4000
<small>CHECKED BY</small> [Signature]	<small>DATE</small> 11/01/2011	<small>PROJECT NO.</small> 11



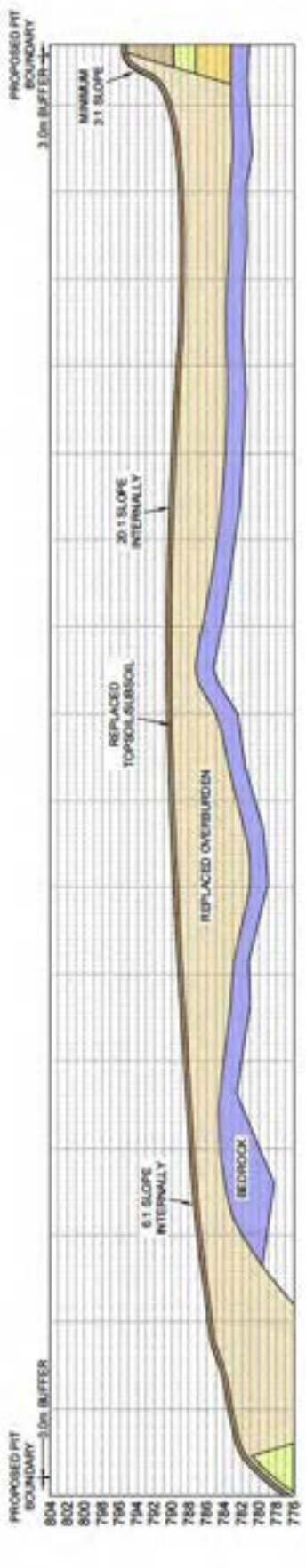
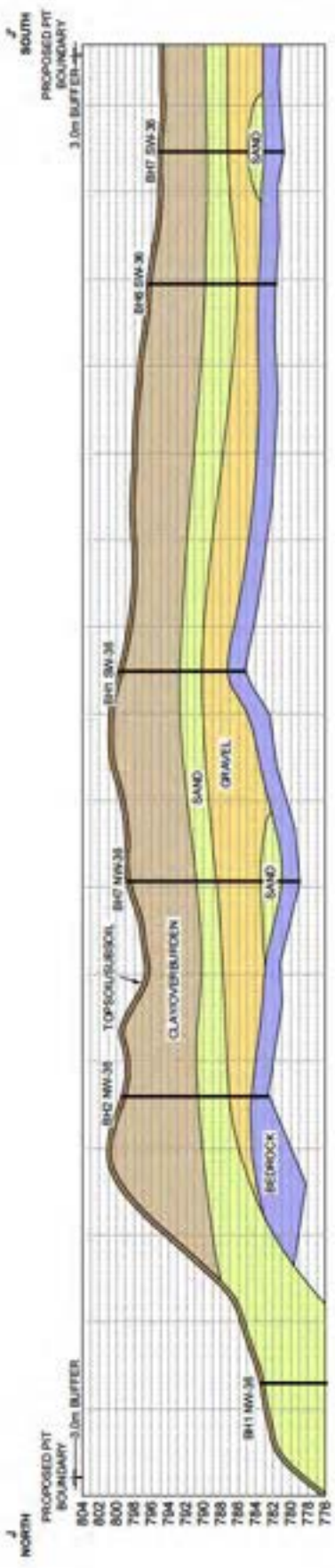
0 40 80 120m
Scale 1 : 4 000
10x Vertical Exaggeration

 MILLENNIUM <small>LAND SERVICES LTD.</small>	T&T Sand and Gravel Bamber #2 Pit NE26-053-05 WSM	SHEET NO. 12
		PROJECT NO.
DATE:		12
DRAWN BY:		12
CHECKED BY:		12
SCALE:		12
PROJECT:		12



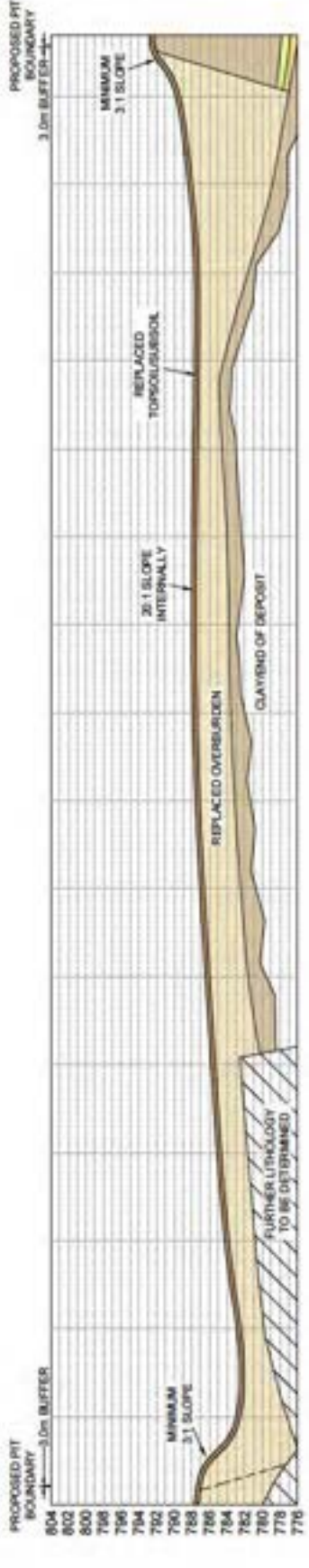
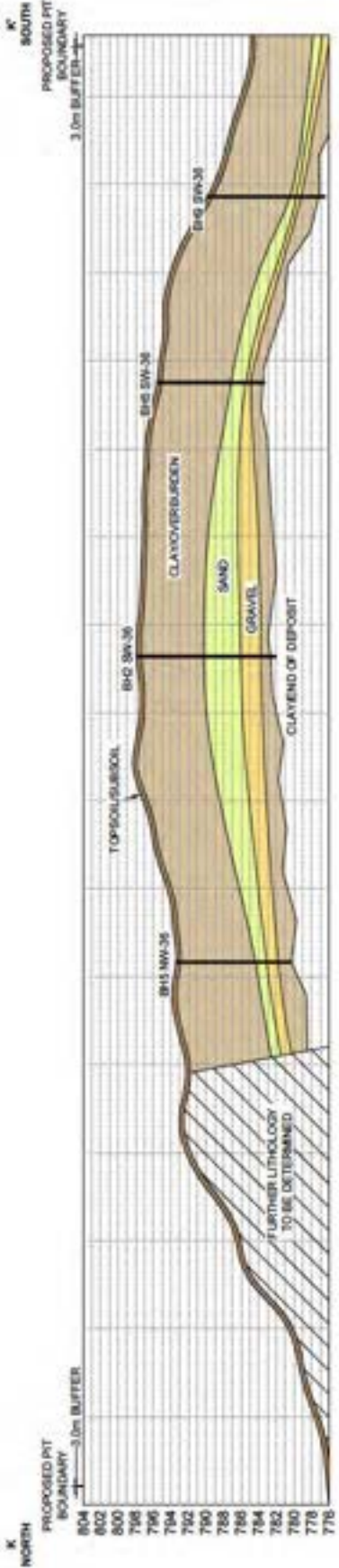
0 50 100 200m
Scale 1:5000
10x Vertical Exaggeration

T&T Sand and Gravel Bamber #2 Pit NE26-053-05 WSM	
Cross-Section 1'	
DRAWN BY: [blank] CHECKED BY: [blank] DATE: [blank]	FILE NO: 41-Bamber-12-2010 PROJECT: 053-05 43



Scale 1 : 5 000
10x Vertical Exaggeration

T&T Sand and Gravel Bamber #2 Pit NE26-053-05 WSM	
Cross-Section JJ'	
SHEET NO. 14	TOTAL SHEETS 14
DATE: 2011	PROJECT: B&B



T&T Sand and Gravel Bamber #2 Pit NE26-053-05 WSM	
Cross-Section KK'	
SHEET NO. 15 CHECKED BY: [blank] DATE: [blank]	PROJECT: [blank]



APPENDIX B: CODE OF PRACTICE FOR PITS; SCHEDULE 1, 2 AND 3



Code of Practice for Pits Registration Application (Schedule 1)

Date: 24 February 2019

Previous Environmental Protection and Enhancement Act Approval Number: 248371-00-00

Water Act authorization required? Yes No

If Yes, application submitted or current Water Act Authorization Number: N/A

Name of Applicant (company or person in whose name the pit will be registered):

214131 Enterprises Ltd (operating as T&T Sand and Gravel)

This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act

d d

Name of Person Submitting Application: Grant Woynarowich

Company Name: Gdubblu Consulting Ltd.

This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act

T,

Signature and title of person who prepared Registration Application:

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

Grant Woynarowich B.Sc.
Environmental Consultant

Name of Primary Contact for Pit: Mr. John Thomas

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)



Pit Location Municipal Address or LSD-Sec-Twp-Rge-Mer	Registered Owners Name, Address and Phone Number	Occupants Name, Address and Phone Number
NE 26-53-05 W5M NW & S1/2 35-53-05 W5M NW & SW 36-053-05 W5M	Kim and Barbara Bamber This information redacted as per Provisions of Privacy Act (PDA) as per	N/A



Activities Plan (Schedule 2, Part 1)

Aggregate Type (check off all that apply): Gravel Sand Clay Marl

Current Size of Pit: 18.74 ha (Operations 4.17ha, Active pit 4.29ha, Active reclamation 7.06ha and Reclaimed and seeded 3.22ha)

Average Thickness (indicate metres or centimetres for each one):

Topsoil: 24 cm Subsoil: 35 cm

Overburden: 5.2 m Aggregate: 7.1 m

Minimum depth: 7.3 m Maximum depth: 22.1 m Excavation Depth (avg.): 13.5 m

Topsoil Texture (check all that apply):

organic soil mineral soil clay loam silty loam sand sandy loam
 loam clay silt other:

Description of techniques to prevent wind and water erosion, and to limit the movement of dust from the pit:

A variety of techniques and construction practices will be implemented throughout the construction and operation of the pit to prevent erosion and dust, these techniques may include:

- Topsoil will be salvaged 5 meters (minimum) ahead of all pit faces;
- Subsoil will be salvaged 3 meters (minimum) ahead of all pit faces;
- Suspension of soil handling activities during adverse weather conditions (windy or rain) to prevent soil loss and degradation;
- Topsoil and overburden stockpiles placed on stable ground, away from pit faces;
- Stockpiles are contoured to ensure slope stabilization and vegetated to prevent erosion;
- In pit roads will be graded, hard-surfaced and watered as necessary to prevent dust.

Participation in local or regional air monitoring initiative:

Not applicable as potential air impacts should be mitigated using the procedures outlined above.

Inactive pit conservation and reclamation techniques: (see also Sections 3.6, 3.7 and 3.8):

When the pit is left inactive, the following techniques and procedures will be implemented:

- Stockpiles will be placed in a stable location and seeded to protect against erosion and weed invasion;
- The Pit will be monitored and maintained to control weeds;
- Active pit faces will be sloped to a gradient no steeper than 2:1 to prevent slumping and create safer pit conditions;
- Positive drainage, as outlined above, will be maintained;
- Debris and garbage will be removed from the Pit;
- Appropriate signage will be installed throughout the Site to create safer pit conditions;
- The Pit will be monitored to ensure these conditions are met.

Scale drawings and cross-sections of existing pit conditions and planned sequence of operation attached (see Appendix A).



Activities Plan (Part 2)

Maximum planned size of Pit:

NE 26 – Parkland County: 64 ha

NW & S ½ 35, NW & SW 36 – County of Lac St. Anne: 200.75 ha

Total: 264.75 ha.

Development Permit area for County of Lac St. Anne: 320 ha

Depth to groundwater (metres) in test holes (indicate each depth if multiple holes):

Saturated layers (NW 26) were intercepted during testing activities at approximately 6 m below the ground surface. During the first few years of operations, no groundwater has been encountered and has not influenced the excavation of the aggregate material. The project remains a "dry pit" with slight accumulations in the pit bottom following snow melt and precipitation events only.

Planned activities at the pit (check off all that apply): (see Sections 3.0)

- wet pit excavation concrete production mixing salt and aggregate
 mixing asphalt with aggregate spraying truck boxes aggregate washing
 use of alternative materials for reclamation

Mitigation measures for any of the above activities: (see Sections 3.0)

Erosion and sediment control measures around open excavations, no maintenance of equipment onsite except for emergency.

Proposed land uses for reclaimed pit (check all appropriate boxes):

- cultivation _____ 100% hayland _____% pasture _____%
 native range _____% grassland _____% forest _____%
 wildlife habitat _____% waterbody _____% proposed subdivision _____%
 other (specify)

Pit water release (rationale for release, techniques and discharge points): N/A.

No diversion of water is required to facilitate pit excavations.



Average topsoil replacement depth (cm): 24cm (T&T is targeting total replacement, 19 cm - 80% of depth due to operational losses during handling may be acceptable)

Average subsoil replacement depth (cm): 35 cm (T&T is targeting total replacement, 28 cm - 80% of depth due to operational losses during handling)

Average overburden replacement depth (m): 5.2 m

Scale drawings and cross-sections of reclaimed pit conditions attached (see Appendix A).



Description of pond in the reclaimed pit: N/A

Average depth of Pit excavations: 13.5 m
(includes the removal of topsoil, subsoil, overburden and aggregate materials)

Expected life of the deposit: 25-30 years, depending on contracts and local market demand

Equipment that will be used for removing and replacing topsoil and subsoil:
A motor scraper, excavator(s) and rock truck(s) will be used to remove and replace soil materials.

How have the property boundaries and buffers have been located and marked:
All property boundaries are marked by barbed wire fence; buffers and setback areas will be staked and identified in the field during Pit activities and operations. Open pit and operating areas will be fenced with signage.

The extraction setback:
As there is a sufficient volume of overburden to create post mining slopes, extraction setbacks will not be required.

Detailed description of the quality, depth and variation of groundwater encountered in test holes, reports, databases, etc.:

During the first few years of operations, no groundwater has been encountered and has not influenced the excavation of the aggregate material.

The CLI soil capability class for agriculture of the pre-disturbed landscape and the expected capability class in the reclaimed landscape – the relationship of slopes to soil capability classes are:

The land at this location is classified as 3, 4, 6 according to the Canadian Land Inventory. This rating indicates that 10% of the soil has limitations as to what crops can be grown on it, and may require special conservation practices, 70% of the soil has severe restrictions as to what is capable of growing on it and may require special conservation practices as well, while the remaining 20 % is classified as capable of producing perennial forage crops, and soil improvement is not possible. Given this classification, slopes will be re-established at 10:1 internally in the northern part of the Pit, and 3:1 internally along the southern part of the Pit. The expanded quarters to the north cover a large enough area that differing CLI's can be applied for reclamation, these areas have been identified on the cross sections and included as the basis for the Reclamation contours. As noted in the text of the report: "It is T&T's intention to maximize the area of aerable land; to the landowner; upon expiration of the gravel resources. T&T's reclamation goal of maximizing aerable land for the landowner will exceed the CLI requirements."



The seed mixtures or other forms of revegetation to be used:

Seed mixes and fertilizer use will be determined at the time of final reclamation after landowner consultation and will be consistent with the end land use, cultivation. Equipment required to complete the seeding will include a tractor and seed drill. Revegetation will be staged with reclamation activities to ensure areas are not left void of vegetation following reclamation.

Signature and title of person who developed Activities Plan:

This information redacted as per
Proclamation 1386 (PIPA)
Proclamation 1386 (PIPA)
Proclamation 1386 (PIPA)
P I T P I A (PIPA)
Grant Woynarowich
Environmental Consultant



Security Estimate (Schedule 3)

Cost of Reclamation security,

Acres of land certified at \$250/acre: N/A

Acres x \$250 = N/A (a)

Detailed full-cost cost of reclamation calculation attached

Total full-cost: \$122,142.00 (b)

Area of land at full-cost: 10 ha

Cost/hectare = \$12,214.20

Total security to be provided: \$122,142.00

Security already in place: \$131,661.00 (???? Security Amendment)

Additional security to be provided : \$35,586.00

Proposed method of payment: Letter of Credit Cash Other (explain) _____

Signature and title of person submitting estimate:

This information redacted as per Protection of
Privacy Act
This information redacted as per Protection of
Privacy Act
This information redacted as per Protection of
Privacy Act
This information redacted as per Protection of
Privacy Act
This information redacted as per Protection of
Privacy Act

Grant Woynarowich, B.Sc., P.Ag.
Environmental Consultant

SECURITY ESTIMATE

Pit Reclamation

The processes of pit reclamation includes contouring, topsoil replacement and revegetation, all overburden materials are directly placed within the "Active reclamation" or along the backside of the "Active pit" areas. The following cost estimate was developed with consideration of reclamation material stockpile volumes, pit area(s), unit operating costs, cost of seed, time required to complete work and project management. Based on "worst case scenario" for the Active Pit requiring contouring (duration ratio for the Crawler tractor adjusted to 0.75 of soil movement time to compensate for extra contouring) and Active reclamation area requiring topsoil placement/spreading. All topsoil, subsoil and overburden material will be directly placed on reclaimed contours behind the active operating area. This leaves "topsoil" in stockpile for the current working area(s), averaged at 24 cm and given the 8.5 ha working area equates to the volume below.

Contouring and Soil Replacement

This task involves replacement of overburden, sloping and grading the ground surface to facilitate positive drainage and create internal slopes no greater than 3:1, although 10:1 targetted. Required equipment may include: scraper, bulldozer, tractor, subsoiler, discs, harrows and seed drill.

Soil Replacement

Reclamation Material	Volume (m ³)
Topsoil (total)	20,400
Total	20,400

Unit Operating Costs

Equipment	Rate (\$/hour) ¹	Duration (hours) ²	Cost (\$)
Scraper (631G @ 170 m ³ /h)	387	120	\$46,440
Crawler Tractor (CAT D8T)	276	90	\$24,840
Tractor (166 - 200 HP)	128	10	\$1,280
Subsoiler (7 leg)	41	10	\$410
Tractor with 20 wheel trailer (mob/demob) ^{3,4}	288	20	\$5,760

Replacement Total:	\$78,730
Soil Replacement Contingency	\$15,746

Seedbed Preparation

Preparation of the seedbed would require tillage to a shallow depth to loosen, level and firm the topsoil. Required equipment would include: tractor, disc and harrow.

Unit Operating and Implement Costs

	Rate (\$/hour) ¹	Duration (hours)	Cost (\$)
Tractor (166 - 200 HP)	128	20	\$2,560
Disc (12' plows)	20	10	\$200
Harrow (4 section)	10	10	\$100

Seedbed Preparation Total:	\$2,860
-----------------------------------	----------------

Revegetation

The site will be seeded to alfalfa, timothy & brome for the purposes of having monies allotted.. Required equipment would include: tractor and seed drill.

Unit Operating and Implement Costs

Equipment	Rate (\$/hour) ¹	Duration (hours) ²	Cost (\$)
Tractor (166 - 200 HP)	128	5	\$640
Seed Drill	20	5	\$100
Seed			\$3,135
Weed Control ⁵			\$5,000

Revegetation Total:	\$8,875
----------------------------	----------------

Reclamation Subtotal	\$106,211
-----------------------------	------------------

Project Management

15 % of Reclamation Subtotal	\$15,932
------------------------------	-----------------

RECLAMATION TOTAL:	\$122,142
---------------------------	------------------

1. Current Rates per hour quoted as per the 2018 ARHCA Equipment Rental Rates Guide.
2. Unit Operating Costs determined using Caterpillar Performance Handbook (Edition 47), Charts & Tables.
3. Duration includes mobilization time/distance from Edmonton, Alberta.
4. Assumes 5 loads of equipment at a 2 hour trip for load/unload
5. Weed control assumes quad application as well as backpack for a 12 hr day (150/hr plus truck and chemical)
6. As the reclamation progresses, the landowner has been incorporating said lands into his crop rotation, eliminating the majority of seeding costs. A nominal amount will be left in for security contingency accounting for 10 hectares to pasture.

Assumptions:

300 m Haul distances from working areas to stockpile areas (up to 150 m one way)

Up to 7.5 minute cycle times with loading and unloading (bulldozer assisted)

Rolling resistance (10-12%) with level travel for scraper efficiency

22 m³ average load capacity, 26 m³ heaped load capacity

205 m³/hr at maximum efficiency (100%); 170 m³/hr used for estimate, normal production efficiency (83%)

Seeding Calculation			
	Alfalfa (60%) PS 110 brand	Meadow Brome (30%) Fleet 'Nutracoa'	Timothy (10%) Climax
kg/acre	4.2	2.1	0.7
Total Amount (kg) ¹	103.74	51.87	17.29
Price/kg ²	\$5.95	\$4.60	\$3.40
Cost	\$2,592.46	\$501.06	\$41.15
TOTAL COST			\$3,134.68

1. Based on 7kg of seed per acre and 10 ha / 24.7 acres.



APPENDIX C: LAND TITLES AND LEASE AGREEMENTS

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2
112 183 916

REGISTRATION
NUMBER DATE (D/M/Y) PARTICULARS

"TAKES PRIORITY DATE OF CAVEAT NO 882089315 28 04
1988"

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 600 712 5;5;53;36;SW 122 352 153

LEGAL DESCRIPTION
MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 36
QUARTER SOUTH WEST
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND
BARBARA JEAN BAMBER
This information redacted as
this information redacted as
this information redacted as
this information redacted as
this information redacted as
AS JOINT TENANTS

ENCUMBRANCES, LIENS & INTERESTS		
REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
122 352 154	24/10/2012	MORTGAGE MORTGAGEE - ALBERTA TREASURY BRANCHES. BOX 3180,5014 50 STREET STONY PLAIN

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2
122 352 153

REGISTRATION
NUMBER DATE (D/M/Y) PARTICULARS

ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 619 985 5;5;53;26;NE 132 180 917

LEGAL DESCRIPTION
MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 26
QUARTER NORTH EAST
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: PARKLAND COUNTY

REFERENCE NUMBER: 012 116 700

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
132 180 917	18/06/2013	TRANSFER OF LAND	\$2,784,000	SEE INSTRUMENT

OWNERS

1577784 ALBERTA LTD.

This information is intended as information only.

ENCUMBRANCES, LIENS & INTERESTS		
REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
902 067 565	09/03/1990	UTILITY RIGHT OF WAY GRANTEE - ALBERTA GOVERNMENT TELEPHONES. AS TO PORTION OR PLAN:9020474

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 643 779 5;5;53;36;NW 122 352 153 +1

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 36
QUARTER NORTH WEST
CONTAINING 66.4 HECTARES (164 ACRES) MORE OR LESS
EXCEPTING THEREOUT : ALL THAT PORTION DESCRIBED AS FOLLOWS:--
COMMENCING AT THE NORTH WEST CORNER OF THE SAID QUARTER
SECTION, THENCE SOUTHERLY ALONG THE WEST BOUNDARY THEREOF 1,320
FEET, THENCE EASTERLY AND PARALLEL TO THE NORTH BOUNDARY OF THE
SAID QUARTER SECTION 1220 FEET, THENCE NORTHERLY AND PARALLEL TO
THE WEST BOUNDARY OF THE SAID QUARTER SECTION TO AN INTERSECTION
WITH SAID NORTH BOUNDARY, THENCE WESTERLY ALONG THE NORTH BOUNDARY
OF THE SAID QUARTER SECTION TO THE POINT OF COMMENCEMENT
CONTAINING 14.9 HECTARES (36.97 ACRES) MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +1

Table with 5 columns: REGISTRATION, DATE (DMY), REGISTERED OWNER(S), VALUE, CONSIDERATION. Row 1: 122 352 153, 24/10/2012, TRANSFER OF LAND, SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

This information redacted as per
Protection of Privacy Act (POPA)

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2
122 352 153 +1

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

3113VE 23/10/1974 CAVEAT
CAVEATOR - EDMONTON REGIONAL PLANNING COMMISSION.

122 352 154 24/10/2012 MORTGAGE
MORTGAGEE - ALBERTA TREASURY BRANCHES.
BOX 3180,5014 50 STREET
STONY PLAIN
ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0010 118 271 5;5;53;35;SW 122 352 153 +2

LEGAL DESCRIPTION

THE SOUTH WEST QUARTER OF SECTION THIRTY FIVE (35)
TOWNSHIP FIFTY THREE (53)
RANGE FIVE (5)
WEST OF THE FIFTH MERIDIAN,
CONTAINING 64.3 HECTARES (159) ACRES MORE OR LESS.
EXCEPTING THEREOUT:
0.417 HECTARES (1.03) ACRES MORE OR LESS FOR ROAD PLAN
7721629.
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +2

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

This information redacted as per the Access to Information Act and the Protection of Privacy Act.

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2
122 352 153 +2

REGISTRATION
NUMBER DATE (D/M/Y) PARTICULARS

122 352 154 24/10/2012 MORTGAGE
MORTGAGEE - ALBERTA TREASURY BRANCHES.
BOX 3180,5014 50 STREET
STONY PLAIN
ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0027 059 641 5;5;53;35;NW 122 352 153 +3

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 35
QUARTER NORTH WEST
CONTAINING 66.8 HECTARES (165 ACRES) MORE OR LESS
EXCEPTING THEREOUT: HECTARES (ACRES) MORE OR LESS
A) PLAN 7721629 ROAD 0.429 1.06
B) PLAN 9721580 DESCRIPTIVE 4.636 11.46
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE
MUNICIPALITY: LAC STE. ANNE COUNTY
REFERENCE NUMBER: 112 287 057 +3

Table with 5 columns: REGISTRATION, DATE (DMY), DOCUMENT TYPE, VALUE, CONSIDERATION. Row 1: 122 352 153, 24/10/2012, TRANSFER OF LAND, SEE INSTRUMENT

OWNERS
KIM GARY BAMBER
AND
BARBARA JEAN BAMBER

This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act / This information redacted as per section 24(1) of the Access to Information Act

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2
122 352 153 +3

REGISTRATION

NUMBER	DATE (D/M/Y)	PARTICULARS
772 057 829	04/04/1977	UTILITY RIGHT OF WAY GRANTEE - STE ANNE NATURAL GAS CO-OP LIMITED.
972 134 822	14/05/1997	CAVEAT RE : TRANSFER OF LAND CAVEATOR - LAC STE. ANNE COUNTY. BOX 219 SANGUDO ALBERTA T0E2A0
122 352 154	24/10/2012	MORTGAGE MORTGAGEE - ALBERTA TREASURY BRANCHES. BOX 3180,5014 50 STREET STONY PLAIN ALBERTA ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 003

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 643 761 5;5;53;36;NW 122 352 153 +4

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 36
ALL THAT PORTION OF THE NORTH WEST QUARTER
DESCRIBED AS FOLLOWS:--
COMMENCING AT THE NORTH WEST CORNER OF THE SAID QUARTER
SECTION, THENCE SOUTHERLY ALONG THE WEST BOUNDARY THEREOF
1,320 FEET, THENCE EASTERLY AND PARALLEL TO THE NORTH BOUNDARY
OF THE SAID QUARTER SECTION 1,220 FEET, THENCE NORTHERLY AND
PARALLEL TO THE WEST BOUNDARY OF THE SAID QUARTER SECTION TO AN
INTERSECTION WITH SAID NORTH BOUNDARY, THENCE WESTERLY ALONG THE
NORTH BOUNDARY OF THE SAID QUARTER SECTION TO THE POINT OF COMMENCEMENT
CONTAINING 14.9 HECTARES (36.97 ACRES) MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +4

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

This information is protected under the Access to Information Act and the Privacy Act.

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2
122 352 153 +4

REGISTRATION
NUMBER DATE (D/M/Y) PARTICULARS

122 352 154 24/10/2012 MORTGAGE
MORTGAGEE - ALBERTA TREASURY BRANCHES.
BOX 3180,5014 50 STREET
STONY PLAIN
ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 4 DAY OF MAY,
2017 AT 09:41 A.M.

ORDER NUMBER: 32830674

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).

THIS LEASE Made This 18th Day of December, 2013

BETWEEN:

KIM GARY BAMBER and BARBARA JEAN BAMBER

-and-

(157784 Alberta Ltd.)

(Hereafter described as "the Lessor")

-of the first part

-and-

214131 ENTERPRISES LTD.

(Hereafter described as "the Lessee")

-of the second part

LEASE AGREEMENT

RECITALS:

1. The Lessor is the Owner of those lands legally described as follows :

MERIDIAN 5
RANGE 5
TOWNSHIP 53
SECTION 36
NORTHWEST QUARTER

EXCEPTING THEREOUT ALL MINES AND MINERALS AREA:
64.7 HECTARES (160 ACRES) MORE OR LESS

The above described lands shall hereafter be described as "The Demised Premises."

2. The Lessee is in the business of crushing rock, producing and selling sand, gravel and rock products to its customers and has need of the raw product in order to provide the same. Usage of the term "Gravel" herein shall be taken to mean all sand and rock product.
3. The Lessor and the Lessee are desirous of entering into this Lease Agreement, the purpose of which to allow the Lessee to remove and process gravel from the Demised Premises.

Wherefore, the Parties enter into this Agreement and agree as follows, namely:

4. The Lessor hereby grants unto the Lessee a lease of the Demised Premises, such Lease Permits the removal of gravel from the Demised Premises. The Lessor grants unto the Lessee exclusive license and full liberty to search for, dig, get and remove gravel from the Demised Premises by excavating or other means of removal.
5. This grant and Lease by the Lessor allows the Lessee full liberty from time to time at all times during the continuance of this Lease and licence to enter upon the Demised Premises and right-of-way with or without vehicles for the purpose of exercising the License and liberty hereby granted.

6. The Lessor will sell and the Lessee will purchase all those deposits of gravel lying in and Under the Demised Premises, the price and quantity of which shall be set out below.
7. The Lease shall commence on the date this Agreement is signed by the Parties and shall continue for a period or term of Five (5) years therefrom.
8. The Lessor hereby grants unto the Lessee options to renew and extend this Lease for a period of Five (5) further years each and this option may be exercised at any time during the currency of the current five-year term of this Lease and may be exercised by giving the Lessor notice in writing at the address set out herein.
9. Whenever the option to renew or extend this Lease for an additional five-year term is exercised, the same terms and conditions as set out in this Lease shall be applicable except it is understood that the tonnage rate shall be renegotiated and fixed by the Parties at the conclusion of each 3 year period provided the Lessee has met all of the conditions of the Lease.
10. Payment for all gravel removed from the property shall be based on a value of \$1.50 per tonne for gravel (the specific product); \$0.75 per tonne for sand (the specific product). Tonnage shall be determined by weights over a platform scale provided by the Lessee.
11. Payment for all tonnage removed from the property, over the credited tonnage, within any calendar year shall be paid for at the rate of \$1.50 per tonne (gravel) and \$0.75 per tonne (sand) with payment for the past year being made prior to January 31st of the following year.
12. Failure of the Lessee to pay the annual Lease payment or payment for tonnage by January 31st of each year shall constitute a breach of the Lease and no further work or removal of gravel shall be carried out until payments have been made.
13. The Lessor shall have access for the purpose of inspection only to the gravel operation at all times and provided the Lessee is not in default, the Lessee shall be entitled to quiet possession and use of the Demised Premises at all times.
14. The Lessee shall have the right to terminate the Agreement at any time prior to the expiry date of the Agreement with One (1) year's notice in writing to the Lessor. Termination of the Lease Agreement does not release the Lessee from all required reclamation obligations.
15. The Lessee, upon completion or termination of the Lease, shall reclaim the property in accordance with Alberta Environment – Code of Practise for Pits. Reclamation shall include leaving the land in a farmable condition so as to be well drained with no pot holes or non-draining areas. The reclaimed land shall be seeded to an acceptable forage crop. The Lessor shall have the right to review and approve the Reclamation Plan prepared for the property.
16. The Lessee shall provide the Lessor with a copy of the daily summary of all truck weigh tickets for each day that gravel is removed from the property. Daily summaries shall be provided to the Lessor by the end of the following month.
17. The Lessee shall be responsible for the locating and any required locating of any utilities existing on the property and for the protection of the said utilities within the area of the gravel operation or affected by the gravel operation.
18. The Lessee shall be responsible for the placing of signs and providing the necessary security for the gravel pit area to ensure the protection of anyone entering the property against any hazard created by the gravel operation.

19. The Lessee shall provide the owner copies of all approvals, registrations, activity plans, security plans and estimates, all submitted reports, and an annual updated operating report for the pit operation.
20. There shall be no payment required by the Lessee until such time as the appropriate development permit is granted by the Lac Ste Anne County.
21. The addresses for notices to be sent to the Parties are as follows :

- For the Lessee:

214131 Enterprises Ltd.
 This information redacted as per
 Protection of Privacy Act (POPA)
 P i f P i A

- For the Lessor:

Kim & Barbara Bamber - and - 1577784 Alberta Ltd.
 This information redacted as per
 Protection of Privacy Act (POPA)
 P i f P i A

22. So far as is possible, the Lessee shall keep the Lessor fully and effectually indemnified against all actions, suits, causes of action, liabilities, claims, demands, costs, charges and expenses of every kind whatsoever to which the Lessor may be subject or liable in respect of this grant and Lease hereby made or the exercise or purported exercise of the rights under this Agreement.
23. So far as is possible, the Lessor shall keep the Lessee fully and effectually indemnified against all actions, suits, causes of action, liabilities, claims, demands, costs, charges, and expenses of every kind whatsoever to which the Lessee may be subject or liable in respect of this grant and Lease hereby made as a consequence of any action or lack thereof on the part of the Lessor.
24. The Lessee shall consult with the Lessor regarding areas of pit to be developed.
25. The Lessee shall provide weed control for the pit areas only.

Therefore, The Parties have hereto fixed their names and seals effective on the date above described.

For the Lessor:

This information redacted as per Protection of Privacy Act (POPA)

Witness:

This information redacted as per Protection of Privacy Act (POPA)

Witness:

For the Lessee:

This information redacted as per Protection of Privacy Act (POPA)

KIM GARY BAMBER

This information redacted as per Protection of Privacy Act (POPA)

BARBARA JEAN BAMBER

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
JOHN THOMAS

President of **214131 ENTERPRISES LTD.**

THIS LEASE Made This 18th Day of December, 2013

BETWEEN:

KIM GARY BAMBER and BARBARA JEAN BAMBER

-and-

(
(Hereafter described as "the Lessor")

-of the first part

-and-

214131 ENTERPRISES LTD.

(Hereafter described as "the Lessee")

-of the second part

LEASE AGREEMENT

RECITALS:

1. The Lessor is the Owner of those lands legally described as follows :

MERIDIAN 5
RANGE 5
TOWNSHIP 53
SECTION 35
SOUTH EAST QUARTER

EXCEPTING THEREOUT ALL MINES AND MINERALS AREA:
64.7 HECTARES (160 ACRES) MORE OR LESS

The above described lands shall hereafter be described as "The Demised Premises."

2. The Lessee is in the business of crushing rock, producing and selling sand, gravel and rock products to its customers and has need of the raw product in order to provide the same. Usage of the term "Gravel" herein shall be taken to mean all sand and rock product.
3. The Lessor and the Lessee are desirous of entering into this Lease Agreement, the purpose of which to allow the Lessee to remove and process gravel from the Demised Premises.

Wherefore, the Parties enter into this Agreement and agree as follows, namely:

4. The Lessor hereby grants unto the Lessee a lease of the Demised Premises, such Lease Permits the removal of gravel from the Demised Premises. The Lessor grants unto the Lessee exclusive license and full liberty to search for, dig, get and remove gravel from the Demised Premises by excavating or other means of removal.
 - (a) "Annual Payment" shall mean the Lessee guaranteeing a minimum payment to the Lessor in the form of Twenty Five Thousand Dollars (\$25,000.00) to be paid in a single lump sum payment on or before September 30th of each year including the first year of the current or renewed Term but subsequent to the development permit being obtained from Parkland County.
5. This grant and Lease by the Lessor allows the Lessee full liberty from time to time at all

6. The Lessor will sell and the Lessee will purchase all those deposits of gravel lying in and Under the Demised Premises, the price and quantity of which shall be set out below.
7. The Lease shall commence on the date this Agreement is signed by the Parties and shall continue for a period or term of Five (5) years therefrom.
8. The Lessor hereby grants unto the Lessee options to renew and extend this Lease for a period of Five (5) further years each and this option may be exercised at any time during the currency of the current five-year term of this Lease and may be exercised by giving the Lessor notice in writing at the address set out herein.
9. Whenever the option to renew or extend this Lease for an additional five-year term is exercised, the same terms and conditions as set out in this Lease shall be applicable except it is understood that the tonnage rate shall be renegotiated and fixed by the Parties at the conclusion of each 3 year period provided the Lessee has met all of the conditions of the Lease.
10. Payment for all gravel removed from the property shall be based on a value of \$1.50 per tonne for gravel (the specific product); \$0.75 per tonne for sand (the specific product). Tonnage shall be determined by weights over a platform scale provided by the Lessee.
11. Payment for all tonnage removed from the property, over the credited tonnage, within any calendar year shall be paid for at the rate of \$1.50 per tonne (gravel) and \$0.75 per tonne (sand) with payment for the past year being made prior to January 31st of the following year.
12. Failure of the Lessee to pay the annual Lease payment or payment for tonnage by January 31st of each year shall constitute a breach of the Lease and no further work or removal of gravel shall be carried out until payments have been made.
13. The Lessor shall have access for the purpose of inspection only to the gravel operation at all times and provided the Lessee is not in default, the Lessee shall be entitled to quiet possession and use of the Demised Premises at all times.
14. The Lessee shall have the right to terminate the Agreement at any time prior to the expiry date of the Agreement with One (1) year's notice in writing to the Lessor. Termination of the Lease Agreement does not release the Lessee from all required reclamation obligations.
15. The Lessee, upon completion or termination of the Lease, shall reclaim the property in accordance with Alberta Environment – Code of Practice for Pits. Reclamation shall include leaving the land in a farmable condition so as to be well drained with no pot holes or non-draining areas. The reclaimed land shall be seeded to an acceptable forage crop. The Lessor shall have the right to review and approve the Reclamation Plan prepared for the property.
16. The Lessee shall provide the Lessor with a copy of the daily summary of all truck weigh tickets for each day that gravel is removed from the property. Daily summaries shall be provided to the Lessor by the end of the following month.
17. The Lessee shall be responsible for the locating and any required locating of any utilities existing on the property and for the protection of the said utilities within the area of the gravel operation or affected by the gravel operation.
18. The Lessee shall be responsible for the placing of signs and providing the necessary security for the gravel pit area to ensure the protection of anyone entering the property against any hazard created by the gravel operation.

19. The Lessee shall provide the owner copies of all approvals, registrations, activity plans, security plans and estimates, all submitted reports, and an annual updated operating report for the pit operation.
20. There shall be no payment required by the Lessee until such time as the appropriate development permit is granted by the Lac Ste Anne County.
21. The addresses for notices to be sent to the Parties are as follows :
 - For the Lessee:

214131 Enterprises Ltd.
 This information redacted as per
 Protection of Privacy Act (POPA)
 This information redacted as per
 Protection of Privacy Act (POPA)
 This information redacted as per
 Protection of Privacy Act (POPA)
 This information redacted as per
 Protection of Privacy Act (POPA)
 - For the Lessor:

Kim & Barbara Bamber - and - 1577784 Alberta Ltd.
 This
 information
 redacted as per
 Protection of
 Privacy Act
22. So far as is possible, the Lessee shall keep the Lessor fully and effectually indemnified against all actions, suits, causes of action, liabilities, claims, demands, costs, charges and expenses of every Kind whatsoever to which the Lessor may be subject or liable in respect of this grant and Lease hereby made or the exercise or purported exercise of the rights under this Agreement.
23. So far as is possible, the Lessor shall keep the Lessee fully and effectually indemnified against all actions, suits, causes of action, liabilities, claims, demands, costs, charges, and expenses of every kind whatsoever to which the Lessee may be subject or liable in respect of this grant and Lease hereby made as a consequence of any action or lack thereof on the part of the Lessor.
24. The Lessee shall consult with the Lessor regarding areas of pit to be developed.
25. The Lessee shall provide weed control for the pit areas only.

Therefore, The Parties have hereto fixed their names and seals effective on the date above described.

For the Lessor:

This information
redacted as per

Witness:

This information
redacted as per

Witness:

For the Lessee:

This
information
redacted as per

KIM GARY BAMBER

This information redacted as per
Protection of Privacy Act (POPA)

BARBARA JEAN BAMBER

This information redacted as per
Protection of Privacy Act (POPA)

JOHN THOMAS

President of 214131 ENTERPRISES LTD.

THIS LEASE Made This 18th Day of December, 2013

BETWEEN:

KIM GARY BAMBER and BARBARA JEAN BAMBER

-and-

(
(Hereafter described as "the Lessor")

-of the first part

-and-

214131 ENTERPRISES LTD.

(Hereafter described as "the Lessee")

-of the second part

LEASE AGREEMENT

RECITALS:

1. The Lessor is the Owner of those lands legally described as follows :

MERIDIAN 5
RANGE 5
TOWNSHIP 53
SECTION 36
SOUTH WEST QUARTER

EXCEPTING THEREOUT ALL MINES AND MINERALS AREA:
64.7 HECTARES (160 ACRES) MORE OR LESS

The above described lands shall hereafter be described as "The Demised Premises."

2. The Lessee is in the business of crushing rock, producing and selling sand, gravel and rock products to its customers and has need of the raw product in order to provide the same. Usage of the term "Gravel" herein shall be taken to mean all sand and rock product.
3. The Lessor and the Lessee are desirous of entering into this Lease Agreement, the purpose of which to allow the Lessee to remove and process gravel from the Demised Premises.

Wherefore, the Parties enter into this Agreement and agree as follows, namely:

4. The Lessor hereby grants unto the Lessee a lease of the Demised Premises, such Lease Permits the removal of gravel from the Demised Premises. The Lessor grants unto the Lessee exclusive license and full liberty to search for, dig, get and remove gravel from the Demised Premises by excavating or other means of removal.
 - (a) "Annual Payment" shall mean the Lessee guaranteeing a minimum payment to the Lessor in the form of Twenty Five Thousand Dollars (\$25,000.00) to be paid in a single lump sum payment on or before September 30th of each year including the first year of the current or renewed Term but subsequent to the development permit being obtained from Parkland County.
5. This grant and Lease by the Lessor allows the Lessee full liberty from time to time at all

6. The Lessor will sell and the Lessee will purchase all those deposits of gravel lying in and Under the Demised Premises, the price and quantity of which shall be set out below.
7. The Lease shall commence on the date this Agreement is signed by the Parties and shall continue for a period or term of Five (5) years therefrom.
8. The Lessor hereby grants unto the Lessee options to renew and extend this Lease for a period of Five (5) further years each and this option may be exercised at any time during the currency of the current five-year term of this Lease and may be exercised by giving the Lessor notice in writing at the address set out herein.
9. Whenever the option to renew or extend this Lease for an additional five-year term is exercised, the same terms and conditions as set out in this Lease shall be applicable except it is understood that the tonnage rate shall be renegotiated and fixed by the Parties at the conclusion of each 3 year period provided the Lessee has met all of the conditions of the Lease.
10. Payment for all gravel removed from the property shall be based on a value of \$1.50 per tonne for gravel (the specific product); \$0.75 per tonne for sand (the specific product). Tonnage shall be determined by weights over a platform scale provided by the Lessee.
11. Payment for all tonnage removed from the property, over the credited tonnage, within any calendar year shall be paid for at the rate of \$1.50 per tonne (gravel) and \$0.75 per tonne (sand) with payment for the past year being made prior to January 31st of the following year.
12. Failure of the Lessee to pay the annual Lease payment or payment for tonnage by January 31st of each year shall constitute a breach of the Lease and no further work or removal of gravel shall be carried out until payments have been made.
13. The Lessor shall have access for the purpose of inspection only to the gravel operation at all times and provided the Lessee is not in default, the Lessee shall be entitled to quiet possession and use of the Demised Premises at all times.
14. The Lessee shall have the right to terminate the Agreement at any time prior to the expiry date of the Agreement with One (1) year's notice in writing to the Lessor. Termination of the Lease Agreement does not release the Lessee from all required reclamation obligations.
15. The Lessee, upon completion or termination of the Lease, shall reclaim the property in accordance with Alberta Environment – Code of Practice for Pits. Reclamation shall include leaving the land in a farmable condition so as to be well drained with no pot holes or non-draining areas. The reclaimed land shall be seeded to an acceptable forage crop. The Lessor shall have the right to review and approve the Reclamation Plan prepared for the property.
16. The Lessee shall provide the Lessor with a copy of the daily summary of all truck weigh tickets for each day that gravel is removed from the property. Daily summaries shall be provided to the Lessor by the end of the following month.
17. The Lessee shall be responsible for the locating and any required locating of any utilities existing on the property and for the protection of the said utilities within the area of the gravel operation or affected by the gravel operation.
18. The Lessee shall be responsible for the placing of signs and providing the necessary security for the gravel pit area to ensure the protection of anyone entering the property against any hazard created by the gravel operation.

19. The Lessee shall provide the owner copies of all approvals, registrations, activity plans, security plans and estimates, all submitted reports, and an annual updated operating report for the pit operation.

20. There shall be no payment required by the Lessee until such time as the appropriate development permit is granted by the Lac Ste Anne County.

21. The addresses for notices to be sent to the Parties are as follows :

- For the Lessee:

214131 Enterprises Ltd.
 This information redacted as per
 This information redacted (POPA)
 This information redacted (POPA)
 This information redacted (POPA)
 Protection of Privacy Act (POPA)

- For the Lessor:

Kim & Barbara Bamber – and – 1577784 Alberta Ltd.

This
 information
 redacted
 information
 redacted

22. So far as is possible, the Lessee shall keep the Lessor fully and effectually indemnified against all actions, suits, causes of action, liabilities, claims, demands, costs, charges and expenses of every kind whatsoever to which the Lessor may be subject or liable in respect of this grant and Lease hereby made or the exercise or purported exercise of the rights under this Agreement.

23. So far as is possible, the Lessor shall keep the Lessee fully and effectually indemnified against all actions, suits, causes of action, liabilities, claims, demands, costs, charges, and expenses of every kind whatsoever to which the Lessee may be subject or liable in respect of this grant and Lease hereby made as a consequence of any action or lack thereof on the part of the Lessor.

24. The Lessee shall consult with the Lessor regarding areas of pit to be developed.

25. The Lessee shall provide weed control for the pit areas only.

Therefore, The Parties have hereto fixed their names and seals effective of the date above described.

For the Lessor:

This information
 redacted as per

Witness:

This information redacted
 This information redacted

Witness:

For the Lessee:

This
 information
 redacted
 information

KIM GARY BAMBER

This information redacted as per
 This information redacted (POPA)
 P **BARBARA JEAN BAMBER (POPA)**

This information redacted as per Protection of
 Privacy Act (POPA)

JOHN THOMAS

President of **214131 ENTERPRISES LTD.**



APPENDIX D: LSAC DEVELOPMENT PERMIT AND SUPPORTING DOCUMENTS

Tanya Vanderwell

From: Matthew Ferris
Sent: March-15-16 2:07 PM
To: Tanya Vanderwell
Subject: FW: Aggregate Extraction Processing Application
Attachments: Aggregate Application Form on Word.docx; Application for Discretionary Aggregate On word.docx; Image.jpg; Image (2).jpg; Image (3).jpg; Image (4).jpg

Matthew Ferris | RPP MCIP | Manager of Planning and Development
(780) 785-3411

From: Danielle Woolnough
Sent: March-14-16 2:18 PM
To: Matthew Ferris
Subject: FW: Aggregate Extraction Processing Application

From: Kaitlin Spears This information redacted as per Protection of Privacy Act
Sent: March-14-16 2:17 PM
To: Dev Assistant
Subject: Aggregate Extraction Processing Application

Good Afternoon,
Please find the attached Application on behalf of John Thomas with T&T Sand And Gravel Ltd

If you have any other questions or concerns please don't hesitate to contact us

Thank You
Have a great day!

Kaitlin Spears
T&T Sand & Gravel Ltd.

This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act

	Page or Appendix	Notes
Signed by the registered owner of his or her agent (Section 97 1.a)	Appendix D	
State the proposed use or occupancy of all parts of land and buildings (Section 97 1.b.)	Section 1.1	
A written and graphical description of adjoining land uses within a distance of 3.2 kilometers (2.0 miles) of the legal boundary of the subject property (Section 97 1.c.A.(a))	Section 1.4 and 2.7	
A General Requirements :		
The proposed development area including the total area that will be disturbed by the Aggregate Resource Extraction use over its lifespan (Section 97 1.c.A.(b))	Section 3.1,3.3 Appendix A Figure 2	
A list of all other approvals required (which may include: Provincial water division license for pit de-watering, Federal requirements); (Section 97 1.c.A.(c))	Appendix D	EPEA Registration NO. 248371-00-00
A copy of any applications as well as a copy of any responses or approvals from other authorities such as Alberta Environment and Alberta Transportation (Section 97 1.c.A.(d))	Appendix D	EPEA Registration NO. 248371-00-00
The Applicant will be required to conduct an information meeting prior to or at the same time as submitting transportation (Section 97 1.c.A.(e))		Road Agreement Range Road 51 Parkland County
Include parcel plans in duplicate at a scale north point (Section 97 1.c.A.(f)(i))		Refer to mining plan
Legal description of parcel (Section 97 1.c.A.(f)(ii))	Section 1.2 Appendix A Figure 1	
Site dimensions (Section 97 1.c.A.(f)(iii))	Section 3.3 Appendix A Figure 2	
Location of existing facilities (i.e. water wells, buildings and major landscaped area including buffering and screening area) and where the proposed activity is to be located within the property (Section 97 1.c.A.(f)(iv))	Appendix A Figure 2	
Access and egress points to and from the Site (Section 97 1.c.A.(f)(v))		Range Road 51 Parkland County
Extraction locations (Section 97 1.c.A.(f)(vi))	Appendix A Figure 3	
Stockpile locations for topsoil, subsoil and aggregate (Section 97 1.c.A.(f)(vii))	Appendix A Figure 2	
Productions, washing, crushing location (including an explanation of the placement of such things as crushers, asphalt and wash machines, as well as the orientation of the engines for such machines) (Section 97 1.c.A.(f)(viii))	Section 3.4	And January 5 th , 2016 Acoustic Information Letter

Line of sight data from the site to all residential uses within a minimum of 400 meters (1312.34 Feet) or as determined by the Development Authority (Section 97 1.c.A.(f)(ix))	Appendix A Figure 2	
Accompanying text to Site Plan explaining the sequence of mining, the placement of fuel dump, the placement of the crusher (i.e. Bottom of pit) (Section 97 1.c.A.(f)(x))	Section 3.4	
The location of existing and proposed municipal and private local improvements as well as and estimation of the installation thereof (Section 97 1.c.A.(f)(xi))		Not Applicable
If there is a pipeline in the area and its location in conjunction with the proposed development (Section 97 1.c.A.(f)(xii))		No Pipelines
Estimated cost of the project, excluding land prices (Section 97 1.c.A.(f)(xiii))		Unknown
Do you plan on mining a roadway YES or NO		NO
If yes, RGE RD to be mined _____ OR TWP RD to be mined _____		Not Applicable
B. Reclamation		
Topsoil and subsoil salvage and replacement (Section 97 1.c.B.(a)(i))	Section 4.2	
Cross sections including the slopes and the gradients prior to gravel mining, the reclaimed slopes once the Reclamation is completed (Section 97 1.c.B.(a)(ii))	Appendix A Figure 5-15	
Contour elevations of the subject site before and after pit completion (Section 97 1.c.B.(a)(iii))	Appendix A Figure 2 and 4	
Reclamation plan - a description of the operational plan for the site (Section 97 1.c.B.(b)(i))	Section 4	
The location of all improvements, stockpiles, equipment, access, signage, pits (Section 97 1.c.B.(b)(ii))	Section 3.4	
A topographical map at a minimum of 1:5000 scale with a minimum contour index if 1.0 meter (Section 97 1.c.B.(b)(iii))	Appendix A Figure 2	
A topographical map showing the predicted contours of the site after completion of the reclamation. Where the predicted contours shall be no steeper than 4:1 (Section 97 1.c.B.(b)(iv))	Appendix A Figure 2	
A phasing diagram showing the phasing scheme for the pit including the time frame when reclamation will be completed (Section 97 1.c.B.(b)(v))	Appendix A Figure 3	
The estimated amount of aggregate materials located on the site that can be extracted (Section 97 1.c.B.(b)(vi))	Section 3.1	
For pits not utilizing a scale on site, the estimated amount of aggregate material for each phase (Section 97 1.c.B.(b)(vii))	Section 3.1	84,000 per phase volumes broken down per quarter section

The estimated cost for Reclamation of each phase (Section 97 1.c.B.(b)(viii))	Schedule 3	Security estimate based on progressive reclamation and direct placement of soil materials
A description of the steepness of slopes (Section 97 1.c.B.(b)(ix))	Appendix A Figure 5-12	
What will be the projected end land use (i.e. Agricultural, Country Residential) (Section 97 1.c.B.(b)(x))	Section 4.1	Crop rotation/ hay or pasture land
use(s) which may be effected (Section 97 1.c.B.(b)(xi))		
What will be used for re-vegetation on the reclaimed site (Section 97 1.c.B.(b)(xii))	Section 4.5	
How the pit will be reclaimed, including details on subsoil and topsoil replacement and compaction (Section 97 1.c.B.(b)(xiii))	Section 4.2 & Appendix C	
Any water bodies that are proposed and where they may be located (Section 97 1.c.B.(b)(xiv))		None planned
The Reclamation plan shall comply, at a minimum, with the following standards : Drainage: prior to re-contouring, the pit floor area should be sloped to Access Agreement low point location at the bottom of the put area (Section 97 1.c.B.(c)(i))	Appendix A, Figure 4	See planned Reclamation contours
The Reclamation plan shall comply, at a minimum, with the following standards : Subsoil and Topsoil Replacement: the available subsoil should be spread evenly across the re-contoured area of the site (Section 97 1.c.B.(c)(ii))	Section 4.2	
The Reclamation plan shall comply, at a minimum, with the following standards : Seed Bed Preparation: the re-contoured and Reclaimed Areas of the site should accommodate conventional tillage equipment and, as a result, the soil should be adequately prepared for seeding at the site with and approved species of vegetation (Section 97 1.c.B.(c)(iii))	Section 4.2 and Appendix C	
The Reclamation plan shall comply, at a minimum, with the following standards : Seeding and Vegetation Establishment: the site should be seeded with an acceptable seed species, approved by Lac Ste. Anne County, or a species that is native to the undisturbed area of the site (Section 97 1.c.B.(c)(iv))	Section 4.5	
C. Operations, Safety and Emergency Response Plan		
Hours of operation - Aggregate Extraction Activities (Section 97 1.c.C.(a)(i))	Section 3.1	
Hours of operation - Reclamation Activities (Section 97 1.c.C.(a)(ii))	Section 3.1	
Hours of operation - Transportation of aggregate off-site (Section 97 1.c.C.(a)(iii))	Section 3.1	

Hours of operation - Aggregate Resource Processing activities (Section 97 1.c.C.(a)(iv))	Section 3.1	
The proposed number of years of operation and when Reclamation will commence (Section 97 1.c.C.(b))	Section 3.3	
Access and haul roads (Section 97 1.c.C.(c))	Section 3.5	Range Road 51 via Parkland County
Details on location, specification and standards of construction of all internal roadways located within the site (Section 97 1.c.C.(d))		
Where will the stockpiles will be located (Section 97 1.c.C.(e))	Appendix A Figure 2	Provisions for topsoil stockpiles, assuming when progressive reclamation is not utilized, product stockpile on pit bottom
Provisions for loading and parking (Section 97 1.c.C.(f))		
Garbage and storage area and fencing and screenings proposed for the same, and methods of disposing of garbage (Section 97 1.c.C.(g))	Section 3.9	
Has an area been designed on the site for all servicing, fueling and rinsing of trucks, including fuel storage areas (Section 97 1.c.C.(h))	Section 3.4	
Will this area be graded to prevent surface water from entering site (Section 97 1.c.C.(i))		Disturbance only to planned operating area, to prevent topsoil loss via erosion
Are plans in place to install containers to collect used oil and filters (Section 97 1.c.C.(j))	Section 3.4	
will this area be suitably lined to prevent permeation of contaminants into the soil (Section 97 1.c.C.(k))	Section 3.4	
Are there provisions for on-site sewage and garbage disposal (Section 97 1.c.C.(l)(i))	Section 3.4	
Method of effluent disposal (Section 97 1.c.C.(l)(i))		Contractor utilized for waste disposal
Portable toilets (Section 97 1.c.C.(l)(ii))		Contractor utilized for waste disposal
Sewage hauling and removal protocols (Section 97 1.c.C.(l)(iii))		Contractor utilized for waste disposal
Garbage bins (Section 97 1.c.C.(l)(iv))	Section 3.4	
Other (Section 97 1.c.C.(l)(v))	Section 3.4	
Will and asphalt, wash, crush or concrete plant be part of the pit operation, If so describe the type of equipment used in the asphalt, wash, crush and/or concrete plant including its placement, the placement of the power source, the location of the water source, and where the source of gravel will come from if it originates off site (Section 97 1.c.C.(m))	Activities Plan (Part 2) Page 19	No asphalt, wash or concrete for this location
Have hours of operation been established in accordance with County Policy or accepted practice for stripping operations (Section 97 1.c.C.(n)(i))		Parkland County development permit example of current activities

Have hours of operation been established in accordance with County Policy or accepted practice for mining/crushing/ washing operations (Section 97 1.c.C.(n)(ii))		Parkland County development permit example of current activities
Have hours of operation been established in accordance with County policy or accepted practice for asphalt production (Section 97 1.c.C.(n)(iii))		Not applicable
Have hours of operation been established in accordance with County policy or accepted practice for concrete production (Section 97 1.c.C.(n)(iv))		Not applicable
Have hours of operation been established in accordance with County policy or accepted practice for hauling operations (Section 97 1.c.C.(n)(v))		Parkland County development permit example of current activities
Gravel mining method (Section 97 1.c.C.(o))	Section 3.4	
The extraction process (Section 97 1.c.C.(p))	Section 3.4	
Type of crusher being used (Section 97 1.c.C.(q))		T&T utilizes 1 Norber 300 Hp cone crusher and 1 Sandia 3800 cone crusher
Total amount of sand and gravel to be mined out (Section 97 1.c.C.(r))	Section 3.1	
Written security plan that identifies dangerous situation of areas, typical procedures to be used for monitoring the site during period of activity and also when activities are suspended (Section 97 1.c.C.(s))		Daily FLHA see attached
Methods to be used to restrict public access, to protect wildlife and neighboring livestock (Section 97 1.c.C.(t))	Section 3.9	
The days and hours of operation for each activity and any known or regular periods of inactivity (Section 97 1.c.C.(u))	Section 3.1	
Location of the nearest city, town, village, or summer village and its distance from the proposed pit (Section 97 1.c.C.(v))	Section 1.2	
Provide the name, address and telephone number of any landowners or occupants which are affected by the proposed development, namely those landowners of occupants within TWO 92 kilometers (1.24 miles) of the proposed development and those whose residences are located on a haul route (Section 97 1.c.C.(w))		Not Applicable
Provide a list of emergency contact personnel to the County for the pit operation, both during active times, when the pit operation is suspended and during final Reclamation provide a list of emergency contact personnel to the county for the pit operation , both during active times, when the pit operation is suspended and during final Reclamation (Section 97 1.c.C.(x))		Office 780 987 5221 President John 780 940 5283 Foreman Gary 780 777 7406
D. Setback and Screening		

Written consent from all pipeline and right of way holders with in the pit or within the vicinity of the pic (Section 97 1.c.D.(a))		No pipelines/ Right-of-way
Details of the screenings and landscaping - the location and area of native vegetation that will remain undisturbed (Section 97 1.c.D.(b)(i))	Appendix A Figure 2	
Details of the screenings and landscaping - the location and design and of any visual barriers to be constructed by the Applicant, such as fences or berms (Section 97 1.c.D.(b)(ii))	Appendix A Figure 2	
Details of the screenings and landscaping - the location and area where the Applicant will plant vegetation and trees (Section 97 1.c.D.(b)(iii))		Land is to be used Agricultural Purposes
Details of the screenings and landscaping - details on any other measures to be taken by the Applicant (Section 97 1.c.D.(h)(iiv))		
E. Transportation of Aggregate On or Off-site		
A description of the shortest and most desired route from the proposed pit to a processing area, if off-site or from another site to the processing area if being transported on-site, and to the nearest provincial roadway within a suitable access to accommodate projected traffic from the proposed development (Section 97 1.c.E.(a))	Section 3.3 & Section 3.5	
Include site plans showing the proposed haul roads (Section 97 1.c.E.(b))		No permanent haul roads as excavation progresses through property
Description of plans for removal of internal roads, fences and barriers or any internal roads that may be left (Section 97 1.c.E.(c))		No internal roads left according to reclamation plan
Details of the dust control measures to be implemented including the suppressant materials or methods to be used on the haul roads and the estimated frequency for the including the suppressant materials or methods to be used on the haul roads and the estimated frequency for the application (Section 97 1.c.E.(d))	Section 3.7	
Provide details on whether the haul route is on a school bus route and the anticipated amount of traffic increase (approx. number of trucks per day) (Section 97 1.c.E.(e))		As per Road Agreement with Parkland County RR 51
Submit a report on the proposed haul route or haul routes anticipated generation of motor vehicle traffic on a daily, weekly or monthly basis (Section 97 1.c.E.(f)(i))		As per Road Agreement with Parkland County RR51
Number of vehicles that will be used in the hauling of materials and the proposed hauling route to and from site (Section 97 1.c.E.(f)(ii))		As per Road Agreement with Parkland County RR51
Access locations to and from the site, including municipal roads and highways (Section 97 1.c.E.(f)(iii))	Section 3.5	

Provide a description of roads constructed within the site that are required for the operation of pit (Section 97 1.c.E.(f)(iv))		Temporary road as per Development of Gravel Pit
Describe any road construction or road upgrading that is necessary to access the pit's working area (Section 97 1.c.E.(f)(v))		Via Range Road 51
Provide information on whether haul routes have been established and agreed to (Section 97 1.c.E.(f)(vi))		As per Haul Agreement Park Land County Range Road 51
Provide information on the number of gravel trucks that will be operating and whether the number has been agreed to (Section 97 1.c.E.(f)(vii))		As per Haul Agreement Park Land County Range Road 51
Has a traffic impact assessment been undertaken and implemented to address potential traffic issues (Section 97 1.c.E.(f)(viii))		As per Haul Agreement Park Land County Range Road 51
Will moratorium be placed on hauling during spring road bans (Section 97 1.c.E.(f)(ix))		No road bans Range Road 51 Parkland County
A Traffic Impact Assessment (TIA) shall be prepared by a qualified professional and submitted to Lac Ste. Anne County where the expected volume of the development exceeds 1500 tonnes per day (Section 97 1.c.E.(g))		As per Haul Agreement Park Land County Range Road 51
Traffic impact assessment shall address cumulative impacts through the inclusion of anticipated traffic levels from other resources extraction uses (Section 97 1.c.E.(h))		As per Haul Agreement Park Land County Range Road 51
F. Ground Water		
An analysis of the potential for adverse impact on surface and ground water aquifers and water wells as a result of the extraction and Reclamation (Section 97 1.c.F.(a))	Section 2.2 and Appendix D	Water well drilling report found in Appendix D
The quantity and quality of well water and soil tests for the systems that may be used in conjunction with the proposed development (Section 97 1.c.F.(b))	Section 2.2 and Appendix D	Water well drilling report found in Appendix D
A hydrogeology report shall be prepared by a professional engineer (Section 97 1.c.F.(c))	Section 2.2	Hydrogeology addressed as part of Code of Practice/ EPEA Application
G. Surface Water		
The storm drainage plan including surface and groundwater management measures, and direction of drainage (Section 97 1.c.G.(a))	Appendix D Figure 2	
A description of the current surface drainage patterns on the site and the anticipated drainage patterns once the Reclamation is complete (Section 97 1.c.G.(b))	Appendix D Figure 2	
H. Noise		
Acoustic mapping of the site (Section 97 1.c.H.(a))		Discussion with Matthew Ferris and January 5 th , 2016

		Acoustic information letter
A description of measures to be taken to minimize noise, dust, and other disturbances to neighboring properties (Section 97 1.c.H.(b))	Section 3.6	And January 5 th , 2016 Acoustic Information Letter
An acoustic mapping including a written assessment and shall include a description of mitigation measures that will be implemented as part of the overall resource extraction operation to reduce acoustic impacts on adjoining land uses including country residential and urban neighborhoods (Section 97 1.c.H.(c))		And January 5 th , 2016 Acoustic Information Letter
Confirmation that any crusher located in the site shall be located at the bottom of the excavation area and shall be located so that any muffler located on the crusher is pointed towards the wall of the excavation area (Section 97 1.c.H.(d))		And January 5 th , 2016 Acoustic Information Letter
I. Dust		
Details of the dust control to be implemented, including the suppressant materials or methods to be used on the pit floor and on stockpiles located on the site and the estimated frequency for the application (Section 97 1.c.I.(a))	Section 3.7	
J. Other		

Application for Discretionary Aggregate Resource Extraction or Aggregate Resource Processing Use

Plus all of the above

	Page or Appendix	Notes
An explanation of the intent of the project (1.(a))	Section 1.1	
The features of the project, which make it desirable to the general public and Lac Ste. Anne County. This is to include an evaluation of how the project may contribute to the present and projected need (1.(b))		Estimated Extraction Fee Lac Ste. Anne 3-5 Million in revenue
An economic analysis of the proposal's anticipated economic impact on the municipality (1.(c))		Possible Employment for residents
An Environmental Impact Assessment report prepared by a qualified professional (1.(d))		Is the county requiring and EIA when the EPEA Registration for a code of Practice does not
Information related to the source of Aggregate for processing, including projected volumes from on and off-site that will be processed on the site (1.(e))	Section 3.1	No off-site Material
Any other pertinent information or tests required by the Development Authority respecting the site of adjacent lands (1.(f))		Would need to specify "other required "
Such additional requirements as are determined necessary by the Development Authority having regard to the nature of the proposed development and the surrounding use(s) which may be effected (1.(g))		Would need to specify "other required "
If it is processing a development permit application for an extension for a discretionary use determine that the application information submitted with the original development permit application in the whole or in the part satisfies the application requirements for the development permit for the extension (1.(h)(i))		Not Applicable
Determine that additional information shall be submitted for the development permit for the extension, even if such information was not required for processing the original development permit application (1.(h)(ii))		Not Applicable
Open House & Communications		

<p>The Applicant for the discretionary use will be required to conduct a minimum of one open house prior to consideration of the initial permit application for the discretionary use by the Development Authority. The open house shall provide for opportunities to discuss and address issues related to the development. The Development Authority may require the Applicant to conduct further open houses until satisfied that the issues related to the development have, in the Development Authority's determination, been appropriately addressed (1)</p>	<p>Appendix D</p>	
<p>The applicant shall keep records from the open house and submit a report to the Development Authority which shall include the following information and address the following issues location and time of open house (2.(a))</p>	<p>Appendix D</p>	
<p>How many people attended and the issues that are brought forward (2.(b))</p>	<p>Appendix D</p>	
<p>How will the pit operator mitigate legitimate concerns brought forward (2.(c))</p>		<p>Maintain open lines of communications with the residents and concerned individuals</p>
<p>Whether the proposed pit will affect any site rights of way, i.e power lines, pipelines, gas co-ops etc (2.(d))</p>		<p>No Right-of-Ways to deal with</p>
<p>Location and hours of operation of a visitor's area, where visitors can visit the operation when it is operating and observe the operation for their own benefit (2.(e))</p>		<p>No visitors area, should visitors want to observe the operation they should contact John Thomas prior</p>
<p>Whether the sand and gravel development conflicts with other land uses, long term priorities for the community, and if so, what measures will be implemented to minimize these conflicts (2.(f))</p>		<p>Discussion with the parties affect and work together to resolve development conflicts</p>
<p>Confirmation on whether or not all residents directly affected by the proposed resource exaction use (those adjacent and within 2 Kilometers (1.24 miles) if the resource extraction site) have been personally interviewed and or notified in writing on the intent to develop the site (2.(g))</p>		<p>Open House and Hand delivered notice letters to all residents</p>
<p>Are there plans laid out for directly affected residents to be notified prior to activation of pit operations (2.(h))</p>		<p>Another open house will be held once Development Permit Issued</p>
<p>Have on or more open houses been held in the community (2.(i))</p>		<p>An open house was held at the start of the process on Development Permit and one is to be held after</p>
<p>Has input from citizens been integrated into the proposal for a development permit (2.(j))</p>		<p>Yes</p>
<p>Are there provisions for affected residents to be consulted (on an annual basis) throughout the lifespan of the sand and gravel operation (2.(k))</p>		<p>Yearly contact with Affected Residents Contact President John Thomas 780 940 5283</p>

The county shall notify landowners within 400 meters of all new proposed long term haul routes on County roads identified at the development permit application stage required to service a new Aggregate Resource Extraction site (2.(1))

Not Applicable

FIELD LEVEL HAZARD ASSESSMENT CARD

COMPANY NAME: _____
 PROJECT: _____
 DATE: _____

"Hazard" means the situation, condition or behaviour that has the potential to cause an injury or loss. Hazards are commonly divided into two categories.

- Health Hazard: a physical, chemical or biological hazard
- Safety Hazard: a substance, process, action or condition which may endanger the immediate safety of a person, property, or the environment.

Hazard Assessment Legislation

An employer must assess a work site and identify existing and potential hazards before work begins at the work site or prior to the construction of a new work site. The hazard assessment must include methods to control or eliminate the hazards identified. It is recommended that the hazard assessment is done daily and when work changes. The Hazard Assessment must be reviewed by all workers affected by the hazards.

Risk = Probability x Severity

#	H Probability				L
	1	2	3	4	
1	A	A	B	C	
2	A	B	C	C	
3	B	C	C	D	
4	B	C	D	D	

A = High B = Medium C = Low D = Very Low



Developed by Safety Ahead Ltd.
 780.473.4772 © 2014
 safetyahead.ca

**THINK SAFE... THINK AHEAD
HAZARD ASSESSMENTS**

Below is a list of possible hazards or awareness items you may encounter doing your task(s), and in other work areas or with other contractors on site. Please place a mark in the box for all applicable hazards and discuss each with your work team. The risk level, description of the hazards, and the hazard controls **MUST** be noted on the back of this card with a strategy on how you plan to eliminate or control the hazard. If your environment changes, update the Hazard Assessment and review with the work team.

WORKERS

- 1. Arc Flash
- 2. Awkward/Extension/ Twisting of Body
- 3. Body in Line of Fire
- 4. Fatigue/Stress/Medical Conditions/ Unfit for Work/Limitations
- 5. Heavy Manual Lifting/ Overexertion/ Repetitive Motions/ Vibration
- 6. Inexperience/ New Worker
- 7. Other Trades in Area/ Out of Sight
- 8. Shock / Exposure to Electrical Hazards
- 9. Training Requirements Incomplete/ Expired
- 10. Working Alone
- 11. Working at Heights/ Elevated Work
- 12. Working in Restricted/ Confined Areas
- 13. Working Near Power Lines
- 14. Other:

HAZARD ITEMS

- 40. Access/ Egress/ Gates/ Driving/ Speed Limits/ No Road
- 41. Adequate Braces and Support
- 42. Airborne Particles/Fumes/vapours/Chemicals
- 43. Asbestos/ Silica
- 44. Barricades/ Ribbon Off Area
- 45. Biohazards (Blood, Body Fluids, etc)
- 46. Confined Space Entry/ Enclosures/ Narrow Area
- 47. Drowning/ Engulfment/ Trapped
- 48. Dust/ Lead Dust/ Insulation Particles
- 49. Eye/ Face/ Foot/ Hand Hazards
- 50. Exposed Rebar/ Nails/ Protruding or Stationary Objects
- 51. Extreme Ambient Temperatures/ Fire/ Burns
- 52. Falling/ Dropping Objects
- 53. H2S/ Gases/ Steam/ Pressure
- 54. Low Light/ Lasers
- 55. Manholes/ Water Ponding
- 56. Metal Finishing/ Sharp Objects
- 57. Noise Levels
- 58. Open Excavation/ Trenching/ Sloped Cave-In
- 59. Overhead & Suspended Loads
- 60. Poor Housekeeping/ Flying Debris
- 61. Ramps/ Sidewalks/ Walkways
- 62. Rigging
- 63. Roof/Floor Openings
- 64. Scaffolds
- 65. Slips/Trips/Falls (Detailed Description)
- 66. The Oil Pointers/ Anchor Points
- 67. Underground Utilities/ Locates
- 68. Waste/ Disposal
- 69. Weather/ Wind/ Heat/ Rain/ Snow/ Road Conditions
- 70. Wild Animals/ Pets/ Insects
- 71. Other:

TOOLS AND EQUIPMENT

- 15. Aerial Lift/ Scissor Lift/ Man Lift
- 16. Air/ Hydraulic Tools
- 17. Contact with moving/ Rotating Equipment parts
- 18. Electrical Tools/ Equipment
- 19. Forklifts/ Zoom Booms
- 20. Generators
- 21. Guards/ Protectors
- 22. Ladders/ ladders/ ladders etc
- 23. Mechanical Equipment
- 24. Pinch Points
- 25. Pre-Use Inspection
- 26. Proper Power Supply/ Extension Cords
- 27. Tools and Equipment Use/Storage
- 28. Traffic and Moving Equipment/ Caught Between
- 29. Other:



Discuss Awareness Items at Safety Meeting
Mark Either a ✓ or an x in the Boxes Below

AREA AWARENESS

- One Call/ All Buried Utilities Located
- Emergency Response Plan Reviewed
- Emergency Phone Numbers Available
- Emergency Access Routes Clear in Place
- Muster Point Location
- Other Muster Point Location
- Fire Extinguishers Location
- Fire Plan Reviewed
- First Aiders on Site

Name: _____ Ph: _____

Name: _____ Ph: _____

- First Aid Room Location
- First Aid Kit/ Eye Wash/ Safety Shower Location
- Site Specific Fall Protection plan developed and reviewed

PERSONAL PROTECTIVE EQUIPMENT INSPECTED DAILY

- CSA-Approved: Hard Hats Safety Boots Safety Glasses
- Safety Traffic Vests Fire Retardant Clothing
- Fall Protection: Harnesses Lanyards Anchor Points
- Respiratory: Dust Masks Respirators
- Fit Test Complete
- Specialized PPE: List

MOTOR VEHICLE INSPECTION

Vehicle ID/Unit #	1	2	3	4	5
Walk around Check					
<input type="checkbox"/> Clear of obstacles					
<input type="checkbox"/> Body/ Exterior Damage					
<input type="checkbox"/> Head/ Brake Lights					
<input type="checkbox"/> Turn Signal/ Other Light					
<input type="checkbox"/> Back Up Alarm/ Lights					
<input type="checkbox"/> Tires: Wear & Inflation					
<input type="checkbox"/> Leaking Fluids					
<input type="checkbox"/> Fire Extinguisher					
Maintenance Required?	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
Initials:					

Reviewed Safe Work Practice, Safe Job Procedure, or relevant safety topic? Yes No Plans or Permits required for this Work? Yes No List: _____

END OF SHIFT / JOB REVIEW (date or revised date)	Yes	No	1	2	3	4	5
Work area is cleaned up -			1	2	3	4	5
Permits in place / closed -			1	2	3	4	5
All barricades and signage in place -			1	2	3	4	5
Any injuries this shift -			1	2	3	4	5
All hazards controlled -			1	2	3	4	5

COMPLIANCE REVIEW QUESTIONS

(To be completed by Management or Supervisor)

1. Is the Hazard Assessment current and valid for the work being performed? Yes No
If no, what action was taken?
Comments

2. Have the hazards been identified? Yes No
If no, what action was taken?
Comments

3. Are the proper controls identified and actively in place?
Yes No
If no, what action was taken?
Comments

4. Are the identified hazards rated properly for the work being performed? Yes No
If no, what action was taken?
Comments

5. Do the workers demonstrate a thorough understanding of the Hazard Assessment, and have accurately described their work? Yes No
If no, what action was taken?
Comments

Completed FLHA Review rating
Excellent Acceptable
Coaching Applied Work Stopped

Date: _____ Time: _____

Supervisor (Print) _____

Worker (Print) _____

Name: _____ Company Name: _____ Project/Area: _____ Location/Job#: _____
 1 Date: _____ 2 Revised Date: _____ 3 Revised Date: _____ 4 Revised Date: _____ 5 Revised Date: _____

1 DESCRIBE THE WORK IN DETAIL:

2 WORK SITE HAZARDS: Perform a walk through and identify the hazards in the work area. 3 WORK HAZARDS RELATED TO THE WORK PROCESS - Hazards associated with the work.

P 1 ITEM # OR TASK	DESCRIBE THE HAZARD	CONTROLS

1 = Date or Revised Date (P) = Priority **A** - High **B** - Medium **C** - Low **D** - Very low

JHA Completed/Reviewed: Yes No MSDS Reviewed: Yes No Pre-use inspection on equipment performed: Yes No All damaged equipment Lock-out / Tag out: Yes No
 List all Required PPE: Hard Hat Safety Glasses Approved Boots Hi-Vis Clothing Gloves Other PPE: _____

A Meeting must be held with every worker affected by the hazards and workers must print and sign their names below (This includes other Contractor's employees)

	WORKER		WORKER		WORKER	
	PRINT / SIGN	PRINT / SIGN	PRINT / SIGN	PRINT / SIGN	PRINT / SIGN	PRINT / SIGN
1				5		7
2				6		8

Supervisor Signature: _____ Management Review Signature: _____



Notification Letter and Notice of Decision

Date: Nov 7, 2018

Permit Number: 193193-16-D0012

File Number: 5305353001,

5305352001, 5305351001, 5305362001,

5305363001, 5305363002

To: 214131 Enterprises Ltd.

This information
This information
This information
This information
This information
Private (FOIPA)

Gravel Extraction and Crushing
New Construction

Re: Decision of the Municipal Planning Commission

Property Address

Long Legal

Lot, Block, Plan

SE 35-53-05 W5M

SW 35-53-05 W5M

NW 35-53-05 W5M

SW 36-53-05 W5M

NW 36-53-05 W5M

NW 36-53-05 W5M Fr.

Dear Sir or Madam:

Please be advised that Development Permit Application for a Gravel Extraction and Crushing under application #193193-16-D0012 was **Approved With Conditions** on Nov 7, 2018.

If as the applicant or landowner you are unsatisfied with the conditions attached to this decision you have 21 days from the date of issuance to appeal the decision to the Subdivision and Development Appeal Board. The appeal deadline is Nov 28, 2018. This application was **Approved With Conditions** as a Agricultural '1' District.

The 21 day appeal period, from Nov 7, 2018 (Notice Of Decision Issue Date), must lapse before this Development Permit becomes effective.

If you have any questions or concerns regarding the Development Permit please contact the undersigned at (780)785-3411.



THIS DOES NOT GIVE YOU PERMISSION TO START CONSTRUCTION. PLEASE OBTAIN A BUILDING PERMIT FROM LAC STE. ANNE COUNTY PRIOR TO COMMENCING ANY CONSTRUCTION ON THE SITE. HOWEVER, IF THERE IS NO STRUCTURE PLANNED TO BE BUILT OR MOVED ONTO THE SITE YOU MAY PROCEED WITH YOUR DEVELOPMENT.

Yours truly,

This information
This information
Private

Tanya Vanderwell, Development Officer
Municipal Planning Commission
Planning & Development Department
Lac Ste. Anne County

Discretionary
Permit

The personal information provided as part of this application is collected under Sections 303 and 295 of the Municipal Government Act and in accordance with Section 32(c) of the Freedom of Information and Protection of Privacy Act. The information is required and will be used for issuing permits, Land Use Bylaw enforcement and property assessment purposes. The name of the permit holder and the nature of the permit are available to the public upon request.

If you have any questions about the collection or use of the personal information provided, please contact Lac Ste. Anne County FOIP Coordinator at Box 219, Sangudo, AB T0E 2A0 or phone 1-866-880-5722 or (780) 785-3411.

Development Permit

Permit No.: 193193-16-D0012
File Number: 5305353001, 5305352001, 5305351001, 5305363001, 53
Application Date: Feb 8, 2016
Issued Date: Nov 28, 2018

Applicant	214131 Enterprises Ltd.	3rd Party	Owner
Name:	214131 Enterprises Ltd.	Name:	Ramher Kim & Barb
Address:	This information has been redacted as per the Access to Information Act.	Address:	This information has been redacted as per the Access to Information Act.
Phone:	This information has been redacted as per the Access to Information Act.	Phone:	This information has been redacted as per the Access to Information Act.
Cell:	This information has been redacted as per the Access to Information Act.	Cell:	This information has been redacted as per the Access to Information Act.
Fax:	This information has been redacted as per the Access to Information Act.	Fax:	This information has been redacted as per the Access to Information Act.

Property Address	Long Legal	Lot, Block, Plan
	SE 35-53-05 W5M	
	SW 35-53-05 W5M	
	NW 35-53-05 W5M	
	SW 36-53-05 W5M	
	NW 36-53-05 W5M	
	NW 36-53-05 W5M Fr.	

Proposed Use	New Construction
Gravel Extraction and Crushing	

Fees	Gravel Pit/Granular Extraction of any kind	\$0.00
	\$50,000.00	
Total Permit Fee:	\$50,000.00	Permit Fee Balance: \$0.00

Permit Conditions

CONDITIONS

NOTE: References to County refer to Lac Ste. Anne County.

Conditions for Aggregate Resource Extraction or Processing Applications

General

1. Failure to conform to the conditions of a development permit will render the permit null and void.
2. Prior to construction or commencement of any development, the Owner/Applicant or contractor is responsible to obtain building, electric, plumbing, sewage, and gas permits, if required. Permits must be obtained from Lac Ste. Anne County. The Applicant is required to consult with the permit issuer to ensure that there are no conflicts between homeowner/contractor permits and the person(s) responsible for performing the actual work.

3. The Applicant shall be responsible for obtaining and complying with any required permits from federal, provincial, or other regulatory bodies. The Applicant shall also be responsible for complying with the condition of any easement, covenant, building scheme, or development agreement affecting the site.
4. This decision to require the structure be completed within two years from the date of issuance; if this decision is appealed (to Subdivision and Development Appeal Board {SDAB} or Municipal Government Board {MGB}), any new decision will be valid for two years from the date of same (SDAB decision or MGB order).
5. All development shall be landscaped and graded in a manner that all surface run-off is either contained on-site, or public drainage system (i.e., a municipal ditch). Any changes to drainage shall require Water Act Approval from Alberta Environment.
6. Any field work or construction undertaken prior to the effective date of the development permit is at the risk of the Owner(s)/Applicant(s).
7. Any changes, amendments, or additions to this development permit shall require a new development permit application, including but not limited to an expansion or intensification of the use.
8. The proposed development shall be sited and conform to all building setbacks as shown on the submitted drawing, shall not be moved or enlarged except where authorized and conform to all building setbacks as required as per the Land Use Bylaw requirements:
Agricultural 1 (AG1)
FRONT 40.0 m (131.23 ft.)
REAR 40.0 m (131.23 ft.)
SIDE 40.0 m (131.23 ft.)
9. The Applicant shall ensure that all aspects of the extraction and reclamation operation take place in full compliance with the approved application and with an approved reclamation plan.
10. The Applicant shall ensure that all aspects of the extraction and reclamation operation take place in full compliance with any requirements or recommendations contained within any professional's report submitted as part of this development permit, including but not limited to, a hydrogeology report, surface water report, noise impact report, traffic impact report, and environmental impact assessment.
11. The Applicant shall pay to the County all costs incurred in reviewing the development permit application and ensuring compliance with the same, including but not limited to compliance with the activities plan and reclamation plan. Further details of cost recovery may be outlined in the development agreement or aggregate haul agreement.
12. The aggregate extraction site including processing, reclamation or other areas involving related activities may be subject to inspection at any time deemed necessary by the County.
13. The County or its agents shall have the right to inspect the Applicant's operations to ensure compliance with the development permit, aggregate haul agreement, and development agreements and impose the costs for the audit on the Applicant if it is found that the Applicant did not provide accurate or complete information including aggregate levels.
14. Aggregate extraction shall not take place on any area designated with a reserve caveat placed by the County.
15. No more than two (2) portable crushers can be active on site at any time.

16. Crushing and Processing for the development must occur along the most southern property lines in Lac Ste. Anne County, shown as Mining Block 24-35 as shown Operations and Mining Plan - Figure 3.

Hours of Operation

17. Hours of operation for aggregate resource extraction shall be as follows:
 - a. 6:00 a.m. to 6:00 p.m. Monday through Friday.
 - b. 8:00 a.m. to 4:00 p.m. Saturday.
 - c. Shall not operate or haul on Sundays and Statutory Holidays (including but not limited to, New Year's Day, Alberta Family Day, Good Friday, Easter Monday, Victoria Day, Canada Day, Heritage Day, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day and Boxing Day), unless prior approval has been obtained from the County.
18. The hours of operation for a crushing plant should be determined as follows:
 - a. 7:00 a.m. to 7:00 p.m. Monday through Friday.
 - b. Hours listed in Condition 18.a. may be extended and/or amended on a case by case basis/site specific project for a maximum of ten (10) weeks per year. Application for request must be received one (1) week prior to required date, upon site inspection and approved in writing by Public Works and notification to directly adjacent landowners.

Duration

19. All work for the development that is the subject of a development permit shall be commence within twenty-four (24) months of the effective date of the development permit and/or all regulatory approvals, whichever comes last.
20. The development permit shall expire five (5) years from the date all regulatory approvals are issued. All extraction activity, excluding reclamation work, must cease upon the expiration of the development permit, unless a new development permit has been applied for and approved by Lac Ste. Anne County. Final reclamation work of grading and seeding must be completed within the greater of one (1) year of all extraction activities ceasing on the site, or one (1) year from the expiry of the development permit. This deadline does not apply if an application has been made and a development permit approved for the continuation of extraction activities on the site.
21. The Applicant is advised that any application for an extension of the aggregate resource extraction operation beyond the term of the development permit is subject to review by the Development Authority, who shall be notified in writing of any request for an extension. Such requests shall be accompanied by the appropriate development permit application fee, if required. It is expected that any request for an extension shall be made no less than six (6) months prior to the expiry date of this development permit.
22. Notwithstanding the above, where the submitted and approved activities plan and reclamation plan for the aggregate resource extraction or aggregate resource processing use evidence that the aggregate resource extraction or aggregate resource processing use will cease within five (5) calendar years from the date when an application for a development permit for a new residential use within a Country Residential District is submitted, the requirement for a restrictive covenant may be waived.

Reclamation and Restoration

23. The Applicant shall obtain necessary approvals for the restoration plan with detailed site plans for implementation, and establish necessary agreements with other parties for any off-site wetland compensation.

24. The Applicant shall provide the County with copies of any and all plans and reports on wetland compensation required by and submitted to Alberta Environment and Parks (AEP). The plans and reports shall be submitted to the County concurrently with the submission of reports to AEP.
25. The Applicant shall ensure the final completion of reclamation of the site within one (1) year of extraction operations ceasing in the open pit area and completion of restoration of environmental features in a phased approach within two (2) years. In this regard, the Applicant shall:
 - a. Obtain development and reclamation registration from Alberta Environment and Parks (AEP), including the provision of security to the satisfaction of AEP for a Class I pit, if applicable; and
 - b. Upon satisfactory completion of reclamation on-site, the Applicant shall obtain a reclamation certificate from AEP and provide a copy of the same to the County for a Class I pit.
26. If operations of the aggregate resource extraction use are abandoned prior to the expiration of the development permit, the Applicant shall complete the reclamation of the site in accordance with the reclamation plan within one (1) year of the abandonment of the operations on the site. For the purposes of this condition, the operation of the aggregate resource extraction use shall be deemed to be abandoned if the Applicant fails to haul aggregate from the site for a period of more than two (2) years.

Operations, Safety, and Emergency Response Plan

27. The Applicant shall provide a copy of the Emergency Response Plan for the site prior to commencing extraction activity. The Emergency Response Plan shall comply with the requirements of this Bylaw to the satisfaction of the County's Director of Emergency Management.
28. The Applicant shall install, at the Applicant's sole expense, appropriate signage on and near the site that, in the sole discretion of the County, is required for public safety, which includes, but is not limited to, "TRUCKS TURNING" signs and "DANGER OPEN PIT" signs. The location of any such signs shall be approved by the County and the sign shall be of a professional grade as approved by Alberta Transportation. At minimum signs shall be located at access points throughout the development and minimum one (1) per half mile.
29. The Applicant shall remove all garbage, waste, recyclables, and used oil from the lands and dispose of such materials in an approved disposal facility. The Applicant shall keep the lands in a clean and orderly manner, at the Applicant's own expense including, but not limited to, ensuring appropriate waste receptacles are located on the lands, that no garbage or waste is imported onto the lands, and that any trees that may be required to be removed from the excavation site are properly piled.
30. The Applicant shall supply, at the Applicant's own expense, portable commercially serviced toilets to be used on the lands during the entire term of the development permit.
31. No highly explosive materials used for blasting shall be used or stored on the premises. No activity shall be allowed that would interfere with radio or television in the area, nor there be any offensive odour, heat, or glare noticeable at or beyond the property line.
32. Only CSA-approved double-walled fuel containment vaults shall be allowed on-site at any time.
33. Secondary containment, not less than 100% of the largest container, shall be provided to all areas where lubricating oil is stored on-site.

Security

34. All arrears including property taxes that may be owed by the Applicant to the County are to be paid in full.
35. All costs incurred by the County Reclamation Officer shall be the responsibility of the Applicant;
36. At no time shall the County be liable for any actions of the operation, and no cost shall be incurred by the County.
37. The Applicant shall assume all liability for all damages to persons and property of all kinds or in any way due to the operation whether the same has been negligently operated or not.

Screening

38. Applicant shall provide berms directly adjacent to roadways, on terms acceptable to the Development Authority or as outlined in an approved reclamation plan. The berms shall be constructed prior to any mining within 50 metres of south property line of NW 36-53-05 W5M and NW 36-53-05 W5M as highlighted with Red X marks on Appendix A – Figure 3.

Transportation of Aggregate Off-Site

39. The Applicant shall enter into and abide by the provisions of a Development Agreement and/or an Aggregate Haul Agreement with Lac Ste. Anne County with terms to the satisfaction of the County. The agreement shall include but not limited to, the following:
 - a. Dust control measures and road maintenance;
 - b. Security requirements;
 - c. Signage;
 - d. Hours of operation for hauling;
 - e. Haul routes, which may differ between routes for empty trucks as opposed to routes for loaded trucks;
 - f. Haul routes that require paving and the time from issuance of a development permit for all paving to be completed;
 - g. Maximum truck numbers and volume;
 - h. All trucks to be clearly marked to the satisfaction of the Community Peace Officer;
 - i. All information that verifies the details in the aggregate shipped tonnage roll for the lands;
 - j. Tonnage of aggregate stockpiled on the lands or elsewhere;
 - k. Tonnage of aggregate removed from the lands; and
 - l. Regular gravel truck counts to the County for every vehicle once every quarter, in a manner suitable to the County, during the operation of the pit.
 - m. All approaches within the County shall be blocked to ensure road use is located through specified Haul Route within Parkland County.
40. The Applicant shall not undertake any work, construction on the lands, or commencement of excavation work on the site, including grading, prior to entering into a Development Agreement and/or Aggregate Haul Agreement with the County.
41. The Haul Route may be amended from time to time, when in the opinion of Lac Ste. Anne County, the circumstances warrant the Haul Route Agreement to be amended.
42. The Applicant shall, prior to undertaking any work on county roads, obtain the consent of the County to do such work. This shall include but shall not be limited to the installation of signage on County road right-of-ways.

43. An aggregate extraction or processing operation shall not create vehicle or pedestrian traffic that would be disruptive to the receiving parking area.
44. The Applicant shall obtain approval from Lac Ste. Anne County for the location of any and all accesses to the development, and any and all accesses approved shall be constructed to the standards and specifications of the County, at the Applicant's sole expense. Any and all accesses constructed by the Applicant are subject to inspections by the County, at any time during regular business hours, to ensure compliance with the County's standards and specifications.
45. The Applicant shall ensure that no vehicle accessing the site shall be permitted to park on any municipal road and ensure no loading or unloading of equipment or materials shall occur on the municipal road network. In this regard, an on-site parking area shall be provided to accommodate all vehicles waiting to load materials.
46. The Applicant shall ensure that no gravel trucks enter or exit the lands when a school bus is within 300.0 m (984.25 ft.) of the access to the lands.

Surface Water

47. The Applicant shall ensure that the development does not cause any adverse drainage impact on adjacent properties or flooding of nearby ditches in excess of their capabilities.
48. All portions of the site that will not be excavated shall be landscaped in a manner that all surface run off is contained on-site, unless *Water Act* approval has been granted stating otherwise. Portions of the site that will be excavated shall be landscaped in accordance with the reclamation plan. The reclamation plan shall detail how surface run-off will be managed.

Groundwater

49. The Applicant shall ensure that the development does not cause any adverse groundwater impacts on adjacent existing water users, aquifers, or the natural environment.

Noise

50. The Applicant shall preserve all existing stands of trees and shrubbery outside of the development area for environmental and sound attenuation purposes as shown on Appendix A - Figure 3 – Operations and Mine Plan of submitted application.
51. The Applicant shall adopt a purchasing policy that includes consideration of noise attenuation for all new plant equipment.
52. The Applicant shall undertake all noise mitigation measures specified in the Aggregate Haul Agreement, which should include:
 - a. Avoid unnecessary revving of engines, and power down or turn off equipment when not required;
 - b. Ensure plant and vehicles are properly maintained, and regularly checking silencers and bearings to ensure dust population is minimized; and
 - c. Use rubber linings where possible in chutes and dumpers to reduce impact of noise.

Vegetation Control

53. The Applicant shall ensure that weed and invasive species control measures are in place for the life of the pit, which shall be at the Applicant's sole expense. The Applicant shall work with Lac Ste. Anne County's

Agricultural Service Board to develop and implement an active weed control program for the development. The Applicant shall contact the County's Agricultural Services Manager or Assistant Agricultural Services Manager for guidance.

54. The Applicant shall ensure that the lands are seeded, and vegetation maintained, where possible, or planted, at the Applicant's sole expense, as required by the County. The Applicant may work with Lac Ste. Anne County's Agricultural Service Board to develop and implement a seeding and vegetation program for the development. The Applicant shall contact the County's Agricultural Services Manager or Assistant Agricultural Services Manager for guidance.

Dust

55. The Applicant shall ensure that all extraction activities be carried out so as to create a minimum of dust, noise and environmental disturbance. The Development Authority may, in its sole discretion, require the implementation of administrative controls to minimize the impact of noise and dust beyond the property lines of the site.

Monitoring and Reporting

56. A monitoring and mitigation plan or Environmental Management Plan (EMP) shall be implemented based on the recommended monitoring and mitigation measures outlined in the Environmental Impact Assessment and supporting environmental studies. The EMP shall:
 - a. Be provided to the County within sixty (60) days of first phase developed in the County.
 - b. Provide a link between monitoring results and the implementation of mitigation or contingency measures if needed, including communication and reporting protocols;
 - c. Outline baseline environmental conditions pre-construction;
 - d. Provide guidelines for protection of groundwater and sensitive environmental features or wildlife;
 - e. Provide details of the monitoring measures, frequency, locations, and triggers;
 - f. Detail resulting contingency or mitigation measures and outline best management practices for operations to reduce potential for environmental issues.
57. An annual monitoring report shall be prepared for County review to be submitted annually after December 31, including:
 - a. Summary of monitoring results;
 - b. Assessment of impacts;
 - c. Compliance with conditions of approval;
 - d. Recommended changes to monitoring and mitigation measures or locations; and
 - e. Summary of any complaints received and follow-up actions
 - f. Status of current project and existing approvals status.

Other Approvals

58. Approval of this application does not excuse the Applicant from ascertaining and complying with the requirements of any federal, provincial, or municipal legislation including but not limited to legislation directed at protection of the environment, human health, and the management of hazardous waste and the reporting of hazardous spills or the condition of any easement, covenant, building scheme, or development agreement affecting the lands.
59. The Applicant must provide all required federal and provincial approvals to the County within thirty (30) days of approval, including but not limited to *Water Act*.

60. The Applicant shall notify the County within sixty (60) days if the Applicant applies for a change and/or if any change to any provincial approval related to the operation of the aggregate resource extraction use is approved by the Province.
61. Mining of any local roads will require the submission and approval of a Road Right of Way Access Agreement or a Road Haul Agreement as per Public Works.
62. Mining of any local undeveloped roads will require the reclamation of the right of way to a standard in which it could be developed in the future as per Public Works.

 This information
This information
provided as per
Issued by
Tanya Van der Weide, Development Officer
Municipal Planning Commission
Lac Ste. Anne County

Municipality
LAC STE. ANNE COUNTY
Box 219
56521 RGE RD 65
Sangudo, Alberta
T0E 2A0
Phone: (780)785-3411
Fax: (780)785-2985

Encl: SDAB Brochure



LEGEND

- Staging Block Location
- Change Buffer
- Existing Contour
- CU Classification Boundary
- Drainage Direction
- 400m Buffer around Residential Use
- Stages of Development
- Proposed POC Boundary (2023-09-04)
- 20m Levee Buffer

Staging Block Size	
Blocks 1, 2, 5	1.40 Ha/Block
Blocks 3, 4	1.17 Ha/Block
Blocks 6-139	Based on 130 m x 130 m 1.77 Ha/Block

T&T SAND AND GRAVEL LTD.
BAMBER #2 PIT EIA

OPERATIONS AND MINE PLAN

FIGURE 3.01E: OPERATIONS, 2023

Preparation/Date: UTM Zone 11 East 83

Scale: 1:5000

Project: Bamber #2
 Drawn by: JAC
 Checked by: AM
 Date: April 28, 2023

FIGURE 3



November 14, 2017

Opus Stewart Weir Ltd

P +1 780 410 2580

Matthew Ferris
Manager of Planning and Development
Lac Ste Anne County
4928 Langston Street
Box 219
Sangudo, Alberta T0E 2A0

Sherwood Park Office
Suite 140, 2121 Premier Way
Sherwood Park AB T8H 0B8
Canada

Ref: S-38679

Lac Ste Anne Development Permit Application Review - Bamber #2 Pit

Mr. Ferris,

As requested, a review of Millennium EMS Solutions Ltd.'s Development Permit Application for "Bamber #2" Pit Operations has been completed. Our comments are as follows:

For **Approval Purposes**, the general requirements are;

- Completion of a Biophysical Report.
- A Phase I ESA for the site/ Project location is recommended.
- The application or the plan(s) prepared in general accordance with the Code of Practice for Pits.
- Open house or public consultation event held with the neighbors and the respective communities that may have any concerns from the development.
- If wetlands are on the site, an appropriate wetlands assessment, and the need of compensation measures, if required, with notes/ comments from AEP.

Following, is a **Summary** for the Development Permit Application for Bamber #2 Pit *focusing on Environmental Concerns* after a thorough review of the application, A Guide to the Code of Practice for Pits, Lac Ste Anne County Development Permit Application Requirements and Lac Ste Anne County Bylaw #24-2014:

- Page 3 – **2.4 Surface Water**: Stated "No major waterbodies are located within the vicinity of the Pit." However, the following are not mentioned:
 - There are 4 Unnamed Creeks identified through FWMIS and are visible in aerial imagery. Are these waterbodies going to be avoided with a setback distance? Are they visible on site? Significance? Mitigative Measures? Is there the potential for adverse impacts on surface water because of extraction and reclamation? Site Plans (Figure 2 & 3) in the Appendix do indicate a Drainage Buffer near the southwest creek. It may be useful to get a bit more delineation of these aspects.
 - *Sensitive Areas* – Wetlands are identified through the AB Merged Wetland Inventory. No wetlands are mentioned in the report. If wetlands do exist on site, preliminary classification or any note on their significance would be beneficial. Water Act Approvals may be required at a later stage. If the wetlands are to be removed during mining, would they be reconstructed during the reclamation stage? Has a Wetland Assessment been completed?

- Has a Biophysical Assessment been completed for this Site? A Biophysical Land Use map would be beneficial to include in the Appendix as it would illustrate key important biophysical sensitivities for the Site prior to development, including any wetland features, key habitats and forested areas.
 - Our limited desktop search indicates that there are Marsh Class wetlands and 4 unnamed streams in the area (Waterbody IDs 43645, 43686, 43762, 43786). There appear to be no fish bearing waterbodies.
- Page 4 – 2.6 Wildlife: There is no mention of Species at Risk for the area. Has a FWMIS Search for Sensitive, May Be At Risk, and/or At Risk species been completed? This can be done through desktop research.
 - If tree clearing is to be done on site, mitigative measures for wildlife considerations around Restricted Activity Periods for nesting and/or denning, and the timing of construction and reclamation activities should be mentioned.
 - Our FWMIS desktop research identified American Kestrel, Great Blue Heron, Great Gray Owl, Least Flycatcher (All Sensitive), Canadian Toad (May Be At Risk) as well as Brook Stickleback, Fathead Minnow, Northern Pike, Spottail Shiner, Walleye, White Sucker and Yellow Perch (All Secure) within 5 km of the project area.

General Comments:

- Page 5 – 2.5 Vegetation: Missing a Reference? "or sensitive species were found ("
- Page 6 – 3.1 Proposed Pit Activities and Operations: This paragraph mentions Pit operations as per the agreement with Parkland County. Isn't the new Pit expansion within Lac Ste Anne County? Are the operating days/times the same? Is there an agreement with them, unless that is obtained following approval of the development permit application for the pit?
- The Reclamation Plan in Appendix A does not illustrate the location of waterbodies.

We hope this review is beneficial and provides the necessary feedback regarding environmental concerns and sensitivities for this Development Permit Application. Should you have any questions or concerns, please do not hesitate to contact our office.

Respectfully Submitted,

OPUS Stewart Weir

Prepared by:

This information redacted as per Protection of Privacy Act (POPA)

Sarah Wyllie, B.Sc., BIT, EPt, CESA
Environmental Technologist

This information redacted as per Protection of Privacy Act (POPA)

Kashif Sheikh, Ph.D., P.Biol., PWS
Technical Principal – Ecology, Wetlands and Biodiversity



6111 91 Street
Edmonton, AB T6E 6V6
tel: 780.496.9048
fax: 780.496.9049

Suite 325, 1925 18 Avenue NE
Calgary, AB T2E 7T8
tel: 403.592.6180
fax: 403.283.2647

#106, 10920 84 Avenue
Grande Prairie, AB T8X 6H2
tel: 780.357.5500
fax: 780.357.5501

toll free: 888.722.2563
www.mems.ca

12 June 2018

File #14-00001

Matthew Ferris
Manager of Planning and Development
Lac Ste Anne County
4928 Langston Street
Box 219
Sangudo, Alberta T0E 2A0

Mr. Ferris:

**Re: OPUS – Lac Ste Anne Development Permit Application Review
T&T Sand and Gravel - Bamber #2 Pit**

On behalf of 214131 Enterprises Ltd. (operating as T&T Sand and Gravel (T&T), Millennium EMS Solutions Ltd. (MEMS) is pleased to submit a response to the OPUS review and Supplemental Information Request (SIR) phrased as "*focusing on Environmental Concerns*".

Attached is the response to supplemental information requests by OPUS regarding the application made by 214131 Enterprises Ltd. Please note that 214131 Enterprises Ltd is the applicant of record, not MEMS, as indicated by the OPUS cover letter.

Also attached is the standalone document prepared for Lac Ste Anne County; the **Environmental Impact Assessment of the Proposed "Bamber #2" Pit Operations NW, SW & SE 35-053-05 W5M and NW & SW 36-053-05 W5M**. This includes a full figure set and reclamation plan, the permit conditions provided by Parkland County for the existing operations, the Wetland desktop report (including historical photographs), FWMIS and ACIMS searches, Wildlife Assessment Report and Hydrogeology Report.

Included in the Environmental Impact Assessment document is an individual assessment of the Biophysical components for the property including:

- Air Quality;
- Soil and Terrain;
- Vegetation, Rare Plants and Wetlands;
- Wildlife;
- Aquatic Resources; and
- Hydrogeology.

Each component has an assessment of the potential effects and impacts to the property that the project may have. As well as the recommended mitigation measures that would avoid, reduce or compensate for the environmental effects.

If any questions or concerns should arise, please contact the undersigned, at (780) 496-9048.

Yours truly,

Millennium EMS Solutions Ltd.

This information redacted as per
P t t i / f P i A t (POPA)
P t t i / f P i A t (POPA)
P t t i / f P i A t (POPA)
P t t i / f P i A t (POPA)
P t t i / f P i A t (POPA)

Grant Woynarowich, B.Sc., P.Ag.
Environmental Consultant

Enclosures

Supplementary Information Request

Page 3 – 2.4 Surface Water: Stated “No major waterbodies are located within the vicinity of the Pit.” However, the following are not mentioned:

- There are 4 Unnamed Creeks identified through FWMIS and are visible in aerial imagery. Are these waterbodies going to be avoided with a setback distance? Are they visible on site? Significance? Mitigative Measures? Is there the potential for adverse impacts on surface water because of extraction and reclamation? Site Plans (Figure 2 & 3) in the Appendix do indicate a Drainage Buffer near the southwest creek. It may be useful to get a bit more delineation of these aspects.

Drainage buffer (setback distance of a 6-meter vegetated filter strip (GoA 2017a) surrounding Unnamed ID 43762, and Unnamed ID 43645 has been incorporated into [Figure 2](#)). The operation will not directly disturb these two watercourses. The four unnamed creeks are ephemeral, un-classed, non-fish bearing drainages with no specified Restricted Activity Period (RAP).

Government of Alberta (GoA) 2017a. Buffer Zones for a Healthy Watershed. Revised July 20, 2017. Available online at: [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/irr6419](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/irr6419)

Mitigation measures regarding the four unnamed creeks and aquatic resources are as follows:

- Maintain vegetation within undisturbed portions of the project area;
- where appropriate use staked bales, or silt fencing as required before any stripping or excavation operations;
- soil stockpiles may be seeded with cover crop (if natural emergence isn't sufficient) to minimize erosion from cover crop;
- reclaimed landforms will be contoured with slopes less than 20:1 help to ensure erosion is minimized; and
- stabilise recontoured landforms with seeding mix.

The project area is well vegetated and existing vegetation will be maintained within the undisturbed portions of the Project area. Existing vegetation should intercept any potential sediments carried by overland flows. As detailed in section 3.8, the sequence of the gravel extraction would direct any overland flows back into the pit bottom and the active operations area. Here it will be handled as part of the internal pit water management where it would infiltrate the pit floor. Mitigation measures for impacts of aquatic resources are primarily concentrated in erosion and sedimentation controls.

- Sensitive Areas – Wetlands are identified through the AB Merged Wetland Inventory. No wetlands are mentioned in the report. If wetlands do exist on site, preliminary classification or any note on their significance would be beneficial. Water Act Approvals may be required at a later stage. If the wetlands are to be removed during mining, would they be reconstructed during the reclamation stage? Has a Wetland Assessment been completed?

Response:

A comprehensive desktop wetland delineation assessment has since been completed on the Proposed Pit Application. The wetland desktop review report is attached (Appendix A). Figure 1 in the report illustrates the location of the wetlands and watercourses on the proposed site.

The operations buffer a six-meter vegetated filter strip (GoA 2017a) surrounding Unnamed ID 43762, and Unnamed ID 43645 avoids one of the identified wetlands (WTA). As for the remaining wetlands, Water Act Approvals required for disturbing the wetlands will occur prior to the individual phase of mining operation, and will follow the *Alberta Wetland Mitigation Directive*. Wetland replacement as part of the reclamation activities will follow the *Wetland Construction Guide and Directive* to be released in 2018.

- Has a Biophysical Assessment been completed for this Site? A Biophysical Land Use map would be beneficial to include in the Appendix as it would illustrate key important biophysical sensitivities for the Site prior to development, including any wetland features, key habitats and forested areas.

Response:

A comprehensive desktop wetland delineation assessment has since been completed on the Proposed Pit Boundary. The wetland desktop review report is attached. Figure 1 in the report illustrates the location of the wetlands and watercourses on the proposed site. An Environmental Impact Assessment was completed at the request of Lac Ste. Anne County to address the proposed development, types of natural features, and potential impacts. No further biophysical assessments have been completed, as the primary landscape unit across the site is improved pasture land with active cattle grazing.

- Our limited desktop search indicates that there are Marsh Class wetlands and 4 unnamed streams in the area (Waterbody IDs 43645, 43686, 43762, 43786). There appear to be no fish bearing waterbodies.

Response:

A comprehensive desktop wetland delineation assessment has since been completed on the Proposed Pit Boundary. The wetland desktop review report is attached. Figure 1 in the report illustrates the location of the wetlands and watercourses on the proposed site.

Page 4 – 2.6 Wildlife: There is no mention of Species at Risk for the area. Has a FWMIS Search for Sensitive, May Be At Risk, and/or At Risk species been completed? This can be done through desktop research.

- If tree clearing is to be done on site, mitigative measures for wildlife considerations around Restricted Activity Periods for nesting and/or denning, and the timing of construction and reclamation activities should be mentioned.
- Our FWMIS desktop research identified American Kestrel, Great Blue Heron, Great Gray Owl, Least Flycatcher (All Sensitive), Canadian Toad (May Be at Risk) as well as Brook Stickleback, Fathead Minnow, Northern Pike, Spot-tail Shiner, Walleye, White Sucker and Yellow Perch (All Secure) within 5 km of the project area.

Response:

A desktop wildlife assessment has since been completed on the Proposed Pit Boundary. The desktop wildlife assessment report is attached ([Appendix C](#)). Figure 1 in the report illustrates desktop search completed on the proposed site. Any mitigative measures for wildlife consideration are discussed within the Mitigation section of the **Environmental Impact Assessment of the Proposed “Bamber #2” Pit Operations, NW, SW & SE 35-053-05 W5M, NW & SW 36-053-05 W5M.**

General Comments:

- Page 5 – 2.5 Vegetation: Missing a Reference? “or sensitive species were found (“.

Response:

The missing reference is as follows:

Alberta Conservation Information Management System (ACIMS).
<https://www.albertaparks.ca/acims-data/#> assumed access in May 2015

- Page 6 – 3.1 Proposed Pit Activities and Operations: This paragraph mentions Pit operations as per the agreement with Parkland County. Isn't the new Pit expansion within Lac Ste Anne County? Are the operating days/times the same? Is there an agreement with them, unless that is obtained following approval of the development permit application for the pit?

Response:

There is currently no agreement with Lac Ste. Anne County. As part of the development permit application it is anticipated that an agreement will be developed with the county. It is proposed that the operating hours would remain the same as with Parkland county. The maximum hours of operation for hauling in the Parkland County agreement are:

- 6:00am to 6:00pm Monday to Friday
- 8:00 am to 4:00pm Saturday
- And no hauling on Sunday.
- The Reclamation Plan in Appendix A does not illustrate the location of waterbodies.

Response:

The reclamation plan does not illustrate any waterbodies as there are none to be created. The nature of the gravel deposit and the hill-type structure of the area leads towards a landscape borrow rather than an excavation. Similar contours will be re-established at a lower elevation, using the overburden and reject material available on site.

There may be opportunity for T & T to construct some habitat and/or wetland features into the reclamation plan as part of the wetlands mitigation requirements discussed above. It is however premature at this time to incorporate a designed, replacement wetland feature into the reclamation plan. It is our understanding that Alberta Environment and Parks (AEP) is not currently accepting applications for *Water Act* Approvals authorizing replacement features for wetland compensation unless through the in-lieu system with Ducks Unlimited Canada. We have also received direction that plans incorporated into an Approval cannot incorporate unreleased guidance or direction.

The *Wetland Construction Guide* and *Wetland Construction Directive* were originally scheduled to be released by AEP in the fall of 2017, but have not been released to date. It would be impractical to submit a detailed wetland replacement proposal without knowing the technical requirements and expectations from AEP for constructed replacement wetlands in lieu of financial compensation to Ducks Unlimited.

More detailed plans can be prepared and provided once the AEP Wetland Construction Guidelines and Directives have been released.



APPENDIX E: ENVIRONMENTAL IMPACT ASSESSMENT



#148, 2257 Premier Way
Sherwood Park, AB T8H 2M8
tel: 780.496.9048
fax: 780.496.9049

Suite 325, 1925 18 Avenue NE
 Calgary, AB T2E 7T8
 tel: 403.592.6180
 fax: 403.283.2647

#106, 10920 84 Avenue
 Grande Prairie, AB T8V 6H2
 tel: 780.357.5500
 fax: 780.357.5501

toll free: 888.722.2563
www.mems.ca

Environmental Impact Assessment of the Proposed
“Bamber #2” Pit Operations
NW, SW & SE 35-053-05 W5M
NW & SW 36-053-05 W5M

Prepared for:
214131 Enterprises Ltd.
(T&T Sand and Gravel)

This information
 is intended for
 the use of the
 individual named
 on the accompanying
 cover page. This
 information is
 not to be
 distributed
 outside of the
 named individual
 or their authorized
 representative.
 If you have
 received this
 information in
 error, please
 contact the
 sender.
 Thank you for
 your attention.
 d t d

Prepared by:
Millennium EMS Solutions Ltd.
 #148, 2257 Premier Way
 Sherwood Park, AB
 T8H 2M8

May 2018
 File # 09-00141-02

Table of Contents

	Page
Table of Contents.....	i
List of Tables	ii
List of Figures	ii
List of Appendices	ii
1.0 INTRODUCTION.....	1
2.0 PROJECT OVERVIEW.....	1
3.0 ENVIRONMENTAL IMPACT ASSESSMENT.....	3
3.1 Air Quality.....	3
3.1.1 Existing Conditions.....	3
3.1.2 Potential Impacts.....	4
3.1.3 Proposed Mitigation	4
3.2 Soil and Terrain.....	5
3.2.1 Existing Conditions.....	5
3.2.2 Potential Impacts.....	5
3.2.3 Proposed Mitigation	6
3.3 Vegetation, Rare Plants and Wetlands.....	7
3.3.1 Existing Conditions.....	7
3.3.2 Potential Impacts.....	8
3.3.3 Proposed Mitigation	9
3.4 Wildlife.....	9
3.4.1 Existing Conditions.....	9
3.4.2 Potential Impacts.....	12
3.4.3 Proposed Mitigation	12
3.5 Aquatic Resources	14
3.5.1 Existing Conditions.....	14
3.5.2 Potential Impacts.....	14
3.5.3 Proposed Mitigation	15
3.6 Hydrogeology	16
3.6.1 Existing Conditions.....	16
3.6.2 Potential Impacts.....	17

3.6.3	Proposed Mitigation	17
4.0	RECLAMATION PLAN.....	18
4.1	Reclamation Objective.....	18
4.2	Conservation and Reclamation Activities.....	18
4.3	Progressive Conservation and Reclamation	18
4.4	Reclamation Contours and Grading	18
4.5	Revegetation	19
4.6	Weeds and Weed Control.....	19
4.7	Monitoring and Maintenance	19
5.0	SUMMARY	20
6.0	CLOSURE	21
7.0	REFERENCES	22

List of Tables

		Page
Table 1	Wetlands within Project Area.....	8

List of Figures

Figure 1	Project Location
Figure 2	Existing Conditions
Figure 3	Operations and Mine Plan
Figure 4	Reclaimed Conditions

List of Appendices

Appendix A	Agreements with Parkland
Appendix B	Wetland Desktop Review
Appendix C	Wildlife Desktop Review
Appendix D	Hydrogeology Report

1.0 INTRODUCTION

Millennium EMS Solutions Ltd. (MEMS) was retained by 214131 Enterprises Ltd. (operating as T&T Sand and Gravel [T&T]) to conduct an Environmental Impact Assessment (EIA) for the proposed “Bamber #2” aggregate pit operation (the Project) located at NW, SW and SE 35-053-05 W5M and NW and SW 36-053-05 W5M (Figure 1). The planned development for the *Code of Practice for Pits (2004)*, only extends as far as the drainage buffer to the West and 400m Buffer to the North around rural residences as seen on Figure 2 covering 210.45 ha in Lac Ste. Anne County and 66.15ha in Parkland County.

T&T submitted a Development Permit application for the Project to Lac Ste. Anne County in June 2017 as required under Lac Ste. Anne County’s development permit program, in addition to the Alberta Environment and Parks (AEP) *Code of Practice for Pits (2004)*. Lac Ste. Anne County has determined upon review of the Development Permit application that the proposed Project requires an EIA under Sections 3.4.12 and 3.4.13 of *Lac Ste. Anne County Land Use Bylaw No. 24-2014*.

The EIA will ensure that the proposed Project complies with the requirements of the Land Use Bylaw. The objectives of the EIA are to:

- provide a description of the proposed works;
- describe the existing biophysical environment surrounding the Project;
- describe potential effects of the Project on the biophysical environment;
- provide recommended mitigation measures that would avoid, reduce or compensate for the environmental effects of the Project; and
- describe the reclamation plan for the proposed Project.

2.0 PROJECT OVERVIEW

The Project involves existing and proposed soil, overburden and aggregate excavations for Pit operations on properties containing sand and gravel from glacial origins. After extraction, aggregate is crushed and screened to improve its engineering properties for use in the construction materials industry. The Project has an estimated gravel quantity of 11,780,000 m³, and Project lifespan of 25 to 30 years. Lac Ste. Anne County is able to draw revenue from the Project in the form of a Community Aggregate Payment (CAP) Levy (GoA 2005). As of January 1, 2018, the maximum levy rate is \$0.40 per tonne that can be applied by the municipality. Over the lifetime of the Project, this could potentially equate to \$7.69 million in revenue to Lac Ste. Anne County.

Overburden depths within the expanded Project area are on average 5.8 metres, while the aggregate depth found below the overburden averages 7.7 metres. The aggregate deposit to overburden ratio, based on the average depths, is 1.3:1. To facilitate the ongoing Project activities and operations,

stripped overburden material will be placed directly within depleted Project areas. These lands will be returned to the crop rotation by the landowner, similar to the reclaimed with topsoil area on Figure 2).

The annual operational period is expected to be from six to seven months, as weather permits. All Project operations (stripping, hauling, processing, reclamation *etc.*) are as per the agreement with Parkland County (Appendix A). As with most small gravel pit operations, T&T plans to operate on an intermittent schedule as the local market/contract demands.

The initial operations area for the pit is located in the south-eastern corner of NE 26, adjacent to the site access (Figure 3). The Pit development will progress in 139 stages of approximately 130 m by 130 m (1.4 to 1.7 ha), yielding approximately 84,000 m³ of aggregate per stage respectively. Completing the Project in 139 stages allow for the minimization of surface disturbance and reduces the visual impact on the area for the local residents at any one time. The stages were developed in a sequence in which overburden can be directly placed for progressive reclamation and continued operations within the Project area. The Pit opening in Lac St Anne County will likely start in SE 35, following the progression from the ongoing operations. The maximum disturbance size at any one time will be 6 ha, which would include one active stage, one stockpile stage, and the previously mined parcel being reclaimed *via* direct placement. Over the course of mining, 210.5 ha will be disturbed, but with current operating practices no more than 6 ha at one given time.

Once the upper limit of the sand and gravel deposit is exposed, it is excavated by front-end loader or bulldozer or both, depending on deposit compaction. Periodically, multiple pieces of equipment may be in operation at the same time. When pit opening has advanced further, only one or two pieces of Pit equipment are expected to be in operation at any one time, not including haul truck traffic.

Aggregates will be crushed and screened onsite. The primary processing and stockpile area is situated within the operating portion of the Project. Stockpiles will remain active until all finished product is hauled offsite. Equipment and vehicles used at different stages of operation within the Project area may include; mobile crushing and conveying systems and supporting infrastructure, gravel trucks, motor-scrapers, excavators, and bulldozers.

Permanent haul roads will not be constructed within the proposed Project area, as there are many stages and the construction of permanent roads would not be practical. Haul routes will shift as the Project progresses through its 139 stages, so temporary roads will be created and altered as required. Upon final reclamation, no roads will remain inside the Project area. Access to the Project is *via* Range Road 51 off Highway 16 to the north. Range Road 51 has been upgraded and maintained in joint partnership in accordance with the development permit from Parkland County. There is an access

road along the southern edge of the Property which allows haul trucks to reach the aggregate stockpiles.

Areas that are returned to agricultural uses may require soil preparation and seeding equipment (bulldozers, tractors, subsoilers and broadcast or seed-drills). These pieces of equipment will be brought onto site as required for reclamation purposes.

The EPEA approval, as required by the Code of Practice(COP), will submit a Schedule 4 document every 5 years. Alternatively, as development of the pit progresses and the conditions of the pit change, this would require an update to the EPEA approval and an additional update will be submitted to AEP.

3.0 ENVIRONMENTAL IMPACT ASSESSMENT

The Project is situated within the North Saskatchewan River Basin (GoA 2018a) in the Dry Mixedwood Natural Subregion of the Boreal Forest Natural Region of Alberta (Natural Regions Committee 2006). The average yearly precipitation from 1955 to 2015 is 499 mm (GoA 2018b). Over the course of mining, 210.5 ha will be disturbed but no more than 6 ha at one time with current operating practices and the 139-stage mining plan.

The land use surrounding the Project is predominantly agricultural, with numerous aggregates sites located immediately east and south. The Project is located approximately 1.3 km southeast of the village of Silver Sands and 1.6 km east of Lake Isle. The Yellowhead Highway (Highway 16) is located approximately 5 km south of the Project.

3.1 Air Quality

3.1.1 Existing Conditions

The Project is currently an active pit authorized under EPEA Approval 248371-00-00, with the pit currently operating on NE 26-053-05 W5M. The existing operation excavates sand and gravel, which is then crushed and screened on site. T&T utilizes a Norberg 300 hp cone crusher and a Sandia 3800 cone crusher for its crushing operations. Equipment and vehicles used at different stages of operation may include; mobile crushing and conveying systems and supporting infrastructure, gravel trucks, motor-scrappers, excavators, and bulldozers.

Current project emissions arise from fossil fuel combustion equipment sources, and from fugitive emissions from processing equipment (crushing and screening), soil handling, and hauling of product through wheel entrainment. These emissions include diesel combustion products such as sulphur dioxide (SO₂), fine particulate matter with aerodynamic diameter below 2.5 µm (PM_{2.5}), carbon monoxide (CO), oxides of nitrogen (NO_x), and fugitive dust emissions from wheel entrainment and

pit operations including total suspended particulates (TSP) and particulates with diameter below 10 µm (PM₁₀). Equipment and vehicles used at different stages of operation within the project area may include; mobile crushing and conveying systems and supporting infrastructure, gravel trucks, motor-scrappers, excavators, and bulldozers. However, as only one or two pieces of Pit equipment are typically in operation at any one time, the emissions from exhaust are minimal.

3.1.2 Potential Impacts

The proposed operation will be conducted in a similar manner the current practices. Fugitive dust emissions are expected from the excavation, crushing and screening of aggregate onsite, soil handling, and hauling of product through wheel entrainment. As the Project is a continuation of current operations, no increase in fugitive emissions is expected, however the point of localized emissions will move with the stages throughout the project development. Additionally, as the Project is developed, alignment of the temporary haul road from the pit to Range Road 51 will change as the pit is developed across the Project area.

Current operations involve the operation of one to two pieces of equipment at one time in addition to haul trucks. The combustion emissions from these pieces of equipment will be minimal, and there are no additional emissions as there are no changes to their current operating practices.

Timing of emissions is limited to the annual operation period of six to seven months annually, as weather permits. Operations are estimated to be Monday to Friday from 6am to 6pm, and Saturdays from 8 am to 4pm. Operations will occur over multiple (three times per summer or as local market/contract fulfillment demands) two- to three-week periods as per the agreement with Parkland County (Appendix A).

3.1.3 Proposed Mitigation

Two primary fugitive dust sources onsite result from crushing and screening of aggregates along with equipment and vehicle travel within the Project Area. Other dust sources may include new soil and overburden stockpiles, as well as Pit excavation and working areas. Dust emission mitigation measures are proposed for use as part of Project activities and operations:

- regular water spray use (or biodegradable suppressant) on unpaved access roads, including Range Road 51;
- water spraying and sweeping of paved driveway and access;
- stockpile sites used for screening;
- equipment location at lower elevations below grade (in-Pit excavations);
- operator awareness when operating mobile equipment and vehicles; and

- limit duration of an activity or operation in a particular location.

Reduction of combustion emissions from equipment will be managed by limiting idle time for vehicles by turning off equipment when not in use and maintaining equipment regularly to maintain efficiency. As only one to two pieces of equipment are expected to be in operation at one time during operational hours mentioned in Section 3.1.2, the emissions from these vehicles will be minimal.

Communicating with nearby landowners that may be affected by the operation is an integral part of the mitigation strategy. T&T notifies landowners prior to the start of the intermittent mining by phone or by letter, providing office and cell phone numbers as contacts for local operations. T&T ensures that employees and any contractors, adhere to the conditions of the development permit pertaining to hours of operations and truck haul.

3.2 Soil and Terrain

3.2.1 Existing Conditions

The current pit operations are located in the Black-Dark Gray Soil Zone of central Alberta (ASSWG 1993). Soils information obtained from AGRASID indicated that the soil map unit (SMU) is COZCzbl2/H11. These soils consist of Orthic Black Chernozems and Orthic Gray Luvisols developed on moderately fine textured till. Topsoil is averaged at 20 cm, subsoil is approximately 35 cm and overburden has an average depth of approximately 4 m. The total soil depth is approximately 4.55 m.

The northern five quarters had a topsoil survey completed in October of 2014 with 64 locations advanced. With the majority of the area having undergone some improved pasture cultivation with a distinct Ap horizon (plow layer), typical soils were Eluviated Black Chernozems (with gleyed variations) and Dark Gray Luvisols (with gleyed variations). Two of the locations were a mineral gleysol with a surface peat of 35 cm, the peat material depth was included in the topsoil average. The topsoil for the expanded area ranged from 12 to 40 cm with some deep Ae layers, and averaged 24 cm. A slight increase in average topsoil depth from the current Pit operations within the NE 26 quarter section. The subsoil layer remained consistent with the current pit operations (NE 26) at 35 cm and average overburden depth increased to approximately 5.2 m.

3.2.2 Potential Impacts

Through each successive development stage of the Project, topsoil and subsoil layers will be stripped and stockpiled in separate piles when preparing designated Pit excavation areas. The overburden layer (on average, 5.8 m thick) is also excavated in lifts and direct placed in depleted Pit areas for pit contouring and reclamation purposes before sand and gravel excavations start in the subsequent stage. Once the overburden is placed and contoured, subsoil and topsoil layers are replaced, and the land is reclaimed. The process will be repeated through the 139 stages of the Project life.

Potential impacts on the soil resources include alteration in landscape patterns, soil quality, soil volume and possible soil contamination. The landscape patterns within the disturbance areas can change from baseline conditions due to overburden and gravel removal. Soil quality could be affected by the Project through soil salvage, stockpiling, replacement, compaction, erosion and contamination. The volume of soil available for reclamation can be affected by the Project through inappropriate soil handling measures. Soil loss, including loss through erosion, is possible during soil salvage, stockpiling and replacement. Lastly, there is a potential risk in contamination from accidental leaks or spills from machinery and fuel storage containers.

3.2.3 Proposed Mitigation

It is T&T's intention to maximize the area of arable land to the landowner upon expiration of the gravel resources. The reclamation goal of the Project is to return the land to equivalent capability, which would be pasture for hay/grazing.

To mitigate potential impacts on changes to landscape patterns and drainage, conceptual contours and grades for final reclamation have been developed and are indicated on the reclaimed conditions presented in Figure 4. Base contours within the operations area will be graded to match the reclamation plan. T&T has shown with their reclamation in the NE 26, with an average 4 metres of overburden, there is sufficient volume of material to meet the reclaimed sloping requirements of the project area.

T&T will continue to implement the following mitigation measures to ensure minimal loss in soil quality and volume:

- separation distances of 1 metre or greater between the stockpile sites to prevent potential mixing of soil(s) and overburden materials;
- locate stockpiles in areas within short range of anticipated reclamation to minimize double handling of materials;
- determine when soil handling activities should be suspended under wet or windy conditions when there is potential for degradation of soil quantity or quality;
- ensure adequate thickness of suitable material over unsuitable overburden;
- replace soils at varying thicknesses to assist in creating diversity in the reclaimed landscapes;
- seed/stabilize topsoil stockpiles with cover crop; and
- revegetate reclaimed landscapes to stabilize soil.

To minimize the risk of contamination from spills and/or leaks the following mitigation measures and procedures will be put in place:

- ensure regular maintenance of machinery and vehicles on site;
- any fuel on site will have secondary containment and absorbent materials and fabrics will be available in case of spills and/or leaks; and
- contaminated material will be contained, removed from site, and disposed of appropriately by following T&Ts Emergency Spill Procedure.

Additionally, throughout operations T&T will continue to monitor for:

- soil erosion on stockpiles and recently replaced soil;
- the effectiveness of erosion control processes implemented; and
- reclaimed landscapes for stability, drainage, and re-establishment of vegetation.

3.3 Vegetation, Rare Plants and Wetlands

3.3.1 Existing Conditions

The Pit is located within the Dry Mixedwood Subregion of the Boreal Forest Natural Region which is characterized by aspen white spruce forest (Strong and Leggatt 1992). Through historical review of air photos from 1950 to 2013 the land use surrounding the Project area appears to change. In the 1950 aerial photographs, the land is forested, then progressively cleared of trees in the remaining historic photographs. Vegetation at the Pit consists of pasture species and aspen / white spruce / willow stands.

An ACIMS rare plant search was performed for the project area on February 5, 2018 and no rare or sensitive species were found.

Millennium EMS Solutions Ltd. (MEMS) conducted a desktop review of potential wetlands within the Project area. The details on the desktop review can be found in Appendix B. A summary the wetlands identified in the desktop review is presented in Table 1. Five potential wetlands were identified on the property (Wetlands WT A through WT E). Wetlands WT A and WT B appear to be potentially temporary or seasonal marshes; wetland WT C appears to be a potential temporary or seasonal marsh; while wetlands WT D and WT E appear to be potential temporary marshes.

Table 1 Wetlands within Project Area			
Wetland Number	AWCS Classification Class-Form-Type^{1,2,3}	Location (Quarter and Section of TWP 35 R5 W5M)	Area of Wetland
WT A	Marsh-Graminoid-Temporary or Seasonal (M-G-II or III)	SW of Section 35	0.51
WT B	Marsh-Graminoid-Temporary or Seasonal (M-G-II or III)	SE of Section 35	0.78
WT C	Marsh-Graminoid-Seasonal (M-G-III)	SE of Section 35	3.36
WT D	Marsh-Graminoid-Temporary (M-G-II)	SE of Section 35	0.26
WT E	Marsh-Graminoid-Temporary (M-G-II)	SW of Section 36	0.73
Total Potential Replacement Area			5.64

¹ Class is ephemeral (E), marsh (M), shallow open water (W) or swamp (S)

² Form is Graminoid (G), submerged or floating aquatic vegetation (A) or bare (B), shrubby (S), wooded deciduous (Wd)

³ Type is salinity (f-fresh, sb is slightly brackish, mb is moderately brackish, ss is subsaline) and water permanence (Temporary (II), Seasonal (III), Semi-permanent (IV), Permanent (V))

Wetlands WT A, WT B, WT C and WT D are altered over time by the construction of dugouts. In 2013 imagery, water appears in all dugouts but not in the original wetlands. The boundaries of the wetlands are indistinct, and a field assessment would be required to accurately delineate the wetlands.

The preliminary search of the estimated wetland value using the Alberta Merged Wetland Inventory (GoA 2016e) identified the potential for 5 ha of D-value wetlands in Section 35 and 2 ha of D-value wetlands in Section 36.

3.3.2 Potential Impacts

Impacts to vegetation and wetland resources is primarily associated with the clearing and removal of natural vegetation, and disturbing the soils, including:

- direct loss of vegetation and wetlands through clearing and removal;
- alterations to wetland resulting in change of wetland type or permanence;
- disruption to drainage patterns within the wetland resulting in increased sediment runoff;
- increase in the abundance of noxious species; and
- change in vegetation composition through the dispersal of undesirable species.

3.3.3 Proposed Mitigation

Revegetation will be staged with reclamation activities. This has been demonstrated in current operations as seen in the southwest quadrant of NE 26, which has already been returned to the landowners crop rotation. A seed mix of 60% *Medicago sativa* (Alfalfa), 30% *Bromus riparius* (Meadow brome), and 10% *Phleum pratense* (timothy-grass) will be implemented for improved pasture or an appropriate crop for the landowner's rotation, whichever they desire upon reclamation. Seed mixes and fertilizer application rates are to be confirmed at the time of reclamation in consultation with the landowner.

Once topsoil and subsoil has been placed, the seed bed will be prepared by first disking, then harrowing the area to reduce soil compaction that may have been caused by reclamation. A tractor with a drill seeder will then be implemented to seed the area.

Project properties will be monitored for noxious and restricted weeds as defined by Alberta's "Weed Control Act" and County bylaws. Herbicide may be applied to control weeds in accordance with the latest edition of the *Environmental Code of Practice for Pesticides (Alberta Environment 1997)* and the *Code of Practice for Pesticides*. Presence of weeds on site are continuously monitored and mitigated throughout the year as part of pit operations.

The *Alberta Wetland Mitigation Directive (GoA 2017)* outlines three main strategies to avoid or minimize potential impacts: avoidance, minimization and replacement. Avoidance of all the wetlands and unidentified drainages is not feasible in the areas where gravel will be excavated. Wetland A is located to the west of the planned excavation and will be avoided, A drainage buffer with a 6 meter vegetated filter strip (GoA 2017a) will surround Wetland A and has been incorporated into the mine plan. The disturbance to the other wetlands cannot be avoided, however disturbance can be mitigated by limiting the timing of the disturbance to the time of the excavation of the pit. Minimization of adverse effects to the wetlands is not possible, and a resulting permanent loss of wetland area will occur. The proponent intends to replace the disturbed wetlands with constructed wetlands which will follow the *Wetland Construction Guide and Directive* to be released in 2018.

3.4 Wildlife

3.4.1 Existing Conditions

3.4.1.1 Wildlife Habitat and Sensitive Wildlife Zones

Based on a historical review of air photos, the Project area is dominated by pasture land although scattered patches of small aspen/white spruce stands, willow thickets and five small wetlands are also present. Three of the wetlands were classed as potentially temporary or seasonal marshes while the remaining two were classed as potentially temporary marshes accounting for 2.7% (5.6 ha) of the

210.5 ha that will be mined. From a wildlife perspective, pasture land has some value for wildlife but if the area is subjected to livestock grazing/trampling, habitat suitability is reduced because of reduced cover (e.g., herbaceous layer, tall grasses, and shrubs) and disturbance from livestock. In contrast, wetland and forest/shrub habitat types in the Project area have the highest value for wildlife. Although no permanent wetlands appear to be present within the Project area, the presence of temporary and/or seasonal wetlands can provide suitable habitat for migrating and breeding waterfowl, shorebirds, and other wetland-dependant wildlife (e.g., muskrat, amphibians, and migratory songbirds such as red-winged blackbirds and yellow-headed blackbirds). However, the value of these areas has been affected by their relatively small size and significant alteration of wetland edges by agricultural practices. Smaller treed areas and treed fence lines can also provide some additional habitat and linkages between habitat patches for wildlife moving through the area to larger, higher quality habitats located to the west and north.

Based on a search of the Fish and Wildlife Management Information System (FWMIS, 2018) data base using the Fish and Wildlife Management Internet Mapping Tool (AEP 2018), the Project area is not located within or near any Key Wildlife and Biodiversity Zones (KWBZ), nor does it contain any sensitive wildlife ranges. In addition, the Project area does not fall within any provincial Environmentally Significant Areas which are areas that have been identified as important to the long-term maintenance of biodiversity, physical landscape features, and/or other natural processes in Alberta (Fiera 2014).

3.4.1.2 Wildlife Species of Concern

Forty-two wildlife species of concern representing two amphibians, three reptiles, 30 birds and seven mammals could potentially occur in the Project Area (Appendix C, Table 4) based on species accounts, range maps, and available literature. Forty-two of these species have provincial status designations while fourteen are federally listed. Of the 42 provincially listed species, three are considered "Secure" or have an "Undetermined" status. An additional 31 species are classified as 'Sensitive' in Alberta (AEP 2015) which indicates that although these species are not currently at risk of extinction or extirpation, they may require protection to prevent them from becoming 'At Risk'. The remaining eight species are either "May Be At Risk" or "At Risk" in Alberta (Appendix C, Table 4). At the federal level, five of the 42 wildlife species are of "Special Concern", two are "Threatened", and two are "Endangered", while five species were assessed by Committee on the Status of Endangered Wildlife in Canada (COSEWIC 2017) but were determined to be "Not At Risk" (Appendix C, Table 4).

The potential for most wildlife species classified as "May Be At Risk" or "At Risk" in Alberta or "Special Concern", "Threatened" or "Endangered" in Canada to occur in habitats within or adjacent to the proposed Project is considered to be low because of lack of suitable habitat and/or the extent of

agricultural development in the region. Of the 42 wildlife species of concern, 25 species (or 60%) were considered likely to occur in the Project area or in habitats immediately adjacent to the Project area based on general habitat preferences and range distributions. Several of the remaining special status species may also use portions of the Project area during various times of year, particularly when wetlands in the area contain water or in adjacent forested areas.

Three species of amphibians including the boreal chorus frog, wood frog, and tiger salamander are likely occur in the Project area because of the presence of suitable wetland habitats. Wood frogs are found in damp wooded areas, wet grasslands or are associated with open ponds, while chorus frogs occur in grassy and wooded areas near shallow water (Russell and Bauer 2000). Both these species, which are “Secure” in Alberta, are expected to be common in the area and will use ephemeral wetlands and wet depressional areas in shrubby areas and pasturelands in the Project area for breeding and overwintering. Tiger salamanders, a SARA-listed Schedule 1 species in Canada, prefer moist, dark sheltered areas near water and may be present near wetlands or forested/shrubby areas in the Project area.

Three reptiles, the western terrestrial, common, and plains garter snakes may also occur in the Project area near wetlands, marshes, dugouts, and streams (Russell and Bauer 2000) although the plains garter snake is likely uncommon in the area. A critical habitat component for snakes in Alberta is the presence of suitable hibernacula or over-wintering dens. Because snakes are cold-blooded, they are sensitive to variations in ambient temperature. The hibernacula are located below the frost line of the ground where openings occur. These den sites may occur in gravel deposits, animal burrows, tree roots and occasionally in cellars and basements of houses, and below abandoned buildings (Takats 2000).

The central portion of the North American Breeding Bird Survey (BBS) Route 04-330 forms the boundary of the three northern quarter sections of the Project area (Appendix C, Figure 1) and included bird survey data from 1992 to 2010 and from 2012 to 2016 (Pardieck *et al.* 2018). During this period, 144 bird species were recorded along BBS Route 04-330, 29% (or 42 species) of which were classified as provincially and/or federally listed species (Appendix C, Table 4). The remaining 102 bird species are classified as “Secure” in Alberta. A search of the provincial FWMIS using the FWIMT also indicated the presence of American kestrel, a “Sensitive” species in Alberta, within a 3 km radius of the Project area. The American kestrel is a small falcon that is relatively common, occurring throughout the province between April and October (Fisher and Acorn 1998). It prefers open habitats along forest edges where hunting and nesting occurs.

Most of the mammals expected to occur in the vicinity of the Project area are “Secure” in Alberta and likely includes coyotes, red fox, red squirrel, striped skunk, muskrat, least weasel, snowshoe hare, white-tailed deer, mule deer, and moose. Most of these mammals are relatively common in

agricultural areas and adjacent to industrial sites if suitable habitats are present and for the most part, readily habituate to various human activities. However, there is potential that seven special status wildlife species could also occur in the vicinity of the Project area including American badger, long-tailed weasel, and five species of bats.

3.4.2 Potential Impacts

The Project may have the following potential effects on wildlife in Project area:

- loss or alteration of important wildlife habitat;
- loss of habitat connectivity with adjacent habitats;
- potential disturbance to provincially or federally listed wildlife species; and
- increased mortality risk primarily through wildlife-vehicle collisions associated with increased traffic on local roads.

With implementation of the recommended mitigations measures in conjunction with the relatively small areas that will be affected over the 25- to 30-year life span of the Project (*e.g.*, no more than 6 ha will be disturbed at one given time, and a six or seven month annual operating period that will be based on an intermittent schedule that will be dependent on market/contract demands), the effects of Project development on wildlife and wildlife habitat is expected to be negligible to low.

3.4.3 Proposed Mitigation

Reclamation of disturbed natural areas back to similar native vegetation and creation of replacement wetland habitats would reduce long-term effects of habitat loss on wildlife. Progressive reclamation is encouraged to ensure that disturbance areas are minimized to the extent possible and the post-extraction landscape is returned to its pre-disturbance state. Maintenance and/or re-establishment of habitat connectivity would reduce impacts on wildlife movements, and thus habitat-use, within the Project Area. Habitat enhancements or built structures could be used to create habitat for some species that may be disturbed by the Project including bird houses for cavity nesting species and roosting boxes for bats.

A variety of wildlife likely inhabit the Project area and adjacent habitats including a number of special status species. However, no significant areas of wildlife habitat appear to be present within the Project area, nor is the area likely to provide critical habitat for most species of concern that may occur in the area. The overall quality of wildlife habitat over much of the Project area is considered to be relatively low aside from the presence of several small wetlands. Watercourses likely facilitate wildlife movements adjacent to the Project area, as well as within the larger landscape to the west towards Isle Lake and to the north to Lac Ste. Anne. Similarly, larger blocks of native vegetation, particularly to the north and west of the Project area, should provide suitable habitats for local

wildlife displaced by the Project. However, to mitigate the effects of the Project on wildlife the following mitigation measures should be considered:

- Pre-disturbance wildlife surveys should be conducted to document the potential presence/absence of wildlife species at risk. Based on a review of existing habitats present within the proposed development footprint, the occurrence of most listed species is considered unlikely. However, surveys for potentially sensitive breeding birds (see next bullet) and the potential occurrence of a snake overwintering site should be conducted. These surveys would be based on current sensitive species inventory guidelines for Alberta (GoA 2013). For snakes, any exposed gravel areas and actively used or abandoned buildings within the Study Area should be searched for the potential presence of snake hibernacula prior to aggregate extraction. Searches for snake hibernacula are typically conducted in spring (April 1 – June 15) or fall (August 15 – October 31) when snakes are leaving or entering their over-wintering den sites, respectively (GoA 2013). In the event any species of concerns are detected, appropriate setback distances and/or other potential species-specific mitigation measures will be identified and discussed with T & T Sand and Gravel Ltd and Alberta Environment and Parks personnel.
- Environment Canada (2018) recommends that all habitat destruction activities (including any vegetation clearing, construction, flooding, infilling of ponds, dewatering, reclamation and any mowing) avoid the period from April 15-August 31 to reduce the potential impacts on migratory birds. Furthermore, the Alberta *Wildlife Act* protects owls, other raptors (hawks, eagles) and waterfowl from disturbance during their breeding seasons. Restricted activity periods commence March 1 for owls, March 15 for hawks and eagles, and April 15 for horned grebes (AESRD 2013). Given these timing windows and the potential for all of these species to occur in the Project area, Project-related clearing and dewatering should not occur between March 1 and August 31 to ensure compliance with the *Wildlife Act* and the *Migratory Birds Convention Act*. If the timing restrictions cannot be adhered to, a pre-disturbance nest search should be conducted prior to any clearing and dewatering activities to identify the occurrence of any active nest sites.
- Any end pit wetlands associated with the Project should be modified once AEP finalizes its Wetland Construction Guide and Directive so that ecologically functional wetland habitats with varying depths are created. This may include regrading edges to a lower slope (e.g., 6:1 slope), incorporation of irregular shorelines in the final design of end pit wetlands, and establishment of emergent and submergent vegetation communities by transplanting muck and vegetative matter from natural wetlands.
- Implement appropriate dust suppression measures in active areas of the Project area to minimize the effects of particulate matter on adjacent wildlife habitats and wildlife.

- Ensure that speed limits on local roads are followed to minimize wildlife/vehicle collisions in the vicinity of the Project area.

3.5 Aquatic Resources

3.5.1 Existing Conditions

No major water bodies are located within the vicinity of the Pit. There are several dugouts located throughout the Project area; the landowner utilizes them for watering cattle within the pasture quarters. Visible on Figure 1 in Appendix B, the dugouts are located approximately central in SW-35-053-05 W5M, south-central in SE-35 053-05 W5M and southwest in SW-36-053-05 W5M.

The project area is hummocky with low to medium relief landforms and gentle (3 to 6%) to moderate (6 to 15%) slopes (ASIC 2001). A search of the FWMIS database identified four unnamed watercourses in the Project area (Figure 2):

- Unnamed ID 43645 encroaches onto the north half of Section 35 053-05 W5M;
- Unnamed ID 43762 traverses the southwest portion of the Project area in SW 35-053-05 W5M,
- Unnamed ID 43786 encroaches onto SW 36-053-05 W5M; and
- Unnamed ID 43686 encroaches into the southwest portion of NW 36-053-05 W5M.

The four unnamed watercourses are ephemeral, un-classed, non-fish bearing drainages with no specified Restricted Activity Period (RAP). The boundaries of the ephemeral drainages are un-distinct. A dugout appears to have been constructed northwest of wetland WT A within Unnamed ID 43762. Aerial photographs from 1995 indicate a trail or ditch from wetland WT D to Unnamed ID 43786 (Appendix B) was created and still apparent on current aerial photography.

The four drainages begin on the Project area and progress through slightly different tributaries before entering the North Saskatchewan River via the Sturgeon River. Unnamed ID 43645 drains north into a large wetland complex (Geodiscover Alberta, 2018) in TWP 54-05 W5M prior to entering the Sturgeon River that flows into Lac Ste. Anne. Similarly, Unnamed ID 43686 drains northwest through a series of small wetlands that then flow through a larger wetland complex before entering the Sturgeon River. Unnamed ID 43762 drains into another unnamed non-fish bearing drainage that flows into Isle Lake upstream of the Sturgeon River. Lastly, Unnamed ID 43786 flows northeast into an unnamed small lake/large shallow open water wetland, the wetland outlet is Mission Creek that flows into Lac Ste. Anne.

3.5.2 Potential Impacts

Potential impacts to aquatic resources include:

- temporary impediment to natural drainage patterns of overland flow by storage piles and operating pits;
- deposition of sediments from storage piles and operating pits into the ephemeral drainage;
- removal of vegetation along the ephemeral drainage leading to increased spring melt or flood flows and reduction in water quality; and
- potential for alterations in run-off flow rates from the nature of the pit excavation as any storm water overland flow will be contained within the pit. Potential indirect impacts to aquatic resources would be from increased sediment loads in runoff from soil stockpiles, and disturbed landforms.

Impacts of the proposed Project on aquatic resources are expected to be minimal with effective implementation of the proposed mitigation measures.

3.5.3 Proposed Mitigation

The Project area is well vegetated. Vegetation will be maintained within the undisturbed portions of the Project area. Existing vegetation should intercept any potential sediments carried by overland flows. Mitigation measures for impacts towards aquatic resources are primarily related to erosion and sedimentation controls. The erosion and sedimentation controls planned for this operation are as follows:

- maintain vegetation within undisturbed portions of the Project area;
- where appropriate use staked bales, or silt fencing as required before any stripping or excavation operations;
- soil stockpiles will be seeded with cover crop to minimize erosion and translocation of sediment towards the drainages;
- during reclamation, stabilise recontoured landforms with seeding mix; and
- reclaimed landforms will be contoured with slopes less than 20:1 help to ensure erosion is minimized.

A drainage buffer with a 6 meter vegetated filter strip (GoA 2017a) surrounding Unnamed ID 43762 and Unnamed ID 43645 has been incorporated into the mine plan (Figure 2). The operation will not directly disturb these two watercourses.

The drainages to be disturbed are identified as non-fish bearing, with no defined channels. In addition to the proposed mitigation measures, the natural topography and landforms will help to minimize impacts as the Project area consists of vegetated gentle to moderate slopes. These

conditions limit the potential for the translocation of sediment outside of the project area, let alone into any areas of wetland complexes or fish habitat.

3.6 Hydrogeology

3.6.1 Existing Conditions

MEMS personnel conducted a site visit to the Bamber #2 Pit on August 9, 2016 and is detailed in the Hydrogeology Report in Appendix D.

3.6.1.1 Regional Hydrogeology

The upper surficial deposits in the vicinity of the Project are comprised of hummocky till material deposited by stagnant glacial ice and consists of a mixture of sand, silt and clay with pebbles, cobbles and boulders (Andriashek *et al.*, 1979). Also present is fine-textured glacio-lacustrine deposits containing silt to clayey silt, minor sandy silt and few to no stones, with a thin organic peat cover (Andriashek *et al.*, 1979). The upper surficial deposits may contain minor sand and gravel deposits of meltwater origin, which may occur as isolated pockets (HCL, 1998). The most widely known aquifer in the area is the Buried Onoway Valley, which trends from west to east and underlies Isle Lake and Lac Ste. Anne (HCL, 1998). The Buried Onoway Valley is approximately 10 km north of the Project, in TWP 054 to 055.

The bedrock surface in the vicinity of the Project ranges from a depth of 7 metres to greater than 20 metres below ground level (BGL). The uppermost bedrock unit is the Horseshoe Canyon Formation which is comprised of fine- to very-fine grained sandstone interbedded with siltstone, mudstone and laterally continuous coal seams (Ozoray, 1972; Prior *et al.*, 2013).

3.6.1.2 Local Hydrogeology

Saturated layers were encountered at approximately 6 m BGL during the testing activities for the existing mining in NE 26-053-05 W5M. During the first few years of operations, no groundwater has been encountered and has not influenced the excavation methods for the aggregate material. The borehole logs that were drilled in the expansion area in August 2013 (the quarter sections located in the County of Lac Ste. Anne) showed that the sand and gravel to be mined is dry.

The overburden depths within the expanded pit area are on average 5.8 m in depth and the aggregate depth below the overburden averages 7.7 m in depth. Based on the average depths, the aggregate deposit to overburden ratio is 1.3 : 1. The base of the gravel deposits overly the bedrock surface at depths that range from approximately 7 to 22 m BGL, with an average excavation depth of 13.5 m.

3.6.1.3 Groundwater Users

A review of the AEP Water Well database includes 29 groundwater-related records for Sections 25, 26, 35 and 36 in 053-05 W5M. Of these 29 records, 24 are classified as water wells in which 12 records have completion interval depths and 5 records have inferred open completion intervals based on the bottom of the steel casing and the total depth drilled. These 17 records have lithology details; based on the completion depths and lithology all of these records are completed in bedrock materials. Based on the lithology recorded during drilling, the bedrock depth varies from 7 to 27 m BGL. Table 1 in Appendix D Attachment summarizes the water well data for these four sections. Furthermore, a desktop review was completed by Millennium of water wells in the immediate vicinity of the proposed Pit area. Wells that had completion data presented indicated that they were all completed into the bedrock, so groundwater in the surficial deposits is not anticipated. This information is presented in Appendix D.

Three groundwater wells are located in the NE 35, and are assumed to be servicing the acreages in that quarter section. The two most recently drilled are registered to D. Carrie (GIC Well ID: 460405) and M. Glesner (GIC Well ID: 1640390). The Glesner well has its screen depth at 23.1 to 26.2 mbgl within shale layers identified on the lithology description. The Carrie well has its perforation depth at 51.8 to 57.9 mbgl also within shale layers identified on the lithology description. Copies of these Water Well Drilling Reports are located in Appendix D: Additional Survey Information. There are no mentions of sands or gravels in the lithology of the wells but are likely above the 7 mbgl where the lithology starts.

3.6.2 Potential Impacts

Of the water well records that have completion and lithology information, all records indicate that the water wells located in the sections to be mined are completed in the bedrock. The results of the hydrogeological investigation confirm that the proposed area to be mined contains dry gravel. No adverse effects are expected to nearby groundwater users since there was no evidence of water wells completed within the gravel deposits in the vicinity of the Bamber #2 Pit expansion area.

Provided that the Bamber #2 Pit remains dry during operations, a groundwater monitoring program is not required unless groundwater becomes present in the proposed areas to be mined.

3.6.3 Proposed Mitigation

Based on the results of the hydrological study, no potential effects were expected to occur to the nearby groundwater uses, as the area to be mined contains dry gravel. There are no proposed mitigations measures for groundwater.

4.0 RECLAMATION PLAN

4.1 Reclamation Objective

Reclamation for Pit activities and operations, as indicated in the Activities plan, are developed to achieve equivalent land capability. That is, returning the disturbed land to a similar, but not necessarily the same, land use or uses after final reclamation work is complete. The COP process as well as the proposed reclamation security promotes a staged development and subsequent reclamation to minimize the ongoing “scar” on the lands. T&T proposes to reclaim this land for the agricultural uses (crop rotation / hay or pasture land). As shown along the south boundary of the NE 26 quarter section, the landowner is already incorporating his agricultural rotation on recently reclaimed lands (Figure 2).

4.2 Conservation and Reclamation Activities

Through each successive development stage of the current Pit, topsoil and subsoil layers (estimated at 20 cm and 35 cm respectively) will be stripped and placed on previous areas as defined by progressive reclamation when preparing designated Pit excavation areas. T&T will be targeting complete replacement of topsoil and subsoil, however due to stripping and mechanical limitations (80%) will be acceptable lower limit when completing the property assessment prior to the Reclamation Certificate application is submitted. The topsoil for the expanded area ranged from 12-40 cm with some deep Ae layers, and averaged 24 cm. A slight increase in average depth from the original application only including the NE 26 quarter section. The subsoil layer remained consistent with the previous application at 35 cm. Before sand and gravel excavations start, the overburden layer (on average, 5.8 m thick) is also excavated in lifts and direct placed in depleted Pit areas for pit contouring and reclamation purposes.

4.3 Progressive Conservation and Reclamation

Where practical after stage opening and operations expansion, T&T’s first preference will be for direct placement, in proper sequence, for topsoil, subsoil and overburden materials in depleted areas of the Pit before storing these materials in stockpiles. Sufficient separation distances, 1 metre or greater, will be provided between the stockpile sites to prevent potential mixing of soil(s) and overburden materials.

4.4 Reclamation Contours and Grading

Conceptual contours and grades for final reclamation are indicated on the Activities plans presented in Figure 4. Base contours within the operations area will be graded to match the reclamation plan.

4.5 Revegetation

Revegetation will be staged with reclamation activities, see the area at the south and west extent of the project area, this has already been returned to the landowner's crop rotation. Seed mixes and fertilizer application rates are to be determined at the time of reclamation in consultation with the landowner. A seed mix of 60% *Medicago sativa* (Alfalfa), 30% *Bromus riparius* (Meadow brome), and 10% *Phleum pretense* (timothy-grass) will be implemented for improved pasture or an appropriate crop for the landowner's rotation, whichever they desire upon reclamation.

Once topsoil and subsoil has been placed, the seed bed will be prepared by first discing, then harrowing the area to reduce soil compaction that may have been caused by reclamation. A tractor with a drill seeder will then be implemented to seed the area.

4.6 Weeds and Weed Control

Project properties will be monitored for noxious and restricted weeds as defined by Alberta's "Weed Control Act" and County bylaws. Herbicide may be applied to control weeds in accordance with the latest edition of the *Environmental Code of Practice for Pesticides (Alberta Environment 1997)* and the *Code of Practice for Pesticides*. Presence of weeds on site are continuously monitored and mitigated throughout the year as part of pit operations. Reclaimed portions of the pit are returned to the landowner's crop rotation/hayland and weeds are managed by his scheduled herbicide application(s).

4.7 Monitoring and Maintenance

A monitoring program will be developed and implemented to assess the success of reclamation. It will be developed to ensure consistent, objective assessment until the desired plant community is established. Success will be measured and compared to applicable reclamation criteria and the requirements set by regulatory approvals. Monitoring activities will assess the following:

- success of mitigative measures;
- landscape characteristics (e.g., subsidence, drainage); and
- erosion and sediment controls.

Post-reclamation monitoring will be conducted in late summer / fall to assess any revegetation work and will continue until vegetation has established. This will also include a weed assessment to determine if any further actions are required prior to completing the Reclamation Certificate application. The assessment and application is usually completed two years following revegetation (as per requirements) and depending upon the degree of disturbance and revegetation complexity.

5.0 SUMMARY

A review of the groundwater and hydrology did not identify any potential adverse effects relating to the proposed pit. No listed rare plant species were identified, therefore no specific recommendations for rare plants are applicable to the project. The main environmental sensitivities identified in the Project area are:

- fugitive dust emissions from haul roads and operation;
- sediment deposition in the ephemeral drainages originating within the Project area;
- the removal of existing wetlands; and
- impacts to wildlife through habitat loss and connectivity; and
- morality risk through wildlife-vehicle collisions.

Regular water spray use (or biodegradable suppressant) on unpaved access roads, including range road 51, locating equipment at lower levels during in-Pit excavations and limiting duration of an activity or operation in a particular location should help mitigate any adverse effects from dust emissions.

Vegetation buffers along the boundary of the Project area and vegetating of the soil storage piles, along with the implementation of erosion and sediment control measures described in this report should help mitigate any potential adverse effects from soil and water erosion and sedimentation. The progressive clearing and reclamation of the proposed stages in the proposed pit will allow the existing lush vegetation to act as a sediment trap and act as wildlife habitat until clearing is required.

Avoiding “Wetland A” reduces the overall impact to wetlands on site. However, the remaining wetland will be mined through. The proponent intends follow the *Wetland Mitigation Directive* (GoA, 2017) and intends to replace the disturbed wetlands with constructed wetlands which will follow the *Wetland Construction Guide and Directive* to be released in 2018.

Restricted activity periods for bird species are discussed above for construction and vegetation clearing. If timing restrictions cannot be adhered to, pre-disturbance nest search will be conducted. Conducting pre-disturbance wildlife surveys for breeding birds, waterfowl, snakes and bats are recommended and appropriate actions should be taken if species of concern are found. Lastly, ensure that speed limits on local roads are followed to minimize wildlife/vehicle collisions in the vicinity of the Project area.

The mitigation measures described in this report should be considered to mitigate the identified environmental sensitivities. The proposed pit is located in an area zoned as Agricultural by Lac Ste.

Anne County. Using the proposed progressive reclamation, pit areas will be reclaimed to improved pasture capability as requested by the landowner.

6.0 CLOSURE

We thank you for the opportunity to be of assistance to T&T Sand and Gravel. Should you have any questions, please contact the undersigned at 780.496.9048.

Yours truly,

Millennium EMS Solutions Ltd.

Prepared by:

This information redacted as per
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)

Jennifer Martin

Junior Environmental Scientist

Reviewed by:

This information redacted as per
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)
This information redacted (PEPA)

Grant Woynarowich

Environmental Scientist, B.Sc., P.Ag.

7.0 REFERENCES

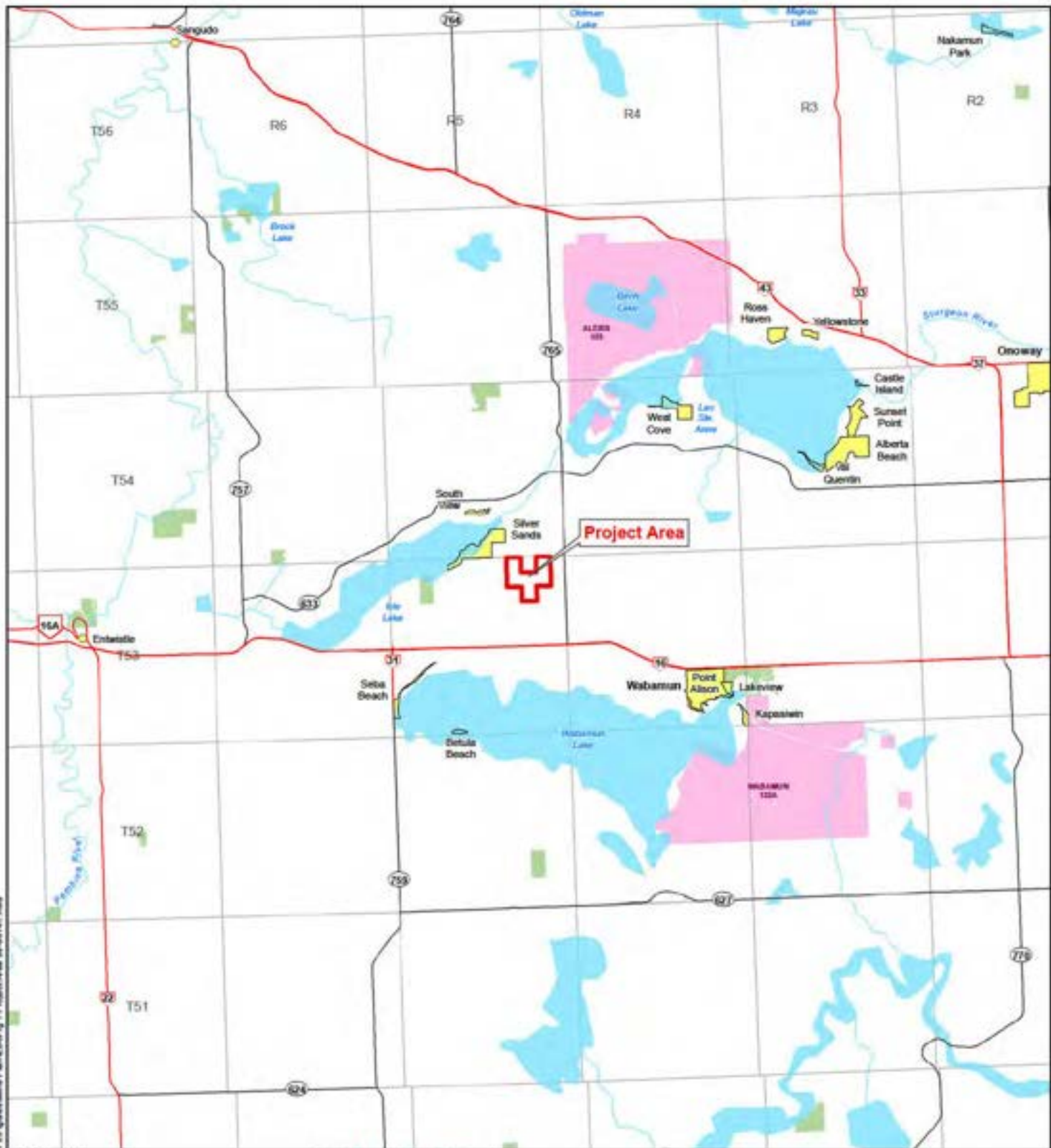
- Alberta Conservation Information Management System (ACIMS). 2018.
<https://www.albertaparks.ca/acims-data/#> Accessed February 5, 2018.
- Alberta Environment and Parks (AEP). 2015. Species at Risk: A Guide to Endangered and Threatened Species and Species of Special Concern in Alberta. Version 2. Available online at: <http://aep.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/documents/SpeciesAtRiskGuide-Jan-2015.pdf>.
- Alberta Environment and Parks (AEP). 2018. Access FWMIS Data. FWIMIT – Fish and Wildlife Internet Mapping Tool. Available online at: <http://aep.alberta.ca/fish-wildlife/fwmis/access-fwmis-data.aspx>.
- Alberta Environment and Parks (AEP). 2017. Alberta Water Well Information Database. Retrieved June 17, 2016, via Alberta Environment and Parks FTP site.
- Alberta Environment and Parks (AEP). 2004. *Code of Practice for Pits*, Published by Alberta Queen's Printer, Edmonton, Alberta.
- Alberta Environment and Sustainable Resource Development (AESRD). 2013. Enhanced Approval Process (EAP) Manual. Edmonton, Alberta, Canada. Available Online at: <http://aep.alberta.ca/forms-maps-services/enhanced-approval-process/eap-manuals-guides/documents/EAP-Manual-Apr01-2013.pdf>.
- Andriashek, L.D., Fenton, M.M. and J.D. Root. 1979. Surficial Geology Wabamun Lake, Alberta. NTS 83G. Map 149, scale 1:250,000.
- COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2017. Canadian Species at Risk. Environment Canada. Ottawa, Ontario, Canada. Available Online: http://www.cosewic.gc.ca/eng/sct5/index_e.cfm.
- Environment Canada. 2018. Technical Information: Risk Factors for Migratory Birds. Available Online at: https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=8D910CAC-1#_03_1_1.
- Fish and Wildlife Management Information System (FWMIS). 2018. Fish and wildlife information management information system data. Available Online: <http://aep.alberta.ca/fish-wildlife/fwmis/access-fwmis-data.aspx>.
- Fisher, C. and J. Acorn. 1998. *Birds of Alberta – Field Guide*. Lone Pine Publishing, Edmonton, Alberta, Canada.

- Government of Alberta (GoA) 2005. Community Aggregate Payment Levy Regulation AR 236/2005. Published by Alberta Queen's Printer, Edmonton Alberta, Available Online http://www.qp.alberta.ca/documents/Regs/2005_263.pdf
- Government of Alberta (GoA). 2013. Alberta Government Sensitive Species Inventory Guidelines. Edmonton, Alberta, Canada.
- Government of Alberta (GoA). 2015a. *Alberta Wetland Identification and Delineation Directive*. June 15, 2015.
- Government of Alberta (GoA). 2015b. *Alberta Wetland Classification System*. June 1, 2015.
- Government of Alberta (GoA) 2017a. Buffer Zones for a Healthy Watershed. Revised July 20, 2017. Available online at: [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/irr6419](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/irr6419)
- Government of Alberta (GoA). 2017b. *Wetland Mitigation Directive*. Water Policy Branch, Alberta Environment and Parks. Edmonton, Alberta.
- Government of Alberta (GoA). 2018a. Watersheds of Alberta. <http://geodiscover.alberta.ca/Viewer/?Viewer=GDA>. Accessed February 5, 2018.
- Government of Alberta (GoA). 2018d. GeoDiscover Alberta. <http://geodiscover.alberta.ca/Viewer/?Viewer=GDA> Accessed February 5, 2018
- Government of Alberta (GoA).2015c. *Alberta Wild Species General Status Listing 2015*. Updated March 1, 2017.
- Government of Alberta (GoA)2018b. Alberta Agriculture and Rural Development's Agroclimatic Information Service (ACIS) website. February 5, 2018.
- Government of Alberta. (GoA)2018c. Fish and Wildlife Management Information System (FWMIS) Internet Mapping Tool. Alberta Environment and Sustainable Resource Development, Edmonton, Alberta. Available online at: https://maps.alberta.ca/FWIMT_Pub/Viewer/?TermsOfUseRequired=true&Viewer=FWIMT_Pub February 5, 2018).
- Hydrogeological Consultants Ltd (HCL). 1998. Lac Ste. Anne County. Parts of the North Saskatchewan and Athabasca River Basins. Parts of Tp 053 to 059, R 01 to 09, W5M. Regional Groundwater Assessment. July 1998.
- Natural Regions Committee. 2006. Natural Regions and Subregions of Alberta. Compiled by D.J. Downing and W.W. Pettapiece. Government of Alberta. Pub. No. T/852.

- Ozoray, G.F. 1972. Hydrogeology of the Wabamun Lake Area, Alberta. Research Council of Alberta. Report 72-8.
- Pardieck, K.L., D.J. Ziolkowski Jr., M.-A.R. Hudson. 2017. North American Breeding Bird Survey Dataset 1966 - 2016. United States Geological Survey, Patuxent Wildlife Research Center. Available Online: www.pwrc.usgs.gov/BBS/RawData/.
- Prior, G.J., Hathway, B., Glombick, P.M., Paná, D.I., Banks, C.J., Hay, D.C., Schneider, C.L., Grobe, M., Elgr, R. and Weiss, J.A. 2013. Bedrock geology of Alberta; Alberta Energy Regulator, AER/AGS Map 600, scale 1:1 000 000.
- Russell, A.P. and A.M. Bauer. 2000. The Amphibians and Reptiles of Alberta: A Field Guide and Primer of Boreal Herpetology. University of Calgary Press, Calgary, Alberta, Canada.
- Species at Risk Act (SARA). 2002. *Species at Risk Act*. Available online at: <http://lawslois.justice.gc.ca/eng/acts/S-15.3/>.
- Takats, L. 2000. Red-sided (*Thamnophis sirtalis parietalis*) relocation and education project. Alberta Species at Risk Report No. 30. Alberta Sustainable Resource Development and Alberta Conservation Association. Edmonton, Alberta, Canada.
- Vonhof, M. 2006. Handbook of inventory methods and standard protocols for surveying bats in Alberta. Prepared by Echo Biological Consulting Inc. for Alberta Fish and Wildlife Division, Edmonton, Alberta, Canada

FIGURES

Document Path: K:\Active Clients\T & T Sand and Gravel\Bamber 2 Pit\Figure\Map\Fig 1 Project Area 20-01145.mxd



- LEGEND**
- Primary Highway
 - Secondary Highway
 - Provincial Boundary
 - Park/Protected Area
 - Indian Reserve/Metis Settlement
 - Populated Place

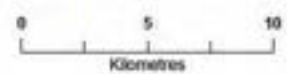


**T&T SAND AND GRAVEL LTD.
BAMBER #2 PIT EIA**

PROJECT AREA

Atlas, 2018; Geobase, 2018; MEMS, 2018

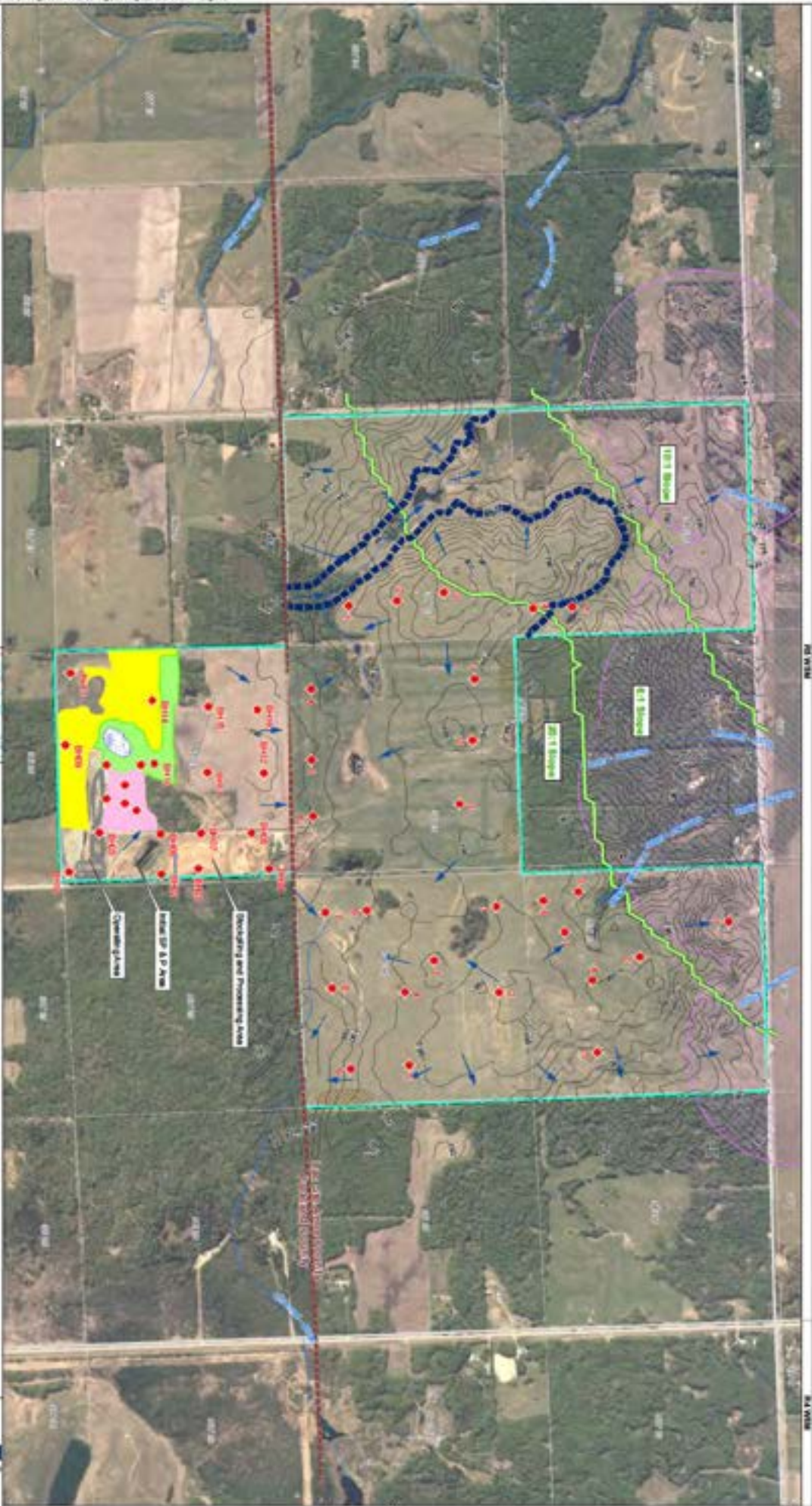
Projection/Datum: UTM Zone 11 Nad 83



PROJECT: 09-00141-02
DRAWN BY: JOC
CHECKED BY: JM
DATE: APRIL 26, 2018

FIGURE
1

Disclaimer: This figure was derived from multiple data sources and while we make every effort to assure its accuracy, Millennium EMS Solutions Ltd. disclaims any representation or warranty and assumes no liability either for any errors, omission or inaccuracies that may occur.



LEGEND

- Burial Site Location
- Storage Buffer
- Existing Contour
- CUL Channelization Boundary
- Charge Contour
- Existing Buffer around Burial Site
- Proposed Pit Boundary (200 acres)
- Existing Conditions (10 acres)
- Reclaimed with Topsoil (5.41 Ha)
- Future Buffer (1.09 Ha)
- In-Lake Buffer
- Proposed Topsoil Pit
- 2.00' Slope
- Watercourse

Proposed Pit Boundary	
Lac Ste. Anne County	327.79 Ha
Parishland County	66.15 Ha
CDP Development Area	
Lac Ste. Anne County	210.45 Ha
Parishland County	66.15 Ha



T&T SAND AND GRAVEL LTD.
BAMBER #2 PIT EIA

EXISTING OPERATIONS

RENKLE 2016 WATER 2016
 Prepared/Drawn: UTM Zone 11 NAD83

Scale: 1:50,000

North Arrow

MILLENNIUM
 2016
 PROJECT: 080074102
 DRAWN BY: JDC
 CHECKED BY: JAM
 DATE: MAR 23 2016
 PROJECT: **2**



LEGEND

- Storage Location
- Storage Block
- Existing Contour
- CUL Channel/Stream Boundary
- Orange Channel
- Adon Buffer around Residential Use
- Slagex of Development
- Proposed Pit Boundary (2019 plan)
- 2m Levee Block

Scaling Block Size	
Blocks 1, 2, 5	1.40 Ha/Block
Blocks 3, 4	1.17 Ha/Block
Blocks 6-139	Based on 130 m x 130 m 1.77 Ha/Block



T&T SAND AND GRAVEL LTD.
BAMBER #2 PIT EIA

OPERATIONS AND MINE PLAN

APPROVALS 2019: MINES, 2019
 REGULATORY/DESIGN: UTM-Zone 11 NAD83

MILLENNIUM

PROJECT: B2007-41-02
 DRAWN BY: JDC
 CHECKED BY: JAM
 DATE: APRIL 26, 2019
 FIGURE 3



- LEGEND**
- Existing Contour (2m Interval)
 - Reclaimed Contour (2m Interval)
 - Drainage Ditch
 - Reclaimed Area
 - Required P1 Boundary

T&T SAND AND GRAVEL, LTD.
NE-26-053-05 WSM, NW/SW-36-053-05 WSM, NW/SW-35-053-05 WSM
BAMBER #2 PT

RECLAIMED CONDITIONS

AMALTA 2018 WATER 2018
 Prepared/Checked: UTM Zone 11, NAD83

MILLENNIUM
 PROJECT: 18000-4182
 DRAWN BY: JDC
 CHECKED BY: JAL
 DATE: JAN 16, 2018
 PICTURE: 4



Important: This plan was prepared from a single source and does not represent a field survey. It is intended for informational purposes only and should not be used for any other purpose without the consent of the engineer.

APPENDIX A: AGREEMENTS WITH PARKLAND



SCHEDULE "A-1"
(STANDARD AGREEMENT)
FOR INDUSTRIAL HAUL
AGREEMENT BETWEEN

PUBLIC WORKS

File #: 2016-H-028

PARKLAND COUNTY
and
T & T SAND AND GRAVEL/214231 ENTERPRISES LTD
(PERTAINING TO DEVELOPMENT PERMIT # 07-D-231)
(ALBERTA ENVIRONMENT APPROVAL # 248371-00-00)

1. Goods and materials to be hauled: **sand and gravel from plant on located at NE 26-53-05-W5M. Municipal Address: 53418 Range Road 51.**
2. Proposed period of haulage: **August 18, 2016 to August 17, 2017.**
3. Designated haul route: **from NE 26-53-05-W5M on Range Road 51 to Hwy 16.**
4. Maximum speed for haulage vehicles (except where lower limits are posted):
as posted.
5. Permitted variations from legal or posted axle weight restrictions: **NIL.**
6. Security provided in the amount of: **\$20,000.00.**
7. Road maintenance requirements during haulage:
 - a. Gravel surface road;
 - i. Road to be maintained with a grader during haulage.
 - ii. Dust to be controlled at all times. Calcium Chloride or other similar approved products must be used for dust control.
 - iii. Soft spots and holes that develop shall be filled with gravel immediately.
 - iv. Water truck to be on site for dust control purposes as when required.
 - b. Oil surface road;
 - i. Holes to be repaired using material approved by Parkland County.
 - c. All road damage to be repaired as it develops. All repair materials subject to County approval.
 - d. Truck Haul In Progress signs to be installed at the following locations:
 - i. **Truck entering sign North and South of pit entrance.**
 - ii. **Truck hauling in progress sign on Twp Rd 534 immediately West of Range Rd 51.**
 - iii. **On Range Road 51 immediately North of Hwy 16.**

Prior to the commencement of hauling operations all drivers shall be given an orientation covering the minimum following topics:

- a. Traffic Haul Safety Strategy
- b. Speed limits
- c. Stopping requirements
- d. Traffic volume and spacing
- e. High traffic flows times
- f. School areas and bus times
- g. Review traffic laws, rules & courtesy
- h. The requirement for all trucks to be in a safe operating condition and the requirements for regular checks to ensure safety.
- i. The requirement for regular cleaning of ASGA signs on trucks to ensure visibility.
- j. Reporting all unsafe driving incidents encountered throughout the haul.

Traffic Haul Safety Strategy

9. The Hauler shall prepare a Traffic Haul Safety Strategy (THSS) detailing the measures he proposes to safely carryout hauling operations throughout the haul route including on the

Provincial Highway system. The Hauler should make every effort to minimize hazards and maximize public safety.

The Hauler shall submit the THSS to Parkland County 14 days prior to any hauling operation taking place. Parkland County will review the THSS and communicate any concerns to the Hauler within 7 days after receiving the THSS. Any issues or concerns regarding the Hauler's proposed THSS shall be addressed by the hauler to the satisfaction of Parkland County prior to the commencement of hauling operations.

The Hauler's THSS shall address the minimum following areas of vehicular and pedestrian traffic safety concerns:

- a. speeding, failing to stop, and other legislated traffic violations;
- b. trucks passing other vehicles along the haul route;
- c. unsafe driving habits (cell phone use, eating, meandering, driving outside the travel lane, etc);
- d. safe haul truck spacing;
- e. traffic control devices (signing);
- f. ensuring normal school bus operations are safely accommodated and not interfered with;
- g. safe access to all other vehicles maintained along the haul route;
- h. public safety when the number of haul trucks become intense;
- i. Potential split haul routes for loaded and unloaded haul vehicles (splitting up traffic volumes on different roads)
- j. listing of internal gravel truck safety infractions;
- k. listing of internal truck disciplinary process for safety infractions;

The Hauler shall notify Parkland County of any haul truck suspended from hauling operations.

Note: Self-reported infractions when accompanied by appropriate disciplinary actions will not be subject to further administrative penalties by Parkland County.

10. Hauler to notify all residents along haul route prior to start of haulage.
11. Hauler to supply company contact and phone number to residents as part of notification process.
12. All gravel trucks to be identified with signage as per the Alberta Sand and Gravel Truck Registry for gravel trucks. The signage shall be consistent with the decals as per the Alberta Sand and Gravel Truck Registry and will include the truck number on a minimum of three sides of the truck/trailer unit (front bumper, driver's side box and rear-most tail gate).

-
13. **Hauler to ensure tires, hitches, sideboards, truck numbering and license plates are reasonably clear of dirt and debris for safety and identification purposes.**
 14. Prior to any driver commencing hauling under this Agreement, a complete listing of trucks used on the haul complete with names and identifying numbers must be provided to the County **on a daily basis (prior to the start of hauling operations) during the haul period** to Community and Protective Services Patrol, **either by phone (780) 968-8400, fax (780) 968-8403 or email patroladmin@parklandcounty.com.**
 15. Maximum hours of operation for the **hauling** shall be:
6:00 am to 6:00 pm Monday to Friday
8:00 am to 4:00 pm Saturday
No hauling on Sunday.
 16. If truck haul is discontinued; the Hauler shall cover all Truck Haul In Progress signs until such time as haul is resumed and notify Community and Protective Services Patrol, **either by phone (780) 968-8400, fax (780) 968-8403 or email patroladmin@parklandcounty.com.**

17. Road restoration requirements upon completion of the haul;
- a) Restore oil surface breaks and damage, restore any failures and rutting in gravel surfaces, blading and re-gravel where required.
 - b) Restore dust controlled areas to pre-haul condition.
 - c) Re-shape shoulders and or road slopes that have been pushed out or damaged as a result of the haul.
18. The attached list of Infractions and Penalties as noted below forms part of this agreement:

HAUL AGREEMENTS
INFRACTIONS AND PENALTIES

NOTE: These penalties are in addition to applicable fines under the applicable by-laws or provincial statutes. Also, a permit holder's record of penalties may affect ability to obtain a subsequent Development Permit.

Parkland County will not tolerate non-compliance of any of the above conditions. Parkland shall be at liberty to immediately suspend the truck haul operation if any of the conditions are breached.

<i>INFRACTIONS</i>	<i>PENALTIES</i>
Hauling outside designated Route without permission	Immediate 1 day suspension of haul 2 nd infraction – one week suspension 3 rd infraction – one month suspension of Haul Agreement. Removal of truck and driver from approved haul for first infraction
Other Traffic Safety Act, Regulations and Traffic Bylaw Infractions	Removal of truck and driver from haul for 24 hours for each infraction 2 nd infraction within a 6 month period for the same driver – one day suspension of haul agreement
Fail to adhere to Haul Agreement Speed Limit	Removal of truck and driver from haul for 24 hours for each infraction 2 nd infraction within a 6 month period for the same driver – one day suspension of haul agreement
Failure to repair and maintain roadways and/or failure to provide adequate dust control in a reasonable time frame	1 st infraction – one day suspension of haul agreement 2 nd infraction – 5 day suspension of haul agreement 3 rd infraction – 1 month suspension of haul agreement 4 th infraction – cancellation of haul agreement


Missing or non visible/readable, expired or counterfeit truck numbering decals	<p>One warning per truck and driver</p> <p>2nd infraction – removal of truck and driver for one day from haul and one day suspension of haul agreement regardless of driver</p> <p>3rd infraction – removal of truck and driver for one week and one week suspension of haul agreement regardless of driver</p>
Truck movements before or after approved times or designated haul periods (Note: Trucks may not proceed to pit until hours of haul are in effect)	<p>1st infraction – truck and driver suspended for 1 day and haul agreement suspended for 1 day</p> <p>2nd infraction – truck and driver removed from haul and haul agreement suspended for one week</p> <p>3rd infraction – haul agreement suspended for one month</p> <p>4th infraction – haul agreement cancelled</p>
Failure to provide list of trucks to Patrol prior to haul	<p>1st infraction – verbal warning</p> <p>2nd infraction – ½ day suspension of haul</p> <p>3rd infraction – 1 day suspension of haul</p> <p>4th infraction – 3 day suspension of haul</p>

INFRACTIONS	PENALTIES
Failure to erect proper signage as specified in Haul Agreement	1 st infraction – verbal warning 2 nd infraction – 1 day suspension of haul
Drivers not licensed and/or truck not insured.	Removal of driver and/or truck for 6 months from haul
Driver and/or truck operating while under administrative suspension	Removal of driver and/or truck for 6 months from haul and a 3 day suspension of haul

NOTE: Road shall be left in a condition which, in the opinion of the County, is equal to the condition prior to the commencement of the haul.

Where a driver and/or truck is under an administrative suspension or removed from a different haul in the County due to an infraction under a haul agreement, the driver and/or truck is prohibited from hauling under this haul agreement without prior written approval from the County. Parkland County will be responsible for providing information regarding driver and/or truck suspensions.

I have read and agree to the terms of this Industrial Haul Agreement.

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
Per: 
T & T Sand & Gravel / 214231 Enterprises Ltd
T & T SAND & GRAVEL LTD.
214231 ENTERPRISES LTD.

Contact Name: John Thomas
Phone #: **This information redacted as per Protection of Privacy Act (POPA)**

g:\public\works\06 public works general\industrial haul agreements\agreements\T & T sand and gravel\214231 enterprises\2016 T & T sand (214231) schedule a.doc

53109A Hwy 779, Parkland County, AB, T7Z 1R1 Tel: 780.968.8448 Fax: 780.968.8451 Toll free: 1.888.880.0858 www.parklandcounty.com

The personal information provided by you is being collected under the authority of the *Municipal Government Act* and will be used for the purposes under that Act. The personal information that you provide may be made public, subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. Questions about the collection of this information can be directed to the Freedom Of Information and Protection Of Privacy Coordinator for Parkland County, 53109A Hwy 779, Parkland County, Alberta T7Z 1R1 (780.968.3229).

APPENDIX B: WETLAND DESKTOP REVIEW



**#148, 2257 Premier Way
Sherwood Park, AB T8H 2M8
tel: 780.496.9048
fax: 780.496.9049**

Suite 325, 1925 18 Avenue NE
Calgary, AB T2E 7T8
tel: 403.592.6180
fax: 403.283.2647

#106, 10920 84 Avenue
Grande Prairie, AB T8V 6H2
tel: 780.357.5500
fax: 780.357.5501

**toll free: 888.722.2563
www.mems.ca**

Bamber #2 Pit Wetland Desktop Review

Prepared for:
T&T Sand and Gravel

Prepared by:
Millennium EMS Solutions Ltd.
#148, 2257 Premier Way
Sherwood Park, Alberta
T8H 2M8

May 2018
File #09-00141

Table of Contents

	Page
Table of Contents.....	i
List of Tables	ii
List of Figures	ii
List of Appendices	ii
1.0 INTRODUCTION.....	1
2.0 SITE LOCATION	1
2.1 Local Setting	1
3.0 METHODS	1
3.1 Preliminary Mapping and Review of Historical Information.....	1
3.2 Searches and Review of Historical Information.....	2
4.0 RESULTS	2
4.1 ACIMS Search	3
4.2 FWMIS Searches.....	3
4.3 Historical Aerial Photograph review	3
4.4 Estimated Wetland Value.....	5
5.0 POTENTIAL IMPACTS.....	5
5.1 Avoidance.....	5
5.2 Mitigation.....	6
5.3 Replacement	6
6.0 SUMMARY AND CONCLUSIONS.....	6
7.0 CLOSURE	7
8.0 REFERENCES	8

List of Tables

		Page
Table 1	Historical Aerial Photographs and Climatic Data.....	2
Table 2	Summary of Historical Aerial Photograph Review	4
Table 3	Proposed Replacement Area for Wetlands within NW/SW/SE 35-053-05 W5M and NW/SW 36-053-05 W5M.....	6

List of Figures

Figure A1	1950 Aerial Photograph
Figure A2	1967 Aerial Photograph
Figure A3	1975 Aerial Photograph
Figure A4	1981 Aerial Photograph
Figure A5	1995 Aerial Photograph
Figure A6	2007 Aerial Photograph
Figure A7	2013 Aerial Photograph

List of Appendices

Appendix A	Historical Aerial Photographs
Appendix B	ACIMS and FWMIS Searches

1.0 INTRODUCTION

Millennium EMS Solutions Ltd. (MEMS) was retained by T&T Sand and Gravel (T&T) to conduct a desktop review of potential wetlands in NW/SW/SE-35-53-5 W5M and W ½ Section 36-53-5-5 W5M. (the Study Area), approximately 85 km west of Edmonton, Alberta within Lac St. Anne County. T&T is planning to operate a gravel pit (the Bamber 2 Pit) within the Study Area (Figure 1).

A portion of the proposed pit (the Project) in NE 26-53-5 W5M is situated in Parkland County and has received approval from Parkland County. The desktop review is being conducted in support of a Development Permit application to Lac St. Anne County for the remainder of the proposed pit located in the Study Area.

2.0 SITE LOCATION

2.1 Local Setting

The Study Area is located on private land in Parkland County, approximately 85 km west of the City of Edmonton. It is situated within the North Saskatchewan River Basin (Government of Alberta 2018a) in the Dry Mixedwood Natural Subregion of the Boreal Forest Natural Region of Alberta (Natural Regions Committee 2006). The average yearly precipitation from 1955 to 2015 is 499 mm (Government of Alberta 2018b).

The land use surrounding the Study Area is predominantly agricultural, with numerous aggregates sites located immediately east and south of the Study Area. It is located approximately 1.3 km southeast of the village of Silver Sands and 1.6 km east of Lake Isle. The Yellowhead Highway (Highway 16) is located approximately five kilometres south of the Study Area.

3.0 METHODS

The methods utilized in preparing the desktop review are presented in Section 3.1 and 3.2.

3.1 Preliminary Mapping and Review of Historical Information

The review of historical information, as well as the desktop delineation of the Study Area, were based on the *Alberta Wetland Identification and Delineation Directive* (Government of Alberta 2015a) and the Alberta Wetland Classification System (Government of Alberta 2015b).

Historical aerial photographs were selected to help determine the historical boundaries of any potential wetlands within the Study Area. The selection of the aerial photographs was based on climatic data obtained from Alberta Agriculture and Rural Development's Agroclimatic Information Service (ACIS) website (Government of Alberta 2018b) to ensure inclusion of wet years, dry years and near normal years. The selected aerial photographs and the yearly precipitation for each year of the

selected photograph are presented in Table 1, and the historical photography presented in Appendix A.

Air Photo (MM/DD/YY)	Photo ID (Roll AS# and Photo)	Resolution	Season¹	Precipitation Year (Dry, Wet, Normal, Near Normal)	Yearly Precipitation (mm)²
05/09/1950	AS134 Frame 85	1:40000	Spring	Not available	Not available
10/08/1967	AS978 Frame 13	1:31680	Summer	Dry	336
05/28/1975	AS1425 Frame 248 and 265	1:12000	Spring	Wet	541
08/08/1981	AS22307 Frame 295	1:60000	Summer	Normal	474
09/04/1995	AS4657 Frame 189	1:30000	Fall	Wet	550
2007	Valtus	40 cm	Unknown	Normal	500
2013	Valtus	40 cm	Unknown	Dry	443

¹ Spring (April-June); Summer (June-Sept); Fall (Sept-Nov.)

² Government of Alberta 2018b. Alberta Agriculture and Rural Development's Agroclimatic Information Service (ACIS) website.

3.2 Searches and Review of Historical Information

The following databases were searched:

- Alberta Conservation Information Management System (ACIMS) on February 5, 2018(ACIMS 2018);
- Fisheries & Wildlife Management Information System (FWMIS) database on February 5, 2018 (Government of Alberta 2018c); and
- Estimated Wetland Value by Section layer of the GeoDiscover Alberta Viewer (Government of Alberta 2018d) was searched on February 5, 2018, to obtain a preliminary estimate of the value of the wetlands in the Study Area and the breakdown of the areas for each wetland value in the Study Area.

4.0 RESULTS

Observations from the desktop searches and historical aerial photograph review are provided below in Sections 4.1 to 4.4.

4.1 ACIMS Search

A search of the ACIMS database did not identify any occurrences of rare or listed species around the Study Area.

4.2 FWMIS Searches

A search of the FWMIS databases identified American kestrel is listed by Alberta Environment and Parks (AEP) as Sensitive (Government of Alberta 2015c) within a three-kilometre radius of the Study Area but did not identify any occurrences of American kestrel or any other species within one kilometer of the Study Area. It identified four unnamed watercourses:

- Unnamed ID 43645 encroaches onto the north half of Section 35;
- Unnamed ID 43672 traverses the southwest portion of the Study Area in SW 35,
- Unnamed ID 43786 encroaches onto SW 36; and
- Unnamed ID 43686 encroaches into the southwest portion of NW 36.

The drainages are un-classed, non-fish bearing drainages with no specified Restricted Activity Period (RAP).

4.3 Historical Aerial Photograph review

A summary the historical photograph review and wetlands identified in the desktop review is presented in Table 2. During the historical photograph review and Merged Wetland Inventory review, five potential wetlands were identified on the property (Wetlands WT A through WT E). Wetland WT C appears to be a potential temporary or seasonal marsh; wetlands WT A and WT B appear to be potentially temporary or seasonal marshes, while wetlands WT D and WT E appear to be potential temporary marshes. The four unnamed drainages identified in the FWMIS search appear to be historically ephemeral drainages, with only drainage 43762 showing historical indications of holding water.

The land use surrounding the Study Area appears to be forested in the 1950 aerial photographs, and then selectively cleared of trees in the remaining historic photographs. Most of the S ½ Sec 35 and SW 36 has been cleared by 1995, and by 2007 most of NW 35 has been cleared. Dugouts were constructed in wetland WT D in 1995, and in wetlands WT B and WT C in 2007. The ephemeral drainages are faintly visible through the various photographs, and in 1995 a trail or ditch appears to connect wetland WT D with drainage 43786.

Table 2 Summary of Historical Aerial Photograph Review

Year of Aerial Photograph	Presence of Water or Inundation	Assessment of Permanence (Yes/No)	Comments
1950	Dry, forested	No signs of permanent open water	Entire area is wooded except for isolated clearings in the SW corner of NW 35 and along drainage 43762 in SW 35. Wetland WT C is clearly visible in a cleared portion of SE 35. Channel of drainage 43762 is slightly visible winding through the forest, and appears to pass through wetlands WT A and WT B. It ends prior to the west edge of wetland C. All other wetlands are not visible. Unnamed drainage 43686 is faintly visible while unnamed drainages 43786 and 43645 are not visible.
1967	Dry, forested	No signs of permanent open water	Entire area remains wooded, with cut lines in S1/2 Sec 35 visible. There is also some additional clearing in SW36. Wetlands WT A, WT B and WT C are faintly visible, all other wetlands are not visible. Observations of unnamed drainages remain the same.
1975	Wet, partially forested	Appearance of open water in Wetlands A and B and unidentified drainage 43762.	More clear patches in forest visible in SW 35, and most of SE 35 has been cleared. Wetlands WT A and WT B have water in them; and the area just northwest of wetland WT A in the drainage appears to have been partially converted to a dugout. Wetlands WT C and WT D are visible and appear wet but have no open water. Wetland E is still not visible. Drainage 43762 has water in it near Wetland WT A.
1981	Dry, vegetated	Appearance of open water in dugout in unidentified drainage 43838. No other observations of open water.	Northeast portion of SE 35 has been cleared, and no open water observed in the wetlands. Wetland WT E is still not visible. Drainages observations remain unchanged from the previous aerial photograph.
1995	Wet, vegetated	Appearance of open water in dugout constructed in wetland WT D.	Much of S1/2 Sec 35 and SW 36 has been cleared, while NW 35 remains forested. A dugout now appears in Wetland D, and a trail or ditch connects drainage 43786 and wetland WT D. Wetland WT C is faintly visible. Wetlands WT A and WT B are faintly visible. Drainages observations remain unchanged from the previous aerial photographs.

Year of Aerial Photograph	Presence of Water or Inundation	Assessment of Permanence (Yes/No)	Comments
2007	Wet, vegetated	Open water in dugouts constructed in wetlands WT C and WT D.	Dugout now appears in wetlands WT B and WT C. Wetland WT E is faintly visible for the first time. Outline of unnamed drainage 43786 is visible and appears moist Drainages 43762 and 43645 appear moist, while drainage 43686 is not visible.
2013	Dry, vegetated	Open water in drainage 43762 in dugout northwest of wetland WT-A and where dugouts have been constructed in wetlands WT B and WT C.	Most of W ½ Section 35, SE 35 and SW 36 has been cleared. Water appears in all dugouts but not in the wetlands.

4.4 Estimated Wetland Value

The preliminary search of the estimated wetland value using the Alberta Merged Wetland Inventory (Government of Alberta 2016e) identified the potential for 5 ha of D-value wetlands in Section 35 and two ha of D-value wetlands in Section 36.

5.0 POTENTIAL IMPACTS

Potential effects to wetland resources include:

- alterations to wetland resulting in change of wetland type or permanence;
- loss of habitat for plants and animals;
- disruption to drainage patterns within the wetland resulting in increased sediment runoff; and
- increase in the abundance of noxious species in the wetlands and drainages.

The *Alberta Wetland Mitigation Directive* (Government of Alberta 2016f) outlines three main strategies to avoid or minimize potential impacts: avoidance, minimization and replacement.

5.1 Avoidance

Avoidance of the wetlands and unidentified drainages is not feasible as they are in the areas where gravel will be excavated. However, a six-meter vegetated filter strip (GoA) 2017a will be maintained along un-named drainage 43762 during construction and operation of the proposed project.

5.2 Mitigation

The disturbance to the wetlands and un-named drainages in the long term cannot be avoided; however, disturbance can be mitigated by limiting the timing of the disturbance to the time of the excavation of the pit.

5.3 Replacement

Minimization of adverse effects to the wetlands is not possible, and a resulting permanent loss of wetland area will occur. The proponent intends to replace the disturbed wetlands with constructed wetlands which will follow the *Wetland Construction Guide and Directive* to be released in 2018.

Table 3 below presents the potential wetland areas delineated from the historical photographs, the classification of all wetlands, and shows the total potential area of wetlands present within the study area.

Table 3 Proposed Replacement Area for Wetlands within NW/SW/SE 35-053-05 W5M and NW/SW 36-053-05 W5M		
Wetland Number	AWCS Classification Class-Form-Type^{1,2,3}	Area of Wetland
Wetland A	Marsh-Graminoid-Temporary or Seasonal (M-G-II or III)	0.51
Wetland B	Marsh-Graminoid-Temporary or Seasonal (M-G-II or III)	0.78
Wetland C	Marsh-Graminoid-Seasonal (M-G-III)	3.36
Wetland D	Marsh-Graminoid-Temporary (M-G-II)	0.26
Wetland E	Marsh-Graminoid-Temporary (M-G-II)	0.73
Total Potential Replacement Area		5.64

¹ Class is ephemeral (E), marsh (M), shallow open water (W) or swamp (S)

² Form is Graminoid (G), submerged or floating aquatic vegetation (A) or bare (B), shrubby (S), wooded deciduous (Wd)

³ Type is salinity (f-fresh, sb is slightly brackish, mb is moderately brackish, ss is subsaline) and water permanence (Temporary (II), Seasonal (III), Semi-permanent (IV), Permanent (V))

6.0 SUMMARY AND CONCLUSIONS

A search of the historical photographs and databases indicates that historically the Study Area was forested and has been cleared incrementally since 1950. The potential wetlands that were identified during the review would be temporary or seasonal marshes which would be removed during the operation of the gravel pit. Wetlands WT B, WT C and WT D have had dugouts constructed within

the wetlands. The boundaries of the wetlands are indistinct, and a field assessment would be required to accurately delineate the wetlands to determine the final wetland replacement area.

The four unidentified drainages are ephemeral, un-classed, non-fish bearing waterbodies with no Restricted Activity Periods. The boundaries of the drainages are un-distinct and only drainage 43762 in SW 35 appears to hold water at anytime. A dugout appears to have been constructed northwest of wetland WT A within drainage 43762 and aerial photographs from 1995 indicate a trail or ditch from wetland WT D to drainage 43786.

A search of the ACIMS and FWMIS databases did not identify any rare or listed plants and wildlife within a one-kilometer radius of the Study Area.

7.0 CLOSURE

We thank you for the opportunity to be of assistance. Should you have any questions, please contact either of the undersigned at 780.496.9048.

Yours truly,

Millennium EMS Solutions Ltd.

Prepared by:

This information redacted as per Protection of Privacy
This information redacted as per Protection of Privacy
This information redacted as per Protection of Privacy
This information redacted as per Protection of Privacy
This information redacted as per Protection of Privacy
A. J. (POPA)

Darcy Meyers, P.Ag, P. Biol.
Vegetation Ecologist

Reviewed by:

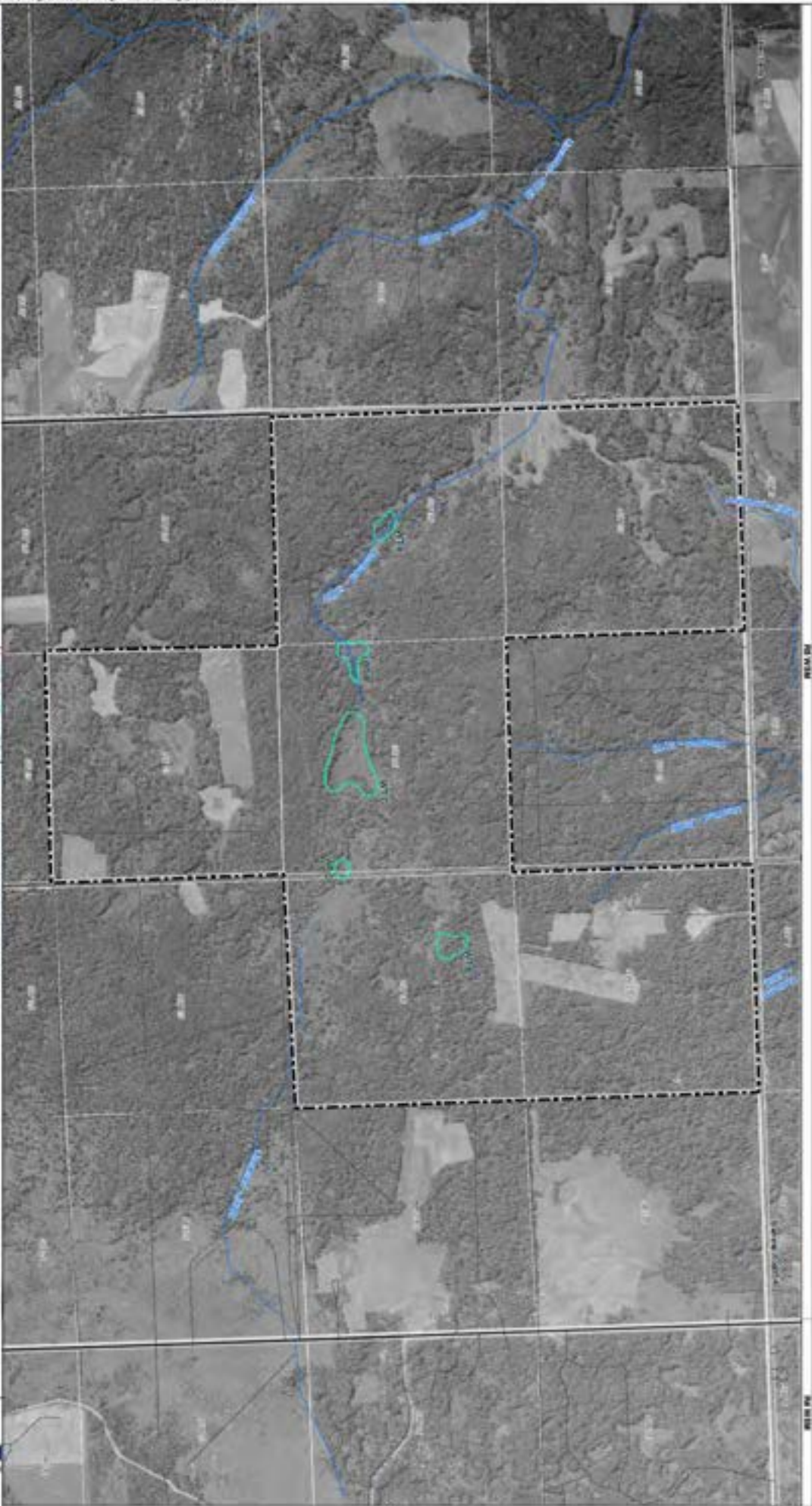
This information redacted as per
This information redacted as per
This information redacted as per
This information redacted as per
This information redacted as per
This information redacted as per
Protection of Privacy Act (POPA)

Grant Woynarowich
Environmental Scientist, B.Sc., P.Ag.

8.0 REFERENCES

- ACIMS 2018. <https://www.albertaparks.ca/acims-data/#> Accessed February 5, 2018.
- Government of Alberta (GoA) 2017a. Buffer Zones for a Healthy Watershed. Revised July 20, 2017. Available online at: [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/irr6419](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/irr6419)
- Government of Alberta. 2018a. Watersheds of Alberta. <http://geodiscover.alberta.ca/Viewer/?Viewer=GDA>. Accessed February 5, 2018.
- Government of Alberta 2018b. Alberta Agriculture and Rural Development's Agroclimatic Information Service (ACIS) website. February 5, 2018.
- Government of Alberta. 2018c. Fish and Wildlife Management Information System (FWMIS) Internet Mapping Tool. Alberta Environment and Sustainable Resource Development, Edmonton, Alberta. Available online at: https://maps.alberta.ca/FWIMT_Pub/Viewer/?TermsOfUseRequired=true&Viewer=FWIMT_Pub (February 5, 2018).
- Government of Alberta 2018d. GeoDiscover Alberta. <http://geodiscover.alberta.ca/Viewer/?Viewer=GDA> Accessed February 5, 2018
- Government of Alberta 2016f. *Alberta Wetland Mitigation Directive*. Water Policy Branch, Alberta Environment and Parks. Edmonton, Alberta. Updated February 16, 2017
- Government of Alberta 2015a. *Alberta Wetland Identification and Delineation Directive*. June 15, 2015.
- Government of Alberta 2015b. *Alberta Wetland Classification System*. June 1, 2015.
- Government of Alberta 2015c. *Alberta Wild Species General Status Listing 2015*. Updated March 1, 2017.
- Natural Regions Committee. 2006. Natural Regions and Subregions of Alberta. Compiled by D.J. Downing and W.W. Pettapiece. Government of Alberta. Pub. No. T/852.

APPENDIX A: HISTORICAL PHOTOGRAPHS AND AVAILABLE PHOTOGRAPH LIST



- LEGEND**
- Secondary Road
 - Gravel Road
 - Transitional/Unimproved Road
 - Watercourse (Channel)
 - Watercourse (Scrubland)
 - Aggregated Wetland Location
 - Proposed PVI Boundary



T&T SAND AND GRAVEL LTD.
NE 26-053-05 W5M, NW/SW-36-053-05 W5M
BAMBERS #2 PVI

1950 AERIAL PHOTOGRAPH

ANALYSIS DATE: 2018-03-27
 ANALYST: J. B. BROWN
 PROJECT: 1950 AERIAL PHOTOGRAPH
 PROJECT NUMBER: 1950 AERIAL PHOTOGRAPH
 PROJECT DATE: 2018-03-27
 PROJECT LOCATION: UTM Zone 11N, 500000



MILLER

PROJECT: 1950 AERIAL PHOTOGRAPH
 DRAWN BY: J. B. BROWN
 CHECKED BY: J. B. BROWN
 DATE: MARCH 15, 2018

FIGURE A1



- LEGEND**
- Secondary Road
 - Gravel Road
 - Track/Drain/Unimproved Road
 - Watercourse (Channel)
 - Watercourse (Soakaway)
 - Aggregated Soakaway Location
 - Proposed P1 Boundary



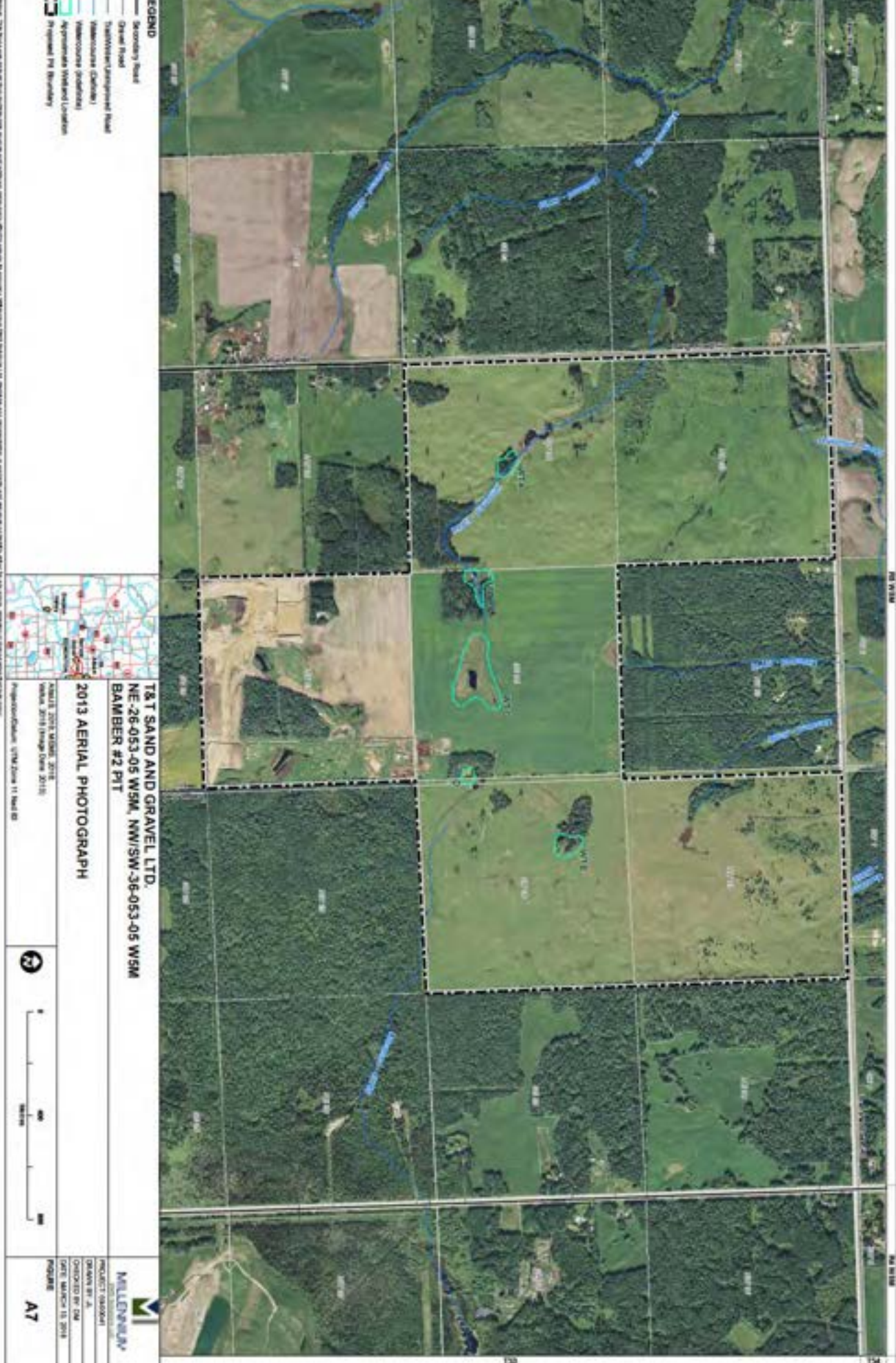
T&T SAND AND GRAVEL LTD.
 NE-26-053-05 WSM, NW/SW-36-053-05 WSM
BAMBER #2 P1

2007 AERIAL PHOTOGRAPH

MAPS: 2016 WSM, 2016
 DATA: 2016 (Image Date 2017)
 Projection/Datum: UTM Zone 11, NAD 83




PROJECT: 080041
 DRAWN BY: J.A.
 CHECKED BY: C.M.
 DATE: MARCH 15, 2018
 PICTURE: **A6**



- LEGEND**
- Secondary Road
 - Gravel Road
 - Thatched/Unimproved Road
 - Watercourse (Channel)
 - Watercourse (Natural)
 - Agricultural Irrigation
 - Proposed PT Boundary

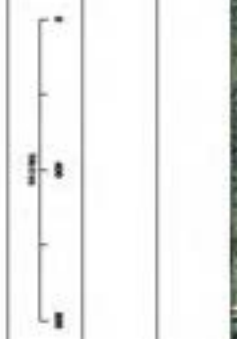


T&T SAND AND GRAVEL LTD.
NE-26-053-05 WSM, NW/SW-36-053-05 WSM
BAMBER #2 PT

2013 AERIAL PHOTOGRAPH

APRILS 2013 (MARCH 2013)
 DATA 2013 (MARCH 2013)

Project/Client: UTM Zone 11, NAD 83



MILLENNIUM

PROJECT: 0000001
 DRAWN BY: J.A.
 CHECKED BY: D.M.
 DATE: MARCH 15, 2013

POSURE
A7

APPENDIX B: FWMIS AND ACIMS SEARCHES

Search ACIMS Data

Date: 5/2/2018

Requestor: Consultant

Reason for Request: Element Occurrence Search

SEC: 35 **TWP:** 053 **RGE:** 05 **MER:** 5



Non-sensitive EOs: 0 (Data Updated: October 2017)

M-RR-TTT-SS	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D
-------------	-------	-------	--------	-------	----------	------------

No Non-sensitive EOs Found: Next Steps - [See FAQ](#)

Sensitive EOs: 0 (Data Updated: October 2017)

M-RR-TTT	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D
----------	-------	-------	--------	-------	----------	------------

No Sensitive EOs Found: Next Steps - [See FAQ](#)

Protected Areas: 0 (Data Updated: October 2017)

M-RR-TTT-SS	PROTECTED AREA NAME	TYPE	IUCN
-------------	---------------------	------	------

No Protected Areas Found

Crown Reservations/Notations: 0 (Data Updated: October 2017)

M-RR-TTT-SS	NAME	TYPE
-------------	------	------

No Crown Reservations/Notations Found

Search ACIMS Data

Date: 5/2/2018

Requestor: Consultant

Reason for Request: Element Occurrence Search

SEC: 36 **TWP:** 053 **RGE:** 05 **MER:** 5



Non-sensitive EOs: 0 (*Data Updated: October 2017*)

M-RR-TTT-SS	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D
-------------	-------	-------	--------	-------	----------	------------

No Non-sensitive EOs Found: Next Steps - [See FAQ](#)

Sensitive EOs: 0 (*Data Updated: October 2017*)

M-RR-TTT	EO_ID	ECODE	S_RANK	SNAME	SCOMNAME	LAST_OBS_D
----------	-------	-------	--------	-------	----------	------------

No Sensitive EOs Found: Next Steps - [See FAQ](#)

Protected Areas: 0 (*Data Updated: October 2017*)

M-RR-TTT-SS	PROTECTED AREA NAME	TYPE	IUCN
-------------	---------------------	------	------

No Protected Areas Found

Crown Reservations/Notations: 0 (*Data Updated: October 2017*)

M-RR-TTT-SS	NAME	TYPE
-------------	------	------

No Crown Reservations/Notations Found

Fish and Wildlife Internet Mapping Tool (FWIMT)

(source database: Fish and Wildlife Management Information System (FWMIS))

Species Summary Report

Report Created: 5-Feb-2018 10:13

Species present within the current extent :

Fish Inventory

Wildlife Inventory

Stocked Inventory

AMERICAN KESTREL

Buffer Extent

Centroid (X,Y):	Projection	Centroid: (Qtr Sec Twp Rng Mer)	Radius or Dimensions
525171, 5939056	10-TM AEP Forest	NE 35 53 5 5	2 kilometers

Contact Information

For contact information, please visit:

<http://aep.alberta.ca/about-us/contact-us/fisheries-wildlife-management-area-contacts.aspx>

Fish and Wildlife Internet Mapping Tool (FWIMT)

(source database: Fish and Wildlife Management Information System (FWMIS))

Species Summary Report

Report Created: 5-Feb-2018 10:16

Species present within the current extent :

Fish Inventory

Wildlife Inventory

Stocked Inventory

AMERICAN KESTREL

Buffer Extent

Centroid (X,Y):	Projection	Centroid: (Qtr Sec Twp Rng Mer)	Radius or Dimensions
525343, 5939009	10-TM AEP Forest	SE 35 53 5 5	3 kilometers

Contact Information

For contact information, please visit:

<http://aep.alberta.ca/about-us/contact-us/fisheries-wildlife-management-area-contacts.aspx>

APPENDIX C: WILDLIFE DESKTOP REVIEW



#148, 2257 Premier Way
Sherwood Park, AB T8H 2M8
tel: 780.496.9048
fax: 780.496.9049

Suite 325, 1925 18 Avenue NE
Calgary, AB T2E 7T8
tel: 403.592.6180
fax: 403.283.2647

#106, 10920 84 Avenue
Grande Prairie, AB T8V 6H2
tel: 780.357.5500
fax: 780.357.5501

toll free: 888.722.2563
www.mems.ca

Desktop Wildlife Assessment of “Bamber #2” Pit Operations NW, SW & SE 35-053-05 W5M NW & SW 36-053-05 W5M

Prepared for:
**214131 Enterprises Ltd.
(T&T Sand and Gravel)**

This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)
This information redacted as per
the Protection of Privacy Act (POPIA)

Prepared by:
Millennium EMS Solutions Ltd.
#148, 2257 Premier Way
Sherwood Park, AB
T8H 2M8

May 2018
File # 09-00141-02

Table of Contents

	Page
Table of Contents.....	i
List of Tables	ii
List of Figures	ii
List of Appendices	ii
Distribution List.....	ii
1.0 INTRODUCTION.....	1
2.0 SITE LOCATION	1
2.1 Local Setting	1
3.0 METHODS	1
3.1 Review of Existing Information.....	1
3.2 Wildlife Species of Conservation Concern.....	2
3.3 General Provincial Status.....	2
3.4 Legislated Provincial Status	3
3.5 Federal Status	4
4.0 EXISTING CONDITIONS	5
4.1 Wildlife Habitat and Sensitive Wildlife Zones.....	5
4.2 Wildlife Species of Concern.....	5
5.0 POTENTIAL IMPACTS.....	10
6.0 PROPOSED MITIGATION	10
7.0 CLOSURE	12
8.0 REFERENCES	14

List of Tables

Table 1	Definitions of Provincial General Status Categories
Table 2	Definitions of the Legal Status Categories Under Alberta’s <i>Wildlife Act</i>
Table 3	Definitions of Federal Status Categories for Wildlife
Table 4	Wildlife Species of Concern That Could Potentially Occur in the Study Area

List of Figures

Figure 1	Wildlife Desktop Review
----------	-------------------------

Distribution List

Client	1 copy
County of Lac Ste. Anne	1 copy
MEMS	1 copy

1.0 INTRODUCTION

Millennium EMS Solutions Ltd. (MEMS) was retained by T&T Sand and Gravel (T&T) to conduct a desktop review of potential wildlife present in NW/SW/SE-35-53-5 W5M and W ½ Section 36 53 5 5 W5M.(the Study Area), approximately 85 km west of Edmonton, Alberta within Lac Ste. Anne County. T&T is planning to operate a gravel pit (the Bamber 2 Pit) within the Study Area (Figure 1).

A portion of the proposed pit (the Project) in NE 26-53-5 W5M is situated in Parkland County and has received approval from Parkland County. The desktop review is being conducted in support of a Development Permit application to Lac Ste. Anne County for the remainder of the proposed pit located in the Study Area.

2.0 SITE LOCATION

2.1 Local Setting

The Study Area is located on private land in Parkland and Lac Ste. Anne County, approximately 85 km west of the City of Edmonton. It is situated within the North Saskatchewan River Basin (Government of Alberta 2018a) in the Dry Mixedwood Natural Subregion of the Boreal Forest Natural Region of Alberta (Natural Regions Committee 2006). The average yearly precipitation from 1955 to 2015 is 499 mm (Government of Alberta 2018b).

The land use surrounding the Study Area is predominantly agricultural, with numerous aggregates sites located immediately east and south of the Study Area. It is located approximately 1.3 km southeast of the village of Silver Sands and 1.6 km east of Lake Isle. The Yellowhead Highway (Highway 16) is located approximately 5 km south of the Study Area.

3.0 METHODS

3.1 Review of Existing Information

Various sources of information were used to assess the potential occurrence of wildlife species of special concern in the study area including those provincially listed as 'At Risk', 'May Be At Risk', and 'Sensitive' by the Fish and Wildlife Division (GoA 2011, AEP 2015), and those listed nationally by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC 2018). Other information sources included the Fish and Wildlife Management Information System (FWMIS 2018), and North American Breeding Bird Surveys (Pardieck *et al.* 2018).

A query of the Fish Wildlife Management Information System (FWMIS) database was conducted using a 3 km search radius centered on the Study Area (Figure 1) and any important wildlife species

locations and/or sensitive habitats identified were noted. The North American Breeding Bird Survey (BBS) is conducted by volunteers who survey routes during the peak bird breeding season (May 28 to July 7) (Pardieck et al. 2018). Each BBS route is 39.4 km long, and on each route, volunteers make 50 stops (0.4 km intervals) recording the species of every bird seen within a three-minute observation period. The start and end points of each route, and the direction in which they run, are selected randomly to ensure that a variety of habitats are covered. The Isle Lake BBS Route (No. 04-330) follows a local road passes along the north side of the Study Area, beginning just south Lac Ste Anne and ending on the north side of Isle Lake (Figure 1).

3.2 Wildlife Species of Conservation Concern

Wildlife species of conservation concern are important to consider in wildlife assessments because of their status and sensitivity to disturbance or changes in habitat. By managing the landscape for species of concern, habitats for a broad range of other wildlife species may also be conserved. The following sections review the provincial and federal ranking systems used to identify wildlife species of concern in the Study Area.

3.3 General Provincial Status

In Alberta, 602 species have an assigned non-legislated general provincial status based on information about their population sizes, distribution trends, and potential threats to their persistence (AEP 2018a, Table 1). These status ranks are updated every five years and are intended to help government and non-governmental organizations set conservation priorities and to alert industry to species that may require special consideration when making land use decisions.

Rank	Definitions¹
At Risk	Any species known to be “At Risk” of extinction or extirpation after a formal detailed status assessment.
May Be At Risk	Any species that “May Be At Risk” of extinction or extirpation, and is therefore a candidate for detailed risk assessment.
Sensitive	Any species that is not at risk of extinction or extermination, but might require attention or protection to prevent it from becoming at risk.
Secure	A species that is not “At Risk”, “May Be At Risk”, or “Sensitive”.
Undetermined	Any species where there is insufficient information, knowledge, or data available to reliably evaluate its general status.
Not Assessed	Any species has not examined in the General Status of Alberta Wild Species 2010 report.

Rank	Definitions¹
Exotic/Alien	Any species that has been introduced due to human activities.
Extirpated/ Extinct	Any species no longer thought to be present in Alberta (“Extirpated”) or no longer believed to be present anywhere in the world (“Extinct”).
Accidental/ Vagrant	Any species occurring infrequently and unpredictably in Alberta, <i>i.e.</i> outside its normal range due to accidents during migration, unusual breeding behaviour by a small number of individuals, or unusual weather circumstances.

¹ Source: GoA 2011.

The general provincial status of all wildlife species occurring in Alberta is determined following consultation with wildlife professionals and the analysis of available data. The provincial ranking system serves as a first step for determining which species should be designated as “At Risk” or “May Be at Risk”. These species often require further detailed study, and are given priority when being considered for federal listing by the COSEWIC. The general status of wildlife in Alberta is divided into nine categories based on a number of criteria including abundance and distribution, population trends, documented and presumed threats to the species and their habitat, and whether the species is native to Alberta (Table 1, GoA 2011).

3.4 Legislated Provincial Status

Alberta’s *Wildlife Act* provides legal protection for species considered to be threatened or endangered in the province. The *Act* charges the Endangered Species Conservation Committee with evaluating the status of potentially threatened or endangered wildlife (Table 2). Species that are classified as “Threatened” or “Endangered” under the *Act* are protected from harm, either directly or indirectly in Alberta. This includes protecting nests and dens of threatened and endangered species throughout the year and providing penalties for killing or trafficking endangered species (AEP 2015).

Status	Definition¹
Extinct	A species that no longer exists in the world.
Extirpated	A species that no longer exists in the wild in Alberta, but occurs elsewhere in the wild.
Endangered	A species facing imminent extirpation or extinction.
Threatened	A species likely to become endangered if limiting factors are not reversed.

Status	Definition¹
Species of Special Concern	A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.
Data Deficient	A species for which there is insufficient scientific information to support status designation.

¹Source: AEP (2015).

3.5 Federal Status

Species ranked as "At Risk" or "May Be At Risk" at the provincial level may be considered candidates for a more detailed assessment by COSEWIC. COSEWIC was established within the *Species at Risk Act* (SARA) as an independent body of experts responsible for identifying and assessing species that are at risk of extinction (SARA 2002). Assessment by COSEWIC is the first step toward protecting species at risk of extirpation or extinction throughout Canada. Species designated by COSEWIC to be at risk of extinction are then eligible for federal protection by the government. Species that are ranked as either "Special Concern", "Threatened", or "Endangered" are offered certain protections under SARA (Table 3). These measures include general prohibitions against harming the species or their nests, commitments to recovery, and protection of critical habitat. General prohibitions provide immediate protection to species on federal lands, aquatic species, and migratory birds. The prohibitions can also apply to listed species on all lands through a safety net process, and on federal lands for species listed by provincial and territorial governments.

Status	Definitions¹
Extinct	A wildlife species that no longer exists.
Extirpated	A wildlife species that no longer exists in the wild in Canada, but occurs elsewhere.
Endangered	A wildlife species that is facing imminent extinction or extirpation.
Threatened	A wildlife species that is likely to become endangered if limiting factors are not reversed.
Special Concern	A wildlife species that might become "Threatened" or "Endangered" because of a combination of biological characteristics and identified threats.
Data Deficient	A wildlife species for which there is inadequate information to make a direct or indirect, assessment of its risk of extinction.
Not At Risk	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

Table 3 Definitions of Federal Status Categories for Wildlife

Status	Definitions ¹
--------	--------------------------

¹Source: Species at Risk Act (SARA 2002)

4.0 EXISTING CONDITIONS

4.1 Wildlife Habitat and Sensitive Wildlife Zones

Based on a historical review of air photos, the Study Area is dominated by pasture land although scattered patches of small aspen/white spruce stands, willow thickets and five small wetlands are also present. Three of the wetlands were classed as potentially temporary or seasonal marshes while the remaining two were classed as potentially temporary marshes accounting for 2.7% (5.6 ha) of the 210.5 ha that will be mined. From a wildlife perspective, pasture lands has some value for wildlife but if the area is subjected to livestock grazing/trampling, habitat suitability is reduced because of reduced cover (*e.g.*, herbaceous layer, tall grasses, and shrubs) and disturbance from livestock. In contrast, wetland and forest/shrub habitat types in the Study Area have the highest value for wildlife. Although no permanent wetlands appear to be present within the Study Area, the presence of temporary and/or seasonal wetlands can provide suitable habitats for migrating and breeding waterfowl, shorebirds, and other wetland-dependant wildlife (*e.g.*, muskrat, amphibians, and migratory songbirds such as red-winged blackbirds and yellow-headed blackbirds). However, the value of these areas has been affected by their relatively small size and significant alteration of wetland edges by agricultural practices. Smaller treed areas and treed fence lines can also provide some additional habitat and linkages between habitat patches for wildlife moving through the area to larger, higher quality habitats located to the west and north.

Based on a search of the FWMIS data base using the Fish and Wildlife Management Internet Mapping Tool (AEP 2018b), the Study Area is not located within or near any Key Wildlife and Biodiversity Zones (KWBZ), nor does it contain any sensitive wildlife ranges (Figure 1). In addition, the Study Area does not fall within any provincial Environmentally Significant Areas which are areas that have been identified as important to the long-term maintenance of biodiversity, physical landscape features, and/or other natural processes in Alberta (Fiera 2014).

4.2 Wildlife Species of Concern

Forty-two wildlife species of concern representing two amphibians, three reptiles, 30 birds and seven mammals could potentially occur in the Study Area (Table 4) based on species accounts, range maps, and available literature. Forty-two of these species have provincial status designations while fourteen are federally listed. Of the 42 provincially listed species, three are considered “Secure” or have an

“Undetermined” status. An additional 31 species are classified as ‘Sensitive’ in Alberta (AEP 2015) which indicates that although these species are not currently at risk of extinction or extirpation, they may require protection to prevent them from becoming ‘At Risk’. The remaining eight species are either “May Be At Risk” or “At Risk” in Alberta (Table 4). At the federal level, five of the 42 wildlife species are of “Special Concern”, two are “Threatened”, and two are “Endangered”, while five species were assessed by COSEWIC but were determined to be “Not At Risk” (Table 4).

The potential for most wildlife species classified as “May Be At Risk” or “At Risk” in Alberta or “Special Concern”, “Threatened” or “Endangered” in Canada to occur in habitats within or adjacent to the proposed Project is considered to be low because of lack of suitable habitat and/or the extent of agricultural development in the region. Of the 42 wildlife species of concern, 25 species (or 60%) were considered likely to occur in the Study Area or in habitats immediately adjacent to the Study Area based on general habitat preferences and range distributions. Several of the remaining special status species may also use portions of the Study Area during various times of year, particularly when wetlands in the area contain water or in adjacent forested areas.

Table 4 Wildlife Species of Concern That Could Potentially Occur in the Study Area				
Common Name	Provincial Status	Federal Status¹	General Habitat Preferences²	Likely to Occur?
<i>Amphibians and Reptiles:</i>				
Canadian Toad	May Be At Risk		Breeds in the shallows of lakes, ponds, marshes, ditches and other similar water bodies.	No
Western Tiger Salamander	Secure	Special Concern/ Schedule 1	Usually near small lakes, ponds, or dugouts. Adults often found in underground burrows.	Yes
Western Terrestrial Garter Snake	Sensitive		Broad habitat preferences including marshes, fields, forests.	Yes
Plains Garter Snake	Sensitive		Occurs near ponds, lakes, dugouts, and streams.	No
Common Garter Snake	Sensitive		Broad habitat preferences including forests, farms, or near water.	Yes
<i>Birds: 3</i>				
Alder Flycatcher	Sensitive		Prefers edges of wet areas in willow and birch thickets, muskeg edges and streamside vegetation. Nests in shrubs and low bushes.	Yes
American Bittern	Sensitive		Occurs primarily in wetlands with tall, emergent vegetation.	Yes

Table 4 Wildlife Species of Concern That Could Potentially Occur in the Study Area

Common Name	Provincial Status	Federal Status ¹	General Habitat Preferences ²	Likely to Occur?
American Kestrel	Sensitive		Uses a wide variety of open and semi-open habitats. Nests in tree cavities and nest boxes.	Yes
American White Pelican	Sensitive		Nest on isolated islands in lakes and feed in shallow lakes, rivers, and marshes.	No
Bald Eagle	Sensitive	Not At Risk	Nests in large stick nests along lakes and large rivers feeding on waterbirds, fish, and small mammals.	No
Baltimore Oriole	Sensitive		Occurs in diverse habitats but prefers open deciduous forests, including those in urban and suburban environments.	Yes
Barn Swallow	Sensitive	Threatened/ Schedule 1	Mud nests are built on vertical structures (usually buildings) that are close to open areas and a source of mud.	No
Black Tern	Sensitive	Not At Risk	Nest in shallow wetlands like marshes surrounded by emergent vegetation.	No
Black-billed Cuckoo	Undetermined		Densely vegetated forests, shrubs, and thickets often in riparian area. Nest in shrubs or small trees in small twig and grass-lined nests.	No
Bobolink	Sensitive		Prefers tall grassy meadows, prairies, hayfields and croplands. Nest on ground in grass nest cup.	Yes
Common Yellowthroat	Sensitive		Prefers alder and willow areas bordering streams and marshes.	No
Eastern Kingbird	Sensitive		Breeds in fields with scattered shrubs/trees, often in trees that overhang wetlands, rivers, or lakes.	Yes
Eastern Phoebe	Sensitive		Occurs in a variety of woodland habitats. Frequently builds nests on man-made structures such as culverts, bridges and buildings.	Yes
Evening Grosbeak	Secure	Special Concern	Breed in coniferous and deciduous forests feeding in buds and berries in winter and insects in summer.	No
Forster's Tern	Sensitive		Nests in colonies in marshes characterized by grasses usually placed on masses of dead marsh vegetation.	No

Table 4 Wildlife Species of Concern That Could Potentially Occur in the Study Area

Common Name	Provincial Status	Federal Status ¹	General Habitat Preferences ²	Likely to Occur?
Great blue heron	Sensitive		Forages along the edges of rivers, lakes, marshes; also observed in wet meadows and fields.	No
Horned Grebe	Sensitive	Special Concern/ Schedule 1	Nests in thick vegetation along lake edges, ponds, marshes, and weedy wetlands.	Yes
Least Flycatcher	Sensitive		Prefers semi-open woodlands and shrubby fields.	Yes
Olive-sided Flycatcher	May Be At Risk	Threatened/ Schedule 1	Open coniferous forests and forest edges. Often found in recently burned areas.	Yes
Peregrine Falcon	At Risk	Special Concern/ Schedule 1	Found along lakeshores, river valleys, urban/ industrial areas, and open areas. Usually nests on rocky cliffs and cutbanks and man-made nest structures.	No
Pied-billed Grebe	Sensitive		Floating platform nests in thick vegetation along lake edges, marshes, and backwater areas.	No
Pileated Woodpecker	Sensitive		Cavity nester that prefers coniferous and mixedwood forests with dead and dying trees.	Yes
Purple Martin	Sensitive		Communal nester usually in man-made structures in semi-open forests, usually near water.	Yes
Sandhill Crane	Sensitive		Breeds in open wetlands or wet meadows surrounded by shrubs or trees.	No
Sedge Wren	Sensitive		Breeds in graminoid marshes, primarily those dominated by sedges.	No
Sora	Sensitive		Shallow wetlands with dense emergent vegetation.	Yes
Trumpeter Swan	Sensitive	Not At Risk	Open fields, grasslands and agricultural areas.	Yes
Western Grebe	At Risk	Special Concern	Colonial nester on floating vegetation platforms in large lakes with dense aquatic vegetation.	No
Western Tanager	Sensitive		Nests on a conifer branch in mature coniferous, aspen or mixedwood forests.	No
Western Wood Pewee	May Be At Risk		Open forests and riparian zones.	Yes
Mammals:				
American Badger	Sensitive	Not At Risk	Open country; grasslands and pastures.	Yes

Table 4 Wildlife Species of Concern That Could Potentially Occur in the Study Area

Common Name	Provincial Status	Federal Status ¹	General Habitat Preferences ²	Likely to Occur?
Eastern Red Bat	Sensitive		Generally roosts in deciduous trees with dense foliage. Forages in openings and over streams.	Yes
Hoary Bat	Sensitive		Roosts in trees and forages high in clearings or over water.	Yes
Little Brown Myotis	May Be At Risk	Endangered/ Schedule 1	Roosts in tree hollows or structures such as sheds or attics. Frequently forages over water.	Yes
Long-tailed Weasel	May Be At Risk	Not At Risk	Open country. Forages in aspen parkland and open forests.	Yes
Northern Myotis	May Be At Risk	Endangered/ Schedule 1	Forested areas close to waterbodies.	Yes
Silver-haired Bat	Sensitive		Trees, crevices, and buildings and access to water are used for roosting and foraging.	Yes

¹ COSEWIC/SARA status (COSEWIC 2018).

² Fisher and Acorn (1998), Pattie and Fisher (1999), Russell and Bauer (2000).

³ List of birds of special concern derived from BBS Route 04-330.

Three species of amphibians including the boreal chorus frog, wood frog, and tiger salamander are likely occur in the Study Area because of the presence of suitable wetland habitats. Wood frogs are found in damp wooded areas, wet grasslands or are associated with open ponds, while chorus frogs occur in grassy and wooded areas near shallow water (Russell and Bauer 2000). Both these species, which are “Secure” in Alberta, are expected to be common in the area and will use ephemeral wetlands and wet depressional areas in shrubby areas and pasturelands in the Study Area for breeding and overwintering. Tiger salamanders, a SARA-listed Schedule 1 species in Canada, prefer moist, dark sheltered areas near water and may be present near wetlands or forested/shrubby areas in the Study Area.

Three reptiles, the western terrestrial, common, and plains garter snakes may also occur in the Study Area near wetlands, marshes, dugouts, and streams (Russell and Bauer 2000) although the plains garter snake is likely uncommon in the area. A critical habitat component for snakes in Alberta is the presence of suitable hibernacula or over-wintering dens. Because snakes are cold-blooded, they are sensitive to variations in ambient temperature. The hibernacula are located below the frost line of the ground where openings occur. These den sites may occur in gravel deposits, animal burrows, tree

roots and occasionally in cellars and basements of houses, and below abandoned buildings (Takats 2000).

The central portion of BBS Route 04-330 forms the boundary of the three northern quarter sections of the Study Area (Figure 1) and included bird survey data from 1992 to 2010 and from 2012 to 2016. During this period, 144 bird species were recorded along BBS Route 04-330, 29% (or 42 species) of which were classified as provincially and/or federally listed species (see Table 4). The remaining 102 bird species are classified as “Secure” in Alberta. A search of the provincial FWMIS using the FWIMT also indicated the presence of American kestrel, a “Sensitive” species in Alberta, within a 3 km radius of the Study Area. The American kestrel is a small falcon that is relatively common, occurring throughout the province between April and October (Fisher and Acorn 1998). It prefers open habitats along forest edges where hunting and nesting occurs.

Most of the mammals expected to occur in the vicinity of the Study Area are “Secure” in Alberta and likely includes coyotes, red fox while red squirrel, striped skunk, muskrat, least weasel, and snowshoe hare, white-tailed deer, mule deer, and moose. Most of these mammals are relatively common in agricultural areas and adjacent to industrial sites if suitable habitats are present and for the most part, readily habituate to various human activities. However, there is potential that seven special status wildlife species could also occur in the vicinity of the Study Area including American badger, long-tailed weasel, and five bats. If these special status species do occur in the Study Area, they will most likely be displaced to adjacent habitats.

5.0 POTENTIAL IMPACTS

The wildlife overview was undertaken based on a desktop review of available information, and did not include species specific wildlife surveys. Based on this review, the Project will affect wildlife in Study Area in several ways including: 1) loss or alteration of important wildlife areas, 2) loss of habitat connectivity with adjacent habitats, 3) potential disturbance to provincially or federally listed wildlife species, and 4) increased mortality risk primarily through wildlife-vehicle collisions associated with increased traffic on local roads. However, with implementation of the recommended mitigations measures in conjunction with the relatively small areas that will be affected over the 25 – 30 year life span of the Project (e.g., no more than 6 ha will be disturbed at one given time, and a six or seven month annual operating period based on an intermittent schedule that will be dependent on market/contract demands), the effects of Project development on wildlife and wildlife habitat is expected to be negligible to low.

6.0 PROPOSED MITIGATION

Reclamation of disturbed natural areas back to similar native vegetation and creation of replacement wetland habitats would reduce long-term effects of habitat loss on wildlife. Progressive reclamation

is encouraged to ensure that disturbance areas are minimized to the extent possible and the post-extraction landscape is returned to its pre-disturbance state. Maintenance and/or re-establishment of habitat connectivity would reduce impacts on wildlife movements, and thus habitat-use, within the Study Area. Habitat enhancements or built structures could be used to create habitat for some species that may be disturbed by the Project including bird houses for cavity nesting species and roosting boxes for bats.

A variety of wildlife likely inhabit the Study Area and adjacent habitats including a number of special status species. However, no significant areas of wildlife habitat appear to be present within the Study Area, nor is the area likely to provide critical habitat for most species of concern that may occur in the area. The overall quality of wildlife habitat over much of the Study Area is considered to be relatively low aside from the presence of several small wetlands. Watercourses likely facilitate wildlife movements adjacent to the Study Area, as well as within the larger landscape to the west towards Isle Lake and to the north to Lac Ste. Anne. Similarly, larger blocks of native vegetation, particularly to the north and west of the Study Area, should provide suitable habitats for local wildlife displaced by the Project. However, to mitigate the effects of the Project on wildlife the following mitigation measures should be considered:

- Pre-disturbance wildlife surveys should be conducted to document the potential presence/absence of wildlife species at risk. Based on a review of existing habitats present within the proposed development footprint, the occurrence of most listed species is considered unlikely. However, surveys for potentially sensitive breeding birds (see next bullet) and the potential occurrence of a snake overwintering site should be conducted. These surveys would be based on current sensitive species inventory guidelines for Alberta (GoA 2013). For snakes, any exposed gravel areas and actively used or abandoned buildings within the Study Area should be searched for the potential presence of snake hibernacula prior to aggregate extraction. Searches for snake hibernacula are typically conducted in spring (April 1 – June 15) or fall (August 15 – October 31) when snakes are leaving or entering their over-wintering den sites, respectively (GoA 2013). In the event any species of concerns are detected, appropriate setback distances and/or other potential species-specific mitigation measures will be identified and discussed with T & T Sand and Gravel Ltd and Alberta Environment and Parks personnel.
- Environment Canada (2018) recommends that all habitat destruction activities (including any vegetation clearing, construction, flooding, infilling of ponds, dewatering, reclamation and any mowing) avoid the period from April 15-August 31 to reduce the potential impacts on migratory birds. Furthermore, the Alberta Wildlife Act protects owls, other raptors (hawks, eagles) and waterfowl from disturbance during their breeding seasons. Restricted activity periods commence March 1 for owls, March 15 for hawks and eagles, and April 15 for horned

grebes (AESRD 2013). Given these timing windows and the potential for all of these species to occur in the Study Area, Project-related clearing and dewatering should not occur between March 1 and August 31 to ensure compliance with the Wildlife Act and the Migratory Birds Convention Act. If the timing restrictions cannot be adhered to, a pre-disturbance nest search should be conducted prior to any clearing and dewatering activities to identify the occurrence of any active nest sites.

- Any end pit wetlands associated with the Project should be modified once AEP finalizes its Wetland Construction Guide and Directive so that ecologically functional wetland habitats with varying depths are created. This may include regrading edges to a lower slope (e.g., 6:1 slope), incorporation of irregular shorelines in the final design of end pit wetlands, and establishment of emergent and submergent vegetation communities by transplanting muck and vegetative matter from natural wetlands.
- Implement appropriate dust suppression measures in active areas of the Project area to minimize the effects of particulate matter on adjacent wildlife habitats and wildlife.
- Ensure that speed limits on local roads are followed to minimize wildlife/vehicle collisions in the vicinity of the Project area.

7.0 CLOSURE

This report pertains solely to the “Bamber Pit #2 Wildlife Assessment” for T&T Sand and Gravel. Information provided by third parties is believed to be accurate and reflective of site conditions, but is not guaranteed. This report is completed using industry-accepted practices to satisfy the requirements of the applicable regulations, approvals and/or directives. MEMS have exercised reasonable skill, care, and due diligence in assessing the information acquired during the preparation of this report.

We thank you for the opportunity to be of assistance. Should you have any questions, please contact either of the undersigned at 780.496.9048.

Yours truly,

Millennium EMS Solutions Ltd.

Prepared by:

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

Senior Wildlife Biologist

Reviewed by:

This information redacted as per Protection of
Privacy Act (POPA)
This information redacted as per Protection of
Privacy Act (POPA)
This information redacted as per Protection of
Privacy Act (POPA)
This information redacted as per Protection of
Privacy Act (POPA)
This information redacted as per Protection of
Privacy Act (POPA)
P I A I (POPA)

Grant Woynarowich, B.Sc., P.Ag.
Environmental Scientist

8.0 REFERENCES

- Alberta Environment and Parks (AEP). 2015. Species at Risk: A Guide to Endangered and Threatened Species and Species of Special Concern in Alberta. Version 2. Available online at: <http://aep.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/documents/SpeciesAtRiskGuide-Jan-2015.pdf>.
- Alberta Environment and Parks (AEP). 2018a. Alberta Wild Species General Status Listing – 2015. Government of Alberta. Available online at: <http://aep.alberta.ca/fish-wildlife/species-at-risk/albertas-species-at-risk-strategy/general-status-of-alberta-wild-species/documents/SAR-2015WildSpeciesGeneralStatusList-Mar2017.pdf>.
- Alberta Environment and Parks (AEP). 2018b. Access FWMIS Data. FWIMIT – Fish and Wildlife Internet Mapping Tool. Available online at: <http://aep.alberta.ca/fish-wildlife/fwmis/access-fwmis-data.aspx>.
- Alberta Environment and Sustainable Resource Development (AESRD). 2013. Enhanced Approval Process (EAP) Manual. Edmonton, Alberta, Canada. Available Online at: <http://aep.alberta.ca/forms-maps-services/enhanced-approval-process/eap-manuals-guides/documents/EAP-Manual-Apr01-2013.pdf>.
- COSEWIC (Committee on the Status of Endangered Wildlife in Canada). 2017. Canadian Species at Risk. Environment Canada. Ottawa, Ontario, Canada. Available Online: http://www.cosewic.gc.ca/eng/sct5/index_e.cfm.
- Environment Canada. 2018. Technical Information: Risk Factors for Migratory Birds. Available Online at: https://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=8D910CAC-1#_03_1_1.
- Fish and Wildlife Management Information System (FWMIS). 2018a. Fish and wildlife information management information system data. Available Online: <http://aep.alberta.ca/fish-wildlife/fwmis/access-fwmis-data.aspx>.
- Fisher, C. and J. Acorn. 1998. Birds of Alberta – Field Guide. Lone Pine Publishing, Edmonton, Alberta, Canada.
- Government of Alberta (GoA). 2011. General status of Alberta wildlife species – Definitions of general status. Available Online: <http://aep.alberta.ca/fish-wildlife/species-at-risk/albertas-species-at-risk-strategy/general-status-of-alberta-wild-species/documents/DefinitionsStatusCategories-Mar2011.pdf>.
- Government of Alberta (GoA). 2013. Alberta Government Sensitive Species Inventory Guidelines. Edmonton, Alberta, Canada.

Pardieck, K.L., D.J. Ziolkowski Jr., M.-A.R. Hudson. 2017. North American Breeding Bird Survey Dataset 1966 - 2016. United States Geological Survey, Patuxent Wildlife Research Center. Available Online: www.pwrc.usgs.gov/BBS/RawData/.

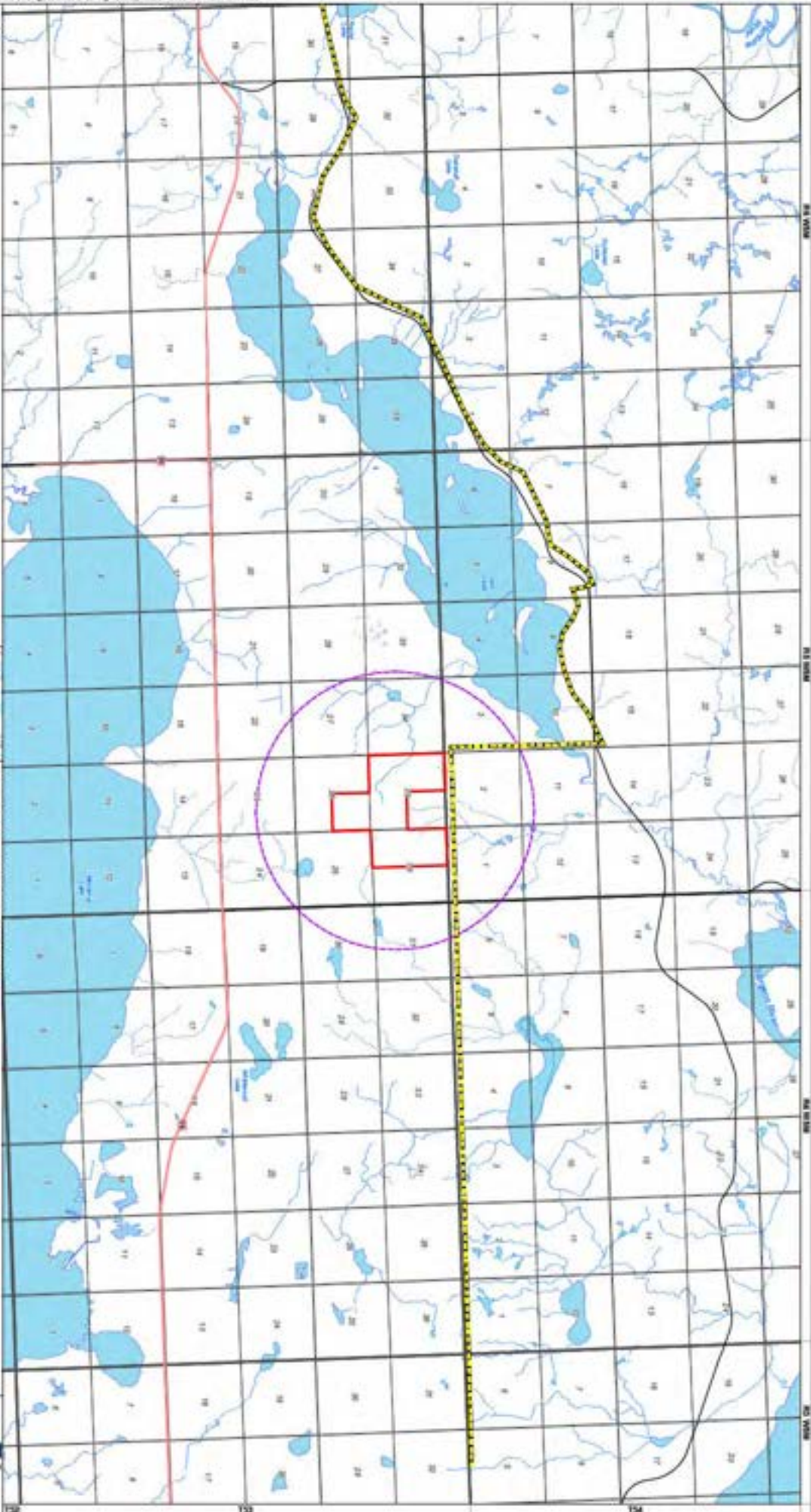
Pattie, D.L. and C. Fisher. 1999. Mammals of Alberta – Field Guide. Lone Pine Publishing, Edmonton, Alberta, Canada.

Russell, A.P. and A.M. Bauer. 2000. The Amphibians and Reptiles of Alberta: A Field Guide and Primer of Boreal Herpetology. University of Calgary Press, Calgary, Alberta, Canada.

Species at Risk Act (SARA). 2002. *Species at Risk Act*. Available online at: <http://lawslois.justice.gc.ca/eng/acts/S-15.3/>.

Takats, L. 2000. Red-sided (*Thamnophis sirtalis parietalis*) relocation and education project. Alberta Species at Risk Report No. 30. Alberta Sustainable Resource Development and Alberta Conservation Association. Edmonton, Alberta, Canada.


APPENDIX A: FIGURES



LEGEND
--- Proposed Site Boundary (10-4-20)
--- Proposed Project Boundary
--- Desktop Wildlife Assessment Area



T&T SAND AND GRAVEL LTD.
NE-26-053-05 WSM, NW/SW-36-053-05 WSM
BAMBER #2 PT EIA
DESKTOP WILDLIFE ASSESSMENT AREA
RESULTS DATE: MARCH 2016
Project/Document: UTM Zone 11 NAD83


PROJECT: 10000-4182
DRAWN BY: JOC
CHECKED BY: JAM
DATE: APRIL 16, 2016
FIGURE 1

Scale: 0 1 2 Kilometers

North Arrow

APPENDIX D: HYDROGEOLOGY REPORT



6111 91 Street
Edmonton, AB T6E 6V6
tel: 780.496.9048
fax: 780.496.9049

Suite 325, 1925 18 Avenue NE
Calgary, AB T2E 7T8
tel: 403.592.6180
fax: 403.283.2647

#106, 10920 84 Avenue
Grande Prairie, AB T8V 6H2
tel: 780.357.5500
fax: 780.357.5501

toll free: 888.722.2563
www.mems.ca

File # 09-00141-00

June 1, 2017

214131 Enterprises Ltd.

This information redacted
as per information of
this information redacted
Privacy Act (PIPA)
as per Protection of

Dear Mr. Thomas:

RE: T & T Sand and Gravel Bamber #2 Pit Hydrogeological Report

INTRODUCTION

Millennium EMS Solutions Ltd. (MEMS) was retained by 214131 Enterprises Ltd. (operating as T&T Sand and Gravel (T&T)) to prepare and submit a development permit for T&T's "Bamber #2" aggregate pit operation in December 2015. As indicated on the Aggregate Applications Processing Form under Section F, "A hydrogeology report shall be prepared by a professional engineer [Section 97 1.c.F.(c)]". The scope of work discussed in this report included a site visit and a desktop review of the readily available information in order to confirm that the proposed gravel pit is dry.

The site is located approximately 80 km west of Edmonton, north of Highway 16.

BACKGROUND

T&T have an existing approval to operate a sand and gravel pit in NE 26-053-05 W5M under EPEA Registration No. 248371-00-00. This portion of the property is located within Parkland County. The original application was anticipated to be a wet operation based on borehole log data; however, once excavation operations began, there was no groundwater encountered in the southern extent of the pit.

The development permit submitted in December 2015 was for the expansion of the Bamber #2 Pit which crosses into the County of Lac St. Anne, encompassing the NW, SW and SE of Section 35 and the NW and SE of Section 36-053-05 W5M. In order to document that there will be no impact on the shallow groundwater table as a result of mining the expansion of Bamber #2 Pit, the County of Lac St. Anne have requested a hydrogeology report be prepared as described in the introduction on the previous page.

SCOPE OF WORK

The site visit to the Bamber #2 Pit was conducted by MEMS personnel and included the following:

- GPS the location of existing water wells in NE 26-053-05 W5M and measure the water level (if possible); and
- observe the current pit walls and pit bottom in the existing mined area in NE 26-053-05 W5M.

The desktop data review and summary report include the following:

- review of regional-scale hydrogeological and geological information;
- review of local-scale background Site information; and
- a factual summary of the site visit and desktop review.

REGIONAL HYDROGEOLOGY

The upper surficial deposits in the vicinity of the Bamber #2 Pit are comprised of hummocky till material deposited by stagnant glacial ice and consists of a mixture of sand, silt and clay with pebbles, cobbles and boulders (Andriashek et al., 1979). Also present is fine-textured glacio-lacustrine deposits containing silt to clayey silt, minor sandy silt and few to no stones, with a thin organic peat cover (Andriashek et al., 1979). The upper surficial deposits may contain minor sand and gravel deposits of meltwater origin, which may occur as isolated pockets (HCL, 1998). The most widely known aquifer in the area is the Buried Onoway Valley, which trends from west to east and underlies Isle Lake and Lac Ste. Anne (HCL, 1998). The Buried Onoway Valley is approximately 10 km north of the Bamber #2 Pit, in Tp 054 to 055.

The bedrock surface in the vicinity of the Bamber #2 Pit ranges from a depth of 7 metres to greater than 20 metres below ground level (BGL). The uppermost bedrock unit is the Horseshoe Canyon Formation which is comprised of fine- to very-fine grained sandstone interbedded with siltstone, mudstone and laterally continuous coal seams (Ozoray, 1972; Prior et al., 2013).

LOCAL HYDROGEOLOGY

Saturated layers were encountered at approximately 6 m BGL during the testing activities for the existing mining in NE 26-053-05 W5M. During the first few years of operations, no groundwater has been encountered and has not influenced the excavation methods for the aggregate material. The borehole logs that were drilled in the expansion area in August 2013 (the quarter sections that are located in the County of Lac St. Anne) showed that the sand and gravel to be mined was dry.

GROUNDWATER USERS

A review of the AEP Water Well database includes 29 groundwater-related records for Sections 25, 26, 35 and 36 in 053-05 W5M. Of these 29 records, 24 are classified as water wells in which 12 records have completion interval depths and 5 records have inferred open completion intervals based on the bottom of the steel casing and the total depth drilled. These 17 records have lithology details; based on the completion depths and lithology all of these records are completed in bedrock materials. Based on the lithology recorded during drilling, the bedrock depth varies from 7 to 27 m BGL. Table 1 in the Attachment summarizes the water well data for these four sections.

RESULTS

A site visit was conducted by MEMS personnel on August 9, 2016. There were three water wells identified on the NE 26-053-05 W5M property; however, water levels were unable to be measured in these water wells. There is one water well record for the NE 26 (Well ID 497025) and this record indicates that the water well is completed in bedrock. The current pit walls and pit bottom in the existing mined area in NE 26-053-05 W5M were observed to be dry.

The overburden depths within the expanded pit area are on average 5.8 m in depth and the aggregate depth below the overburden averages 7.7 m in depth. Based on the average depths, the aggregate deposit to overburden ratio is 1.3 : 1. The base of the gravel deposits overly the bedrock surface at depths that range from approximately 7 to 22 m BGL, with an average excavation depth of 13.5 m.

DISCUSSION

Of the water well records that have completion and lithology information, all records indicate that the water wells located in the sections to be mined are completed in the bedrock. The results of the hydrogeological investigation confirm that the proposed area to be mined contains dry gravel. No adverse effects are expected to nearby groundwater users since there was no evidence of water wells completed within the gravel deposits in the vicinity of the Bamber #2 Pit expansion area.

Provided that the Bamber #2 Pit remains dry during operations, a groundwater monitoring program is not required unless groundwater becomes present in the proposed areas to be mined.

LIMITATION OF LIABILITY

This report pertains solely to the assessment of “Bamber #2” aggregate pit located in the NW, SW and SE of Section 35 and the NW and SE of Section 36-053-05 W5M. Information obtained by site investigation or provided by third parties is believed to be accurate and reflective of site conditions, but is not guaranteed. The assessment was conducted using industry accepted hydrogeological practices to satisfy the requirements of the applicable regulations, approvals and/or directives. Millennium EMS Solutions Ltd. has exercised reasonable skill, care, and due diligence in assessing the information acquired during the preparation of this report.

214131 Enterprises Ltd. and their working interest partners may rely on this report for specific application to this site. The report may not be relied upon by any other person or entity without Millennium EMS Solutions Ltd.’s written consent and that of 214131 Enterprises Ltd. Any uses of this report by a third party, or any reliance on decisions made based on it, are the responsibility of that party. Millennium EMS Solutions Ltd. is not responsible for damages or injuries incurred by any third party, as a result of decisions made or actions taken based on this report.

CLOSURE

We thank you for the opportunity to be of assistance to 214131 Enterprises Ltd. Should you have any questions, please contact the undersigned at 403-592-6180.

Yours truly,

Millennium EMS Solutions Ltd.

APEGA Permit to Practice Number: P07002

Prepared by:

Jason Sanders, P.Geol.
Senior Hydrogeologist

Attachments:

Table 1: Water Well Records

REFERENCES

- Alberta Environment and Parks. Alberta Water Well Information Database. Retrieved June 17, 2016, via Alberta Environment and Parks FTP site.
- Andriashek, L.D., Fenton, M.M. and J.D. Root. 1979. Surficial Geology Wabamun Lake, Alberta. NTS 83G. Map 149, scale 1:250,000.
- Hydrogeological Consultants Ltd. 1998. Lac Ste. Anne County. Parts of the North Saskatchewan and Athabasca River Basins. Parts of Tp 053 to 059, R 01 to 09, W5M. Regional Groundwater Assessment. July 1998.
- Ozoray, G.F. 1972. Hydrogeology of the Wabamun Lake Area, Alberta. Research Council of Alberta. Report 72-8.
- Prior, G.J., Hathway, B., Glombick, P.M., Pană, D.I., Banks, C.J., Hay, D.C., Schneider, C.L., Grobe, M., Elgr, R. and Weiss, J.A. 2013. Bedrock geology of Alberta; Alberta Energy Regulator, AER/AGS Map 600, scale 1:1 000 000.

ATTACHMENT

Table 1: Water Well Records

GIC Well ID	Legal Location W5M	Owner Name	Well Completion Date	Well Depth (m BGL)	Type of Work	Well Use	Completion Top (m BGL)	Completion Bottom (m BGL)	Completion Lithology	Static Water Level (m)
1640390	16-35-053-05	GLESNER, MARK	26-Sep-13	58.5	New Well	Domestic	23.2	26.2	Coal and Shale	5.34
1715902	01-25-053-05	LOCKWOOD, BARB	13-Dec-13	30.5	New Well	Domestic	24.4	30.5	Shale and Coal	21.22
357695	SW 26-053-05	PAISLEY, HELEN	08-Sep-90	70.1	New Well	Domestic	61.0	70.1	Shale and Coal	33.53
376343	SW 36-053-05	CAMPBELL, L.M./SNASKALL, DON	02-Aug-79	30.5	New Well	Domestic	24.4	30.5	Coal and Shale	0.91
466695	SE 25-053-05	SUNDSTROM, SAM	30-Jul-96	68.6	New Well	Domestic	15.9	67.7	Shale and Coal	16.76
471038	16-25-053-05	PANORAMIC ENT LTD	04-Sep-79	51.8	New Well	Domestic	36.6	51.8	Shale and Coal	17.37
471039	NE 25-053-05	FIKE, J.	01-Jul-83	47.2	New Well	Domestic	22.6	47.2	Shale and Sandstone	38.10
471042	01-26-053-05	WHITE, MIKE	26-Apr-73	45.7	New Well	Domestic	38.4	45.7	Shale and Coal	33.83
471043	NW 26-053-05	DUNNING, P.	16-Aug-71	54.9	New Well	Domestic	-	-	-	35.97
471044	13-26-053-05	HEIMAN, E.	11-Sep-76	61.0	New Well	Domestic & Stock	47.0	61.0	Shale	35.05
471152	14-35-053-05	NEWCAMP, HENRY	12-Jun-78	41.1	New Well	Domestic	26.0	41.1	-	12.19
471153	NW 35-053-05	SQUIRE, GORDON	03-Jun-77	42.7	New Well	Domestic	29.0	42.7	-	7.92
471154	NE 35-053-05	MYER, RON	07-Jun-84	30.5	New Well	Domestic	27.4	30.5	Coal	11.58
471155	NE 35-053-05	YAEHNE, JOHN	30-May-85	51.5	New Well	Domestic	29.6	50.6	Shale and Coal	7.62
471156	08-36-053-05	WICHUK, ALLEN	04-Jun-77	42.7	New Well	Domestic	31.7	42.7	Shale and Coal	13.11
471158	13-36-053-05	KUMISH, ED	01-Oct-77	18.3	New Well	Domestic	10.0	18.3	-	0
490405	16-35-053-05	CARRIE, DAVE	31-Dec-97	57.9	New Well	Domestic	51.8	57.9	Shale and Coal	27.74
497025	NE 26-053-05	DIAMOND WILLOW RANCH (BAMBER)	05-Sep-00	51.2	New Well	Domestic	36.0	51.2	Sandstone and Coal	30.18
471036	SE 25-053-05	TWOREK, EDWARD	-	59.7	Chemistry	Domestic	-	-	-	1.83
471037	SW 25-053-05	BURRY, S.	-	39.6	Chemistry	Domestic	-	-	-	24.38
471045	NW 26-053-05	BEDARD, LARRETA	-	80.8	Chemistry	Domestic	-	-	-	-
471046	NW 26-053-05	DUNNING, PHIL	-	60.4	Chemistry	Domestic	-	-	-	-
471159	NE 36-053-05	BARST, DENNIS	-	54.9	Chemistry	Domestic	-	-	-	15.24
471157	SE 36-053-05	LARSON, L.A.	-	51.8	Well Inventory	Unknown	-	-	-	36.58

m BGL - metres below ground level

Completion top is the bottom of the surface casing and completion bottom is the total depth drilled.



APPENDIX F: SUPPORTING REPORTS

Statement of Justification for *Historical Resources Act* Requirements for projects other than small-scale oil and gas

This document contains sensitive information about Historic Resources that are protected under the provisions of the *Alberta Historical Resources Act*. This information is to be used to assist in planning the proposed project only. It is not to be disseminated, and no copies of this document are to be made without written permission of the Historic Resources Management Branch, Alberta Culture & Tourism.

Project Name or Project Identifier

T&T Sand and Gravel Bamber #2 Pit NE-26-053-05 W5M, NW/SW-36-053-05 W5M, NW/SW/SE-35-053-05 W5M

Disposition Type & Number

Name: Peter Stewart

Corporate name of consulting company: Western Heritage

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)

Name of proponent contact: John Thomas

Corporate name of proponent: T&T Sand and Gravel (214131 Enterprises Ltd.)

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)

Lands Affected

<i>Legal Description</i>							<i>Land Ownership Type</i>	<i>HRV</i>
MER	RGE	TWP	SEC	LSD				
5	5	53	35	1,2,3,4,5,6, 7,8,11,12,13,14	Freehold		No value	
5	5	53	36	3,4,5,6,11,12,13,14	Freehold		No value	

Activity Type and Anticipated Ground Disturbance

Refer to Figures 1 and 2.

The activity type includes gravel pit development and stockpiling.

The anticipated ground disturbance includes brush clearing, ripping topsoil and subsoil, blading, cut and fill landscape reshaping, and aggregate mining.

Project size

Total area is approximately 393.95 ha.

Existing Disturbance

Refer to Figures 1 and 2 for satellite imagery of the project area.

Almost the entirety of the proposed development appears to be currently impacted by agricultural activities. The proposed development footprint is bordered by farmland to the east and south, Highway 52 to the west, and Highway 540 to the north.

An existing development is currently ongoing in NE-26-53-W5M, which does not require an assessment.

Landscape and Environmental Information

The project area is within two sections of land that are dominated by cultivation disturbance, with several stands of trees left standing to act as a windbreak.

The majority of the landscape is flat and undifferentiated, with no obvious high potential landforms. The surficial geology is characterized as either moraine or stagnant ice moraine (Fenton, et al. 2013).

The proposed development footprint is located approximately 6.5 km southeast of Isle Lake and approximately 8 km north of Wabamun Lake.

Archaeological Resources

Refer to Figure 3 for the distribution of archaeological sites nearest to the development footprint.

Borden	HRV	Location	Site Type	Relationship to Proposed Development & Anticipated Impacts
FjPp-42	0	LSD 2-30-53-4-W5	homestead	Outside development footprint. Will not be impacted by proposed development.
FjPp-43	0	LSD 2-30-53-4-W5	isolated find	Outside development footprint. Will not be impacted by proposed development.
FjPp-44	0	LSD 1-30-53-4-W5	scatter <10	Outside development footprint. Will not be impacted by proposed development.
FjPp-45	0	LSDs 7 & 8-30-53-4-W5	scatter <10	Outside development footprint. Will not be impacted by proposed development.

Illustrative Materials

Refer to the end of the document.

Figure 1. 2013 development plan for Bamber #2 Pit, provided by developer.

Figure 2. More detailed project development map for Bamber #2 Pit provided by client.

Figure 3. Project area showing nearby archaeological sites plotted on 1:50,000 map.

Evaluation

The proposed development will impact both cultivated and possible native landscape within the project area. The development footprint is located on relatively level terrain that has been used previously for agricultural activities.

Five archaeological sites (FjPp-42, 43, 44, 45, and 46) have been identified within a 3 km radius of the proposed development. FjPp-43, 44, and 45 are isolated finds or small lithic scatters that were found on the surface. FjPp-42 and FjPp-46 are small scatters of historic artifacts. All of these sites are listed as HRV 0. There are no known archaeological sites within the development footprint that would be impacted by the proposed activities within the development. There is no evidence for historic structures within the proposed development area.

The disturbed nature of the soils would be consistent with archaeological sites in the area. Sites FjPp-43, 44, and 45 were all surface finds found within disturbed contexts. Sites FjPp-42 and FjPp-46 are historic surface scatters from farms dating to the 1910's and 1940's respectively.

The area of the proposed development exhibits low potential to contain intact archaeological deposits, because it is flat, featureless and spaced well back from any high potential landforms in the area (e.g.- Wabamun Lake). Additionally, the proposed development footprint appears to have been disturbed by agricultural activities, so it is likely that the upper soil layers have been disturbed.

Due to the lack of historic structures, the low HRV values of the pre-contact sites in the vicinity of the proposed development, and the fact that development has proceeded in NE- 26-53-W5M without the need for an assessment, an Historic Resources Impact Assessment (HRIA) does not appear to be necessary prior to the onset of development and clearance is recommended.

An existing development is currently ongoing in NE-26-53-W5M, which does not require an archaeological assessment.

Recommendations

It is recommended that the proposed development proceed.

Reference

Fenton, Mark M., E. Joan Waters, Steven M. Pawley, Nigel Atkinson, Dan J. Utting and Kirk Mckay.
2013 Surficial Geology of Alberta. In *ERCB/AGS Map 601*. Scale: 1: 1,000,000. Energy Resources Conservation Board, Edmonton.

Recommendations made by

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

Peter Stewart, M.A.
Project Archaeologist

E & O Reviewer

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
A t t (POPA)

Krista Gilliland, Ph.D.
Manager, St. Albert

Date: July 27, 2016



Figure 1. Development plan for Bamber #2 Pit, provided by developer.

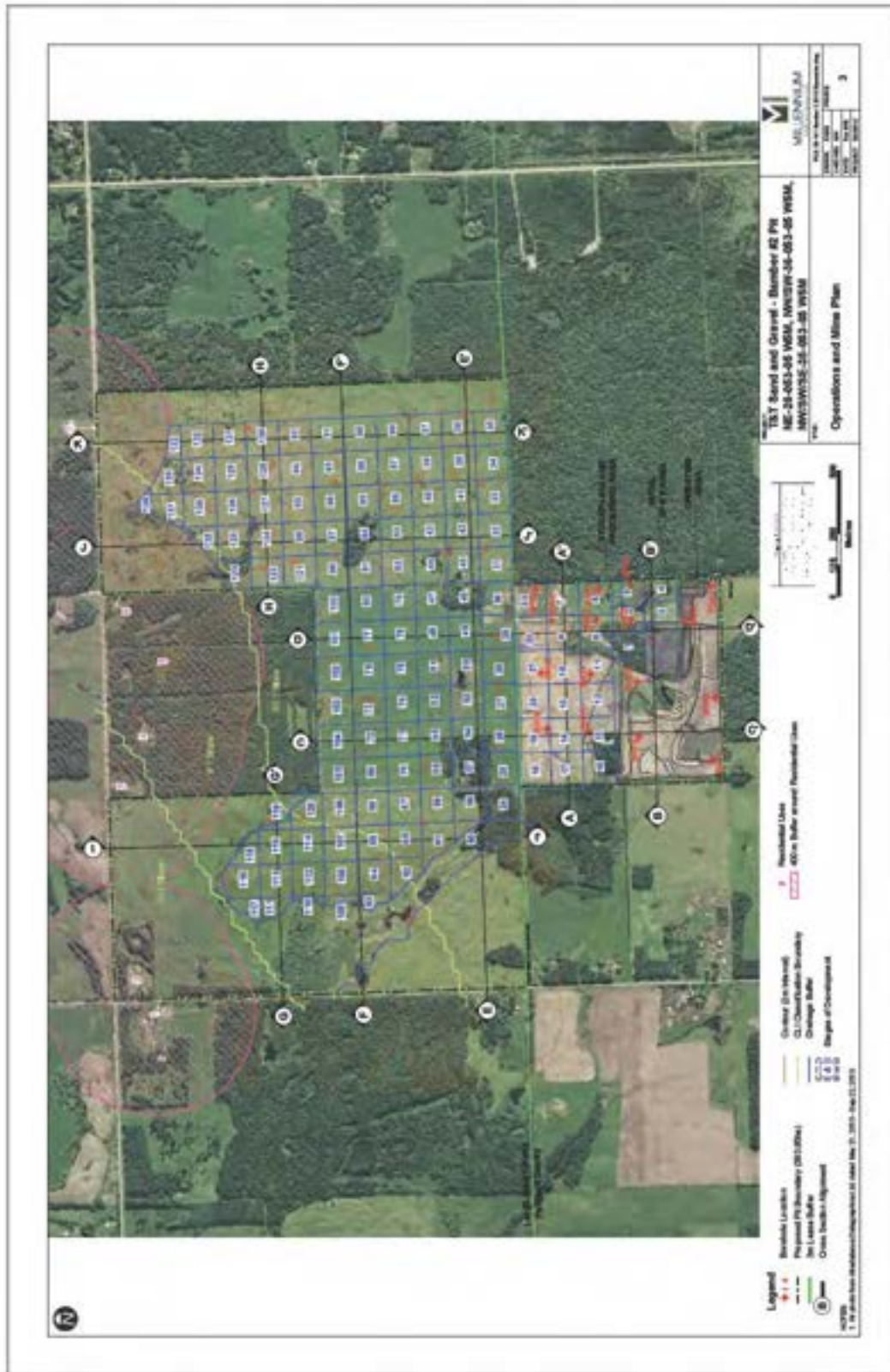


Figure 2. More detailed project development map for Bamber #2 Pit provided by client.

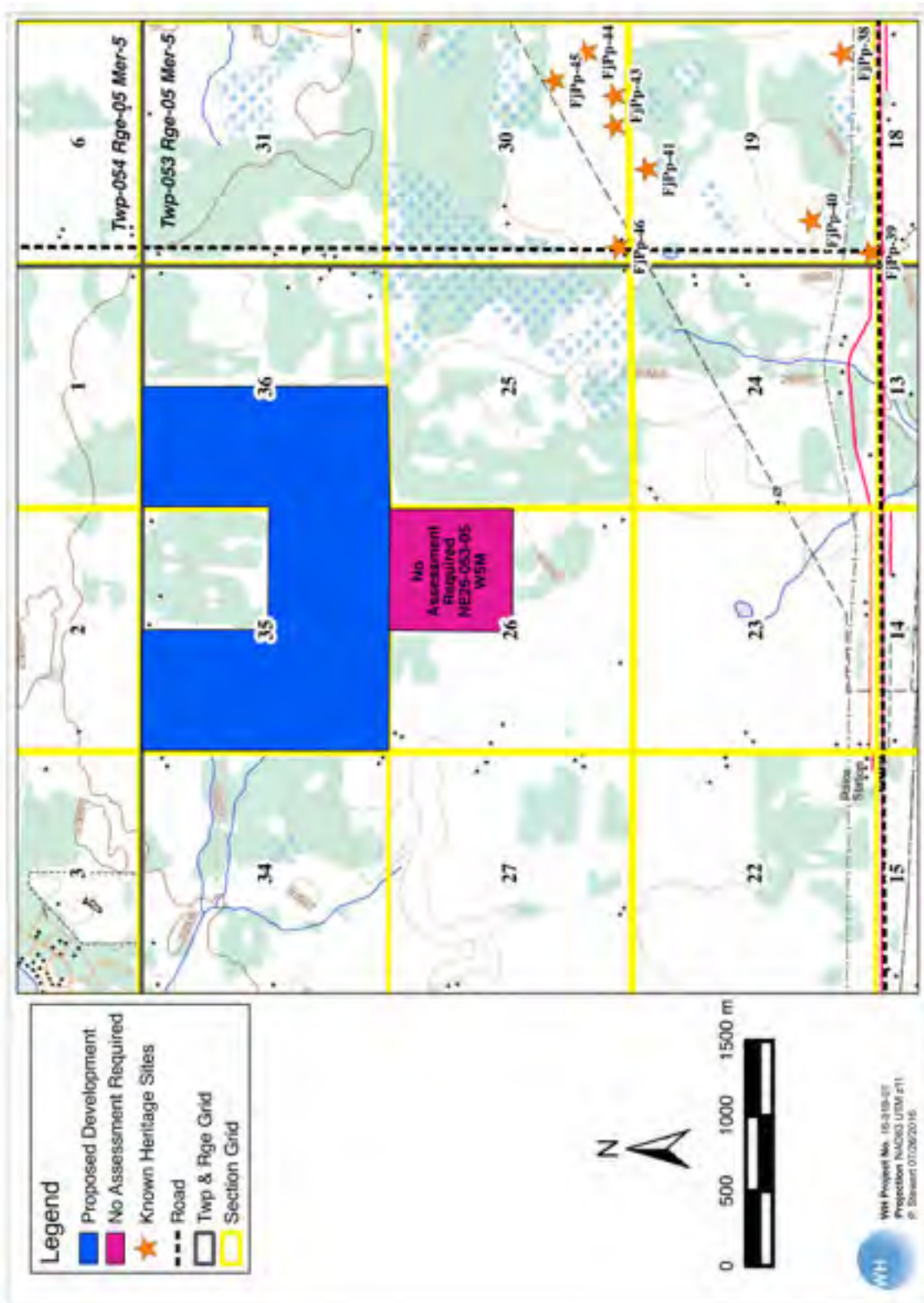


Figure 3. Project area showing nearby archaeological sites plotted on NTS 1:50,000 map.



6111 91 Street
Edmonton, AB T6E 6V6
tel: 780.496.9048
fax: 780.496.9049

Suite 325, 1925 18 Avenue NE
Calgary, AB T2E 7T8
tel: 403.592.6180
fax: 403.283.2647

#106, 10920 84 Avenue
Grande Prairie, AB T8X 6H2
tel: 780.357.5500
fax: 780.357.5501

10208 Centennial Drive
Fort McMurray, AB T9H 1Y5
tel: 780.743.4290
fax: 780.715.1164

toll free: 888.722.2563
www.mems.ca

File # 09-00141

4 May 2017

Matthew Ferris
Planning and Development Manager
Lac Ste. Anne County
4928 Langston St., Box 219
Sangudo, Alberta, T0E 2A0

Dear Mr. Ferris,

RE: 214131 Enterprises Ltd. – Bamber #2 Pit
Development Permit Application – Acoustic Information

In response to your request for a summary of available information pertaining to the sound levels expected for the Bamber #2 Pit, we are providing the following information.

The Bamber Pit has an existing Environmental Protection and Enhancement Act (EPEA) Approval No. 248371-00-00, that indicates that the annual operational period is expected to be from six to seven months (May through November), and as weather permits. Soil conservation and overburden removal operations are estimated to be 12 hours/day (7am-7pm), 6 days/week over the course of a two-three week period (3 times per summer). Gravel processing and operations are also estimated to be 12 hours /day (7am-7pm), 6 days/week over the course of a three to four week period (or as local marked/contract fulfillment demands).

Sound vs Noise

Sound is a form of energy that is transmitted by pressure variations which the human ear can detect. When one plays a musical instrument, for instance, the vibrating chords set air particles into vibration and generate pressure waves in the air. A person nearby may then hear the sound when the pressure waves are perceived by the ear. Sound can also travel through other media, such as water or steel. Apart from musical

instruments, sound can be produced by many other sources - man's vocal cord, a running engine, a vibrating loudspeaker diaphragm, an operating machine tool, and so on.

Noise is unwanted sound. Usually the sound of a violin is referred to as music and is something pleasing. Depending on other factors, the sound may be perceived as noise. Noise perception is subjective. Factors such as the magnitude, characteristics, duration, and time of occurrence may affect one's subjective impression of the noise.

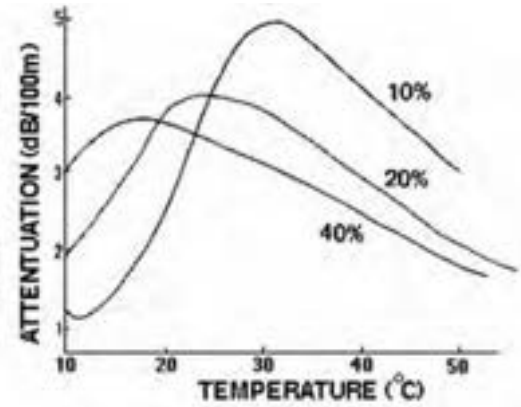
Individuals vary in their tolerance of loud sounds. Zero decibels (dB) represent the approximate threshold of normal hearing. Generally, sounds of up to 60dB are quiet (e.g., normal conversation, singing birds), while 100 dB is extremely loud (e.g., home lawnmower or tractor, passing truck, car horn at 5 meters); 120 dB is uncomfortably loud (e.g., amplified rock music, close thunder, jackhammer). As sound levels, frequency and quality vary with time, it is difficult to determine what the impact of sound will be at the planning stages of any project.

Noise Reduction

There are three generally accepted techniques utilized to dampen the environmental noise perceived by the surrounding community.

- Reduction of noise at the source. There are opportunities to include limits in noise emissions based on the mechanical specifications for some equipment, i.e. mufflers for the exhaust systems and strategically positioning of the equipment, open engines positioned so the body of equipment is between itself and residences and directing exhausts away.
- Reduction of noise between the source and the receptor. One effective means of reducing noise is the use of natural barriers between the sound source and the receptors. For instance, there may be opportunities for reduction if the crushing operation were to be located at the pit bottom. The solid barrier of the excavation edge could provide noise dampening. This could also include the strategic placement of product/overburden/topsoil piles for additional dampening. Finally, could the use of enclosures or other structures and purpose built barriers around the sound source can be effective as well.
- Reduction of the noise at the receptor. In situations where this application is available, for example for occupied residences along major roadways, walls and or sound barriers are constructed and may have some effect on noise.
-

Temperature and humidity also have an effect on sound propagation. In 2015, May to October had an average temperature of 14.4 °C and a humidity of 56.3%, ranging from 8.3 -19.6°C and 43.6 - 69.5% respectively. This has the potential to have an additional dampening effect of approximately 3 dB/100 meters as shown on the chart below.



http://www.sfu.ca/sonic-studio/handbook/Sound_Propagation.html

The presence, or absence/removal of trees, may also have an effect on sound propagation. Information available on sound propagation through trees has produced greatly conflicting results. A band of trees, several hundreds of feet deep, is required in order to achieve significant noise attenuation (http://www.sfu.ca/sonic-studio/handbook/Sound_Propagation.html). Further, it appears that the most effective effect of trees is as a visual barrier. Receptors are less likely to perceive sounds as noise if the source is out of sight. In most instances however, it appears that the presence of vegetation, especially densely spaced broad leafed trees, has a positive net benefit in attenuating the effect and perception of noise.

Bamber Pit Potential for Noise

The sound level decreases equally from the sound source at a ratio of 6dB per distance doubled. One means of displaying this relationship is shown below:

$$L_2 = L_1 - |20 \cdot \log \left(\frac{r_1}{r_2} \right)|$$

<http://www.sengpielaudio.com/calculator-distance.htm>

Where L2 is the sound level at the receiving distance, L1 is the sound level at the measured distance (mechanical specs or externally measured sound levels) r1 and r2 are the respective distances. Primary activities, which include topsoil salvage and overburden removal, will be the closest in proximity as the first lift of material is removed. This material will be placed in stockpiles for later reclamation (or directly placed when areas are available). There is an opportunity to place material in stockpiles to act as an additional buffer for the aggregate operations. Topsoil and shallow overburden salvage will utilize various scrapers and dozers. 214131 Enterprises Ltd. expected equipment list for material salvage include:

- Various CAT scrapers 627's, 637's and 657's: 87-92 dB
- Dozers similar to D8 and D9's: 82-95 dB

*various Caterpillar spec sheets and specified brand equipment manuals

Assuming a "normal" equipment use of 3 - scrapers and 2 - dozers working in close proximity to the 400 meter "line of sight" buffer, a rough estimate of the potential for noise would be approximately 101.5 dB. If only the distance is considered, with no other attenuation measures, the approximate noise at potential receptors could be ~73 dB. Strategic placement of topsoil/overburden stockpiles could further reduce the noise potential by approximately 15 dB. Potential attenuation of the noise with distance and strategic planning of the stockpiles from earlier stages could be from the ~73 dB to a more reasonable 60-65 dB at the receptor.

Secondary activities include the crushing and screening of excavated aggregate material. 214131 Enterprises Ltd. proposes staging the secondary activities approximately 800 meters from the receptors where the excavation will have a total depth of 12-13 meters. This setback would stage operations at approximately stages 47 through 56 (east to west - Figure 3 Operations and Mine Plan). The crusher stands approximately 4.3 meters in height. If the crushing equipment and processing operations are located on pit bottom, and based on borehole logs, equipment will be approximately 7 meters below baseline elevations. This should provide a significant barrier that will be useful for the attenuation of environmental noise to the receptors.

An estimate of the potential for noise from secondary activities is possible with some assumptions. The maximum performance of a barrier is limited to about 40 dB, due to scattering by the atmosphere. A barrier is most effective when placed either very close to the source or to the receptor. As 214131 Enterprises Ltd has indicated that their expected equipment list for material movement, crushing and screening will include:

- | | |
|---|--|
| <ul style="list-style-type: none"> • 2 980 k's Cat – Front-end Wheel loader: 107dB • 1 980 G II Cat – Front-end Wheel loader: 107 dB • 1 972 G Cat – Front-end Wheel loader: 109 dB • 1 Volvo 220 F – Front-end Wheel loader: 108 dB • 1 Cat 3412 - engine for our generator Cat: 91dB • 1 Hitachi 350Z excavator: 104 dB • Numerous gravel trucks of all sizes: 81 dB • Cat skid steer 236 model: 104 dB | <ul style="list-style-type: none"> • 1 Norberg 300 Hp Cone crusher & 1 Sandia 3800 Cone Crusher: 121 dB • Portable plants: 1 El jay 18x36 Jaw and 5X10 screen deck, 1 El jay twin screen plant, 1 6 20 Elrus screening plant: typically 90-95 dB |
|---|--|

*various Caterpillar spec sheets and specified brand equipment manuals



APPENDIX G: PUBLIC NOTICE AND STATEMENTS OF CONCERN

214131 Enterprises Ltd.

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

May 1st, 2015

TO WHOM IT MAY CONCERN :

RE : NW 1/4-36-53-5 W5M North West Quarter
 W 1/2-35-53-5-W5M West Half
 SE 1/4-35-53-5-W5M South East Quarter
 SW 1/4-36-53-5-W5M South West Quarter

214131 Enterprises Ltd., a family owned business has interest in applying to the Lac Ste Anne County to develop the above mentioned properties for aggregate extraction and processing. 214131 Enterprises Ltd. is presently operating an existing property in Parkland County on a quarter section just adjacent to the above listed properties.

As we are preparing to apply to the Lac Ste Anne County, we have started the process with the following steps.

Step One

John Thomas, President of 214131 Enterprises Ltd. met and talked with Lac Ste Anne County to express his interest in acquiring a Development Permit for the above mentioned Quarter Sections, to extract and process aggregates.

Step Two

Between April 9th and April 12th we hand delivered approximately 150 letters to residents in the area to inform them of our intent to apply to the Lac Ste Anne County for a Development Permit. In this letter we mentioned that we were planning to have an open house at the Fallis Hall on April 29th as a general information session. Copy of this letter in attachment for your perusal.

Step Three

We posted an advertisement / notification in the Lac Ste Anne Bulletin (April 13 issue) to notify residents of a meeting where they could express any concerns, ask questions, etc and give John Thomas, President of 214131 Enterprises Ltd. an opportunity to address these issues. Copy of this Advertisement / Notification posted in the Lac Ste Anne Bulletin is in attachment for your perusal.

Step Four

We held a community meeting, general information session at the Fallis Community Hall on April 29th, 2015 hoping to discuss and address any issues residents in the area might have with regards to our intent to apply for a Development Permit on the above mentioned properties. We held the meeting from 4:00 pm to 7:00 pm. We were hoping for a better turn out – but we had Seven people attend. We had them sign in upon arriving and gave each person a business card for John Thomas, President, 214131 Enterprises Ltd., and a letter advising of our intentions. In this letter we advised of our plans and advised our normal stages of extraction are 120 by 120meters (393 feet by 393 feet) square on average, and depths of the pits will be 12.2 to 15.25 meters (40 to 50 feet) deep. A copy of the letter handed out at this general information session is in attachment for your perusal.

At this meeting John spoke with **Mark and Pat Gleisner** of Darwell, as well as **Peter Bleszynski?** and they had a few questions and concerns that they discussed with John and John addressed these as best he could.

Colleen Vowel of Fallis came in and expressed her concerns

- Loss of Property Value

- Noise

- Extra Traffic

- Water Table

- Unsightliness

- How it will affect the Lake

Colleen was not really interested in what John had to say about any of these concerns and just advised that she would like to be kept posted on any further meetings with that might take place with the Lac Ste Anne County that she can attend.

John also met and spoke with both **Mark and Patsy Borle** of Fallis, Alberta and they expressed their exact same concerns as Colleen Vowel above as well as a concern for the wild life in the area. Mark enjoys hunting and has enjoyed hunting from tree stands in the area and expressed concerns of this being affected by having a gravel pit in the area.

Dave Currie from Wabamun also attended the meeting and had a very in depth conversation with John, also discussing several concerns that he has. Some of these concerns being

- Peace and Tranquility

- Loss of Property Value

- Wildlife

- How it would affect the Lake, the Stream to the Lake, the Slew waters, ducks nesting

- Water Flow

- Road Conditions and Dust Control

- Reclamation – the length of time

- Size of proposal

- limitations

- Noise

Dave Currie prepared a paper to express his concerns and a copy of this is in attachment for your perusal.

214131 Enterprises Ltd., next step will be to be in touch with the Lac Ste Anne County and proceed with going ahead with applying to the County to develop the properties in question as planned, for aggregate extraction and processing.

This information redacted as per Protection of
This information redacted as per Protection of
This information redacted as per Protection of
Privacy Act (PIA)

John Thomas, President
214131 Enterprises Ltd.

T & T Sand & Gravel Limited

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

April 09, 2015

TO ALL ADJACENT LAND OWNERS / LAC STE ANNE COUNTY

Re: NW-1/4-36-53-5-W5M North West Quarter
W-1/2-35-53-5-W5M West Half
SE-1/4-35-53-5-W5M South East Quarter
SW-1/4-36-53-5-W5M South West Quarter

Please accept this letter of our plans to apply to the County to develop the above mentioned properties for aggregate extraction and processing. We operate an existing property in Parkland County on a quarter section adjacent to the properties listed above.

We are planning to have an open house at the Fallis Hall on April 29th, 2015 as a general information session. We will be advertising in your local paper soon as to the time and date.

Should you have any questions or concerns, please do not hesitate to contact me on the above listed contact information, or on my cell This information redacted as per

Thanks,

This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act
This information redacted as per Protection of Privacy Act

John Thomas
President
T & T Sand & Gravel Ltd.

STEP 2

STEP 3

COMMUNITY MEETING
ANNOUNCEMENT

Please be advised of our intent to apply to the Lac Ste Anne County for a Development Permit for gravel extraction and processing of the following properties in your area

NW-1/4-36-53-5-W5M North West Quarter

W-1/2-35-53-5-W5M West Half

SE-1/4-35-53-5-W5M South East Quarter

SW-1/4-36-53-5-W5M South West Quarter

You are invited to attend a General Community Meeting being held at the Fallis Community Hall on April 29th, 2015 from 4pm to 7pm.

The meeting will be hosted by 214131 Enterprises Ltd. The purpose of the meeting will be to address any issues, concerns or questions you may have and to obtain public input on the project.

Should you have any questions, please feel free to contact the office at (780) 987-5221 or John Thomas at (780) 940-5283.

214131 Enterprises Ltd.
Box 5317
Devon, Alberta
T9G 1Y1

Community Meeting Announcement - Fallis Community Hall

Date	Name	Address	Phone Number
APR. 29/15	MARK + PAT GLEISNER	This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
APR 29/15	Peter Blazewynski	This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
A 29/15	Colleen Vowel	This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
APR 29/15	MARK BORLE	This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
April 29/15	Patsy Borle	This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
April 29/15	DAVE CURRIE	This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy
		This information redacted as per Protection of Privacy	This information redacted as per Protection of Privacy

STEP 4

TO CONCERNED RESIDENTS :

Let me introduce ourselves, 214131 Enterprises Ltd., the applicant. This company is a family owned business, and we reside in Parkland County.

Our intention is to acquire a Development Permit for the following five quarter sections to extract and process Aggregates.

NW-1/4-36-53-5-W5M North West Quarter
W-1/2-35-53-5-W5M West Half
SE-1/4-35-53-5-W5M South East Quarter
SW-1/4-36-53-5-W5M South West Quarter

We have operated in Parkland County since 2009 directly South of the five quarters mentioned. Part of our long term plan is to continue moving north into the five quarters.

If we are successful in receiving the Development Permit, we anticipate no or very little stockpiles of overburden. Our normal stages of excavation are 120 by 120 meters (393 feet by 393 feet) square on average, and depths of the pits will be 12.2 - 15.25 meters (40 - 50 feet) deep. When it comes to transporting material offsite, we will be going through our Development to the South towards Highway 16.

The purpose of this meeting is to address any questions or concerns you might have. I can also be reached on my cell

This information redacted
as per Protection of
Privacy Act

Sincerely,

This information redacted as per Protection of Privacy
Act (POPIA)
This information redacted as per Protection of Privacy
Act (POPIA)
This information redacted as per Protection of Privacy
Act (POPIA)

John Thomas
President
214131 Enterprises Ltd.

STEP 4



N

Legend

- Development Area
- EFPA No. 248371-00-00
- County Division
- Contour (20m Interval)

NOTES:
 1. Contours generated from the LIDAR survey data, 2015.
 2. Air photo from AerialSource Technologies, LLC, dated May 21, 2015. Day 157, 2015.

T&T Sand and Gravel
Bamber #2 Pit NE26-053-05 WSM

Development Permit Area



MILLENLUM
 2005, LANSING, MI

DATE:	05/15/2015
PROJECT:	2015-053-05
SCALE:	1:25,000
PROJECT:	2015-053-05

April 13, 2015

Re: Pending application to the county to develop these properties for aggregate extraction and processing, letter from John Thomas, President T&T Sand & Gravel Ltd., dated April 9, 2015 (wrote before a phone conversation with John on April 13, at approx. 2PM)

Background:

This letter (as above) was found stuck in our gate at the road entrance to our acreage at 5109-TWP Rd 540 on April 11, 2015.

My Concerns: (of this proposal)

1. Effect on Property Values
2. Effect on Wildlife
3. Effect on Traffic
 - a. Volume (versus current useage, and effect on safety)
 - b. Roads (effect from heavy traffic)
 - c. Noise from road traffic
4. Noise from operations
5. Dust from operations
6. Groundwater and runoff
7. Reclamation and timeline
8. Approval process...
9. Size of proposal

1. I cannot imagine any possible positive influence on the property values of the 4 – 40 acre parcels on NE ¼ 35, 53, 5, W5. Due to all of the concerns I've referred to above, and summarized below, the only possible effect will be to distract potential buyers from purchasing these properties, as their current value is in the serenity of the location as it is today. The attraction to this land is its quiet rural setting, without any possible value being from possible gravel sales. The only potential positive financial gain to us as Lac Ste Anne County taxpayers, would be related to the county purchasing this gravel, should that be the intent of these pits, or receiving royalties from the sales. However, with the gravel from all of the other pits in the area being primarily shipped to the Edmonton area, I would predict that this gravel would also be hauled to Edmonton or area, which has minimal gain to our County.

2. Gravel pit operations will have a negative effect on Wildlife in the area. Since we purchased out acreage in 1978, we have had the pleasure of seeing a vast variety of wildlife on our land. This includes, moose, deer, fox, coyote, black bear, and even cougar. We have commonly seen herds of 20 or more deer in the hayfield directly to the south of us, which is one of the quarters referred to. There have also been a great variety of bird species (owls, pileated wood peckers, etc.) over the years, which could only be negatively affected versus attracting more. When we purchased our land, the quarters around us (all of the ones mentioned in the letter above), were primarily agricultural pasture land, with a percentage of the quarters being hayland, and the remainder being bush pasture. We have seen this land cleared of nearly all of the bush, which we didn't see as a positive due to the potential effect on wildlife, however were supportive of due to the minimal negative effect on our property

*STEP 4
Letter → Dave Currie*

value, and the positive effect on the farming community. Now, to imagine the effect on wildlife due to operations of gravel pits, is absolutely devastating.

3. Assuming the gravel would be hauled via the closest road(s) to these quarters, I would see a major impact to Tshp Rd 540. Township road 540 is the one and only route to our property, coming in from the east from Darwell highway 765, or from the west from Fallis Road Range Road 52. Should a gravel pit be started on either of the quarters to the east or west, it would have significant effect on this road, unless the haul route was out the south end of these quarters. Township road 540 was upgraded in approximately 2008 (?) taking down some sharp hills and raising the grade, and was resurfaced with cold roll in 2011 (?) making it a decent road. When the road was rebuilt, the top was narrowed in many places due to the limited road allowance width. This narrow top combined with large gravel hauling trucks, would make safe travelling on this road a thing of the past. We commonly use this road for foot or bicycle or horseback traffic to our neighbors, and this type of use would also become unsafe. The cold roll surface is already showing effects of traffic that is common to the area such as farm trucks and/or sewage trucks, and had a significant failure in 2012 (?) requiring a rebuild, when a small gravel haul was being conducted. If a small short term gravel haul created a failure, I have to assume that a more long term operation would have a more significant and major impact. I'm assuming the repair cost of this impact should be picked up by the gravel operations, but there will still be a negative effect on the county and us as residents. Currently, there is only rural traffic on this road, so noise from the traffic is minimal. Should this road be used for hauling gravel, the noise from the big trucks will be significant.

4. Gravel pit operations are inherently noisy and we've witnessed other gravel pits in the area to run 24 hours a day. Starting with stripping operations there would be large earthmoving machinery to remove and stockpile topsoil, and then the overburden. Once the overburden is stripped, there would be gravel crushers moved in, that are even noisier than the large earthmoving equipment, along with earth moving equipment to get the product to the crusher. On still evenings, we can hear gravel operations that are over a mile away, I can't imagine the noise and its effect, when they are within 1000 feet.

5. Dust from the operations, and especially from the quarter due west of us, will have a negative impact, with the prevailing westerly winds and minimal brush land between us and this quarter to collect the dust. I would expect that there would be dust control measures requested by any approval, but how would they be measured or enforced?

6. Groundwater and/or runoff water is a real unknown, and therefore a concern for us. We have a waterwell drilled to approx. 180ft. that gets its supply from an underground aquifer, that is difficult to determine where it is fed from. With that in mind, any pits in the immediate area, would have the potential to effect this aquifer, and if there should become an issue with our waterwell, determining the cause would be an exercise in futility. Related to this issue is a concern that the groundwater from the western quarters flows west and north and in to Lake Isle, so I would expect that there would need to be a groundwater management plan provided with any approval for these pits to ensure no silt enters this stream. Similarly, there is a slough on the fence line between our property and the quarter due south of us, which has annual waterfowl use, which could be effected, and this slough overflows to a small stream that flows down through our acreage during spring runoff.

7. Reclamation of gravel pits in the area seems to be nonexistent. That is, I see virtually all of the gravel pits that have been in operation since we have moved to this area,

remaining as moonscapes, versus being reclaimed to useable land. Where gravel operations have been on hold, poplar trees with 4-6" trunks are growing up through piles of stockpiled overburden, and there are several areas where the land has remained a moonscape since gravel extraction has been complete or put on hold.. I have a very strong opinion that once a gravel operation is started, it is an eyesore for a lifetime, meaning that the land will not be turned back in to agricultural or parkland in the lives of my grandchildren who are currently enjoying this area. I would expect that there will need to be a reclamation plan and timeline provided with the approval to proceed with any gravel operation, but that would still leave me with a concern for how, or by whom, this plan was to be monitored and followed up on should it not be followed.

8. I do not know the process or timelines for approval, for controlling operations and/or for reclamation plans and stipulations. I am very concerned that even though we've been living in a serene environment for nearly 40 years, we will have little or no influence on business desires and the greed for financial gain at all expense, be allowed to take this away from us. As well, I'm concerned that the operations would be allowed to go without noise/dust/reclamation/etc. conditions, and go unmonitored for those conditions, thereby allowing total disregard for their neighbors or the environment.

9. When I consider the potential size of this gravel pit, it is overwhelming. The proposal specifically refers to 5 quarter sections of land, meaning we could be either 3/4 surrounded by gravel pit, or we could have pits in operation around us for 20-40 years. I do not support a gravel pit on any of these quarters, say nothing about the potential to have one on each of the 5 quarters referred to. At this point, I have to also assume that should approval be granted on these quarters, the operations would or could be right up to the fence lines, which would leave no buffer zones to these issues.

Please, don't let the serenity and tranquility of our 40 acres of paradise be taken away from us and our grandchildren. We purchased this property in 1978 due to its location, and we have been very fortunate to have a peaceful atmosphere.

Dave & Debbie Currie

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)



APPENDIX H: ADDITIONAL SUPPORTING INFORMATION

Emergency Spill Procedure for Flammable and Combustible Liquids

Name of Company: T&T Sand and Gravel Ltd

*****If the spill cannot be safely contained using the spill kit or if the spill is causing a threat to life. Evacuate the area and contact local fire and emergency Services at 911***

Upon Discovery of a Minor Spill

1. Ensure the safety of all Staff and Workers in the area:

- Warn all surrounding staff and workers
- Notify the onsite supervisor and management
- If unsure of the product, consult the MSDS sheet
- Wear proper Personal Protective Equipment (PPE) contained in the spill kit
- Attempt to stop the leak or eliminate the source of the spill if safe to do so
- Eliminate ignition sources and provide natural ventilation

2. Contain the Spill : (If Safe to do so)

- Use contents of the provided spill kit(s)
- If necessary ensure all drains are covered to prevent run off
- Attempt to stop the spread of the spill 1 leak by using absorbent socks to surround the spill
- Once the spill is contained, attempt to soak it up using an absorbent material
- Place absorbent material in approved container and dispose of it in accordance with the MSDS sheet and Environmental Regulation
- If any leak/spill reaches the drainage system, contact the appropriated authorities

**Location of MSDS Sheet: Crusher Tower Van, Main Office,
Shop**

REGISTRATION
PROVINCE OF ALBERTA

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended

REGISTRATION NO.: **248371-00-00**

APPLICATION NO.: **001-248371**

EFFECTIVE DATE: **October 13, 2009**

REGISTRATION HOLDER: **214131 Enterprises Ltd.**

Registration is issued for the following activity:

The construction, operation or reclamation of a pit located in the NE 26-053-05-W5M as described in the Activities Plan submitted with the registration application.

Designated Director under the Act ^A
This information redacted
as per information redacted
under the Access to Information Act (ATIA)
.....

Date Signed **October 13, 2009**



DEVELOPMENT PERMIT APPLICATION – AGGREGATE

Box 219, Sangudo, AB T0E 2A0
PH: (780) 785-3411 Fax: (780) 785-2985
Toll Free: 1-866-880-5722
[Email: devassistant@Lsac.ca](mailto:devassistant@Lsac.ca)

APPLICATION REQUIREMENTS:

Please check the Lac Ste. Anne County website under Planning & Development to review application requirements.

Applications are **NOT** considered complete until ALL of the required information has been provided. Please ensure that you have completed the application form accurately and clearly and enclosed payment. Lack of information may delay consideration of your application.

1. Incomplete applications, including unpaid applications will be held for 30 days for submission of additional documentation. After 30 days the application will be disposed of.
2. Should additional information be required, you will be contacted directly by the Planning and Development Department via phone, email, fax or regular mail.
3. You will be notified of the decision by written notification letter including any conditions you must complete.
4. You may pay the fee by cheque, cash, debit, Visa or MasterCard (see page 6)
5. If the property is owned by more than one landowner, ALL landowners must be listed on Page 2 (Landowner Information) and must sign the application (see page 5).
6. It is the applicant's responsibility to ensure all pages are received by the department. If sending by fax please check your fax confirmation that the correct number of pages sent was received.

Any documentation/information (including personal information) required for processing an application will become public once submitted to Municipal Planning Commission (MPC) or the Development Authority for review and processing.

NOTES:

1. Developmental changes such as structural size, material quality, and completion of progressive homes under construction are just some factors that affect the market value and **will** cause assessments to increase. If this applies to your property, you may want to make higher monthly payments earlier in the year to accommodate for potential tax increases on your next tax notice.
2. Any development permit application for construction of an accessory building prior to the construction of the main building or use (residence) becomes a discretionary permit application. Therefore the application must be presented to Municipal Planning Commission (MPC) for approval. A detailed description of the building and use must accompany the permit application. The processing time for discretionary permit applications can be 3 to 6 weeks.

OFFICE USE ONLY
Permit # _____
Roll # _____
Receipt # _____

I hereby make application for a Development Permit in accordance with the plans and supporting information submitted herewith. **Incomplete Applications will not be accepted.** If an incomplete application is submitted by mail the application will be sent back for further information.

BUSINESS OPERATING NAME INFORMATION

LANDOWNER INFORMATION

Applicant: <u>214131 Enterprises Ltd.</u>	Registered Owner: <u>Kim & Barbara Bamber</u>
--	--

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)

LEGAL BUSINESS NAME INFORMATION

LEGAL BUSINESS NAME: <u>214131 Enterprises Ltd.</u>
--

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)

LAND INFORMATION:

Lot: _____ **Block:** _____ **Plan #:** _____ **Subdivision/Hamlet:** _____

Rural Address: _____ **Division:** 1 2 3 4 5 6 7 (please circle)

W ½, SE 35-053-05 W5M and NW, SW 36-053-05 W5M

Existing Use of Land: _____ **Parcel size:** _____ **Acres/Ha** _____

PROPOSED DEVELOPMENT:

- Natural Resource (Class I)	- <u>Extraction</u>	- <u>Crushing</u>
- Natural Resource (Class II)	- <u>Processing</u>	- <u>Washing</u>
		- <u>Preparation of asphalt</u>

EXISTING BUILDING AND PRESENT USE:

Estimated Cost of Project _____ **Start Date** _____ **Estimated Completion Date** _____

IS THE DEVELOPMENT WITHIN 1/2 MILE OF ANY OF THE FOLLOWING (Answer YES or NO):

1. Is the subject property near a steep slope (exceeding 15%)? Yes No
2. Is the subject property within 0.5 mile (0.8km) or bounded by a body of water (river, stream, watercourse, lake or other permanent body of water, or a canal, or a drainage ditch)? Yes No
 - a. If YES, State its name _____
3. Is the subject property within 0.5 mile (0.8km) of the right-of-way of a highway? Yes No
 - a. If YES, the Highway No. is _____
4. Is the subject property within 0.5 mile (0.8km) of a Sour Gas facility? Yes No
5. Is the subject property within 0.5 mile (0.8km) of a Pipeline? Yes No
6. Is the subject property within 0.5 mile (0.8km) of an Oil facility? Yes No
7. Is the subject property within 0.5 mile (0.8km) of land that is or has been used as a municipal landfill for the disposal of garbage or refuse? Yes No
8. Is the subject property within 0.5 mile (0.8km) of land that is or has been used as a municipal sewage treatment facility or sewage lagoon? Yes No
9. Has the subject property had a history of flooding? Yes No
10. Is the subject property immediately adjacent to the municipal boundary? Yes No
 - a. If YES, the adjoining municipality is Parkland County

Regulatory Requirements for Surface Development in Proximity to Abandoned Wells

New Buildings larger than 47 sq. m. (500 sq. ft.) and Additions to Buildings that will as a result of the Addition become larger than 47 sq. m. (500 sq. ft.) must include documentation from the Alberta Energy Regulator (AER) with this application. Obtain the information from AER's Abandoned Well Viewer available on the AER Website www.aer.ca

1. Abandoned Well Information Included: YES or NO,
2. If No Why Not: No abandoned wells present

If an abandoned gas or oil well is identified on the land that is subject (the quarter section) of the proposed development, the applicant must include a map that shows the actual well location, as identified in the field, and the setback established in ERCB Directive 079 in relation to existing or proposed building sites.

To obtain clarification about the information provided by the Abandoned Well Viewer, or if you do not have internet access, contact AER Customer Contact Centre by Telephone at 1-855-2197-8311 or by email at inquires@aer.ca or contact Information Services by mail at AER, Suite 1000, 250 – 5 Street SW, Calgary, AB T2P 0R4

THE FOLLOWING MUST BE INCLUDED ON YOUR SKETCH:

	<ul style="list-style-type: none"> ~ Dimensions of proposed building(s) ~ Location of all structures on property (existing & proposed) ~ Proposed Locations of Power Poles ~ Approximate distance from existing structure(s) 	<ul style="list-style-type: none"> ~ Public roads servicing the property ~ Show the location of access to your property ~ (approach) ***Your FRONT Yard <hr/> <p>Setback is the location of entrance (driveway) from a local road***</p> <ul style="list-style-type: none"> ~ Show any pipeline crossing the property
--	--	--

Draw your site sketch in the grid below – All setbacks from proposed buildings to property lines **MUST** be included. Please include a legend.

Setbacks (indicate feet or meters):	North		South		East		West
--	--------------	--	--------------	--	-------------	--	-------------

Quarter: _____ **Section:** _____ **Township:** _____ **Range:** _____ **West of 5th M**

Please include a brief description of the property including any water bodies and steep embankments:

Aggregate Applications Processing Form

Do you plan on mining a roadway YES or NO	PAGE or Appendix	NOTES
If Yes, RGE RD to be mined OR TWP RD to be mined		Range roads are not going to be mined.

	PAGE or Appendix	NOTES
An explanation of the intent of the project	Sec 1.1	
The features of the project, which make it desirable to the general public and Lac. Ste. Anne County. This is to include an evaluation of how the project may contribute to the present and projected need	Sec 1.1	
An economic analysis of the proposal's anticipated economic impact on the municipality	Sec 1.1	
An Environmental Impact Assessment report prepared by a qualified professional	Various	See below for a more detailed breakdown of location of information.
Information related to the source of Aggregate for processing, including projected volumes from on and off-site that will be processed on the Site	Sec 2.1	
Any other pertinent information or tests required by the Development Authority respecting the Site or adjacent lands	TBD	
Such additional requirements as are determined necessary by the Development Authority having regard to the nature of the proposed development and the surrounding use(s), which may be effected	TBD	
If it is processing a development permit application for an extension for a discretionary use determine that the application information submitted with the original development permit application in whole or in part satisfies the application requirements for the development permit for the extension	Appendix E	The original application with the approval has been included in Appendix E.
Determine that additional information shall be submitted for the development permit for the extension, even if such information was not required for processing the original development permit application	TBD	

An application for a development permit for an aggregate resource extraction shall be made to the Development Authority in writing, and shall:	PAGE or Appendix	NOTES
a) Be submitted together with a re-districting application to re-district the subject lands to the Aggregate Resource Extraction and Processing (AR) district.	Appendix F	See attached
b) Be signed by the registered owner or his or her agent where a person other than the owner is authorized by the owner to make application. The correctness of the information supplied shall, when required by the Development Authority, be verified by a statutory declaration.	Appendix D	
c) State the proposed use or occupancy of all parts of the land and buildings.	Sec 1.1	
d) Include the results of the information meeting, as required in above Section, with detailed descriptions of how the proposed development complies with the requirements of any relevant municipal policies and regulations.	Appendix D Sec 1.11	
e) Include an Environmental Impact Assessment completed in accordance with Section 3.4.13 and any additional terms of reference from the meeting described in above.	Various	Pertaining to sec 3.4.13, info for each section is located at the following: a)Sec 1.1, b) Sec 1.9, 1.10, App E, c) App A Fig 2, d) Sec1.11, e) f) App A Fig 2, Sec 2.2 g) h) Sec 2.8 i) Sec 3

General Requirements:

	PAGE or Appendix	NOTES
i) A completed application form	Appendix F	
ii) A written and graphical description of adjoining land uses within a minimum distance of 3.2 km (2.0 miles) of the legal property line of the subject site;	Sec 1.11	
iii) Maximum tonnes of aggregate to be extracted per year;	Sec 2.1	
iv)The proposed development area, including the total area that will be disturbed by the aggregate resource extraction use over the life of the development	Sec 2.3	
v)A list of all other approvals required (which may include: Provincial water diversion licence for pit de-watering, Federal requirements);	No others required	
vi) A copy of any applications as well as a copy of any responses or approvals from other authorities such as Alberta Environment and Sustainable Resource Development (AESRD) and Alberta Transportation, to allow the County to maintain complete records and to ensure that all relevant land use criteria are being satisfactorily addressed;	Appendix E	
vii)A description of the gravel mining method;	Sec 2.1, 2.3	
viii)A description of the extraction process;	Sec 2.1, 2.3	
ix) The type of crusher to be used;	Sec 2.4	
x)Total amount of aggregate to be mined out	Sec 2.1	

The applicant shall submit as part of the application one (1) or more parcel plans, at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum), showing all of the following:	PAGE or Appendix	NOTES
a) North point; b) Legal description of parcel; c) Site dimensions and location with respect to parcel boundaries;	Appendix A Figure 2	
d) Pre-disturbance topographical map at a minimum of 1:5000 scale with a minimum contour index of 1.0 m;	Appendix A Figure 2	
e) Location of existing facilities (i.e., water wells, buildings and major landscaped area including buffering and screening area) and where the proposed activity is to be located within the property;	Appendix A Figure 3	
f) Location of existing drainage features, and significant natural features on and within 0.5 km (0.31 miles) of the site;	Appendix A Figure 2	
g) Access and egress points to and from the site;	Figure 3	
h) Extraction locations and final extraction elevation;	Figure 3,4	
i) Stockpile locations (e.g., for topsoil, subsoil overburden, and aggregate)	Figure 3	
j) A phasing diagram showing phasing scheme for the pit;	Figure 3	
k) Locations and extents of designated processing buffer areas containing production, washing, fueling, and crushing activities (including an explanation of the placement of such things as fuel storage, crushers, asphalt, and wash machines, as well as the orientation of the engines for such machines);	Appendix A Figure 3	
l) Line-of-sight data from the site to all residential uses within a minimum of 400.0 m (1312.34 ft) or as determined by the Development Authority;	Appendix A Figure 2	
m) Accompanying text to site plan explaining the sequence of mining, the placement of fuel storage areas, and the placement of the crusher (i.e., bottom of pit);	Sec 2.3	
n) The location of existing and proposed municipal and private local improvements as well as a time and engineering cost estimate of the installation of these improvements;	Not Applicable	
o) If there is a pipeline in the area and its location in conjunction with the proposed development; and	Sec 2.2	
p) Estimated cost of the project, excluding land prices.	N/A	

For all applications within 0.5 km (0.31 miles) of a water body, the applicant shall provide the following as part of the application:	PAGE or Appendix	NOTES
a) Identification of all upstream, downstream, and associated hydraulically connected water bodies;	Not applicable	
b) Identification of surface water and groundwater flows, volumes, and directions to water bodies identified in Subsection (a);	Not Applicable	

c) Identification of natural in-stream flow requirements required for maintaining the health of water bodies identified in Subsection (a), as determined by a registered professional; and	N/A	
d) Itemized cost of establishing and maintaining the applicable environmental continuous monitoring of the items identified in Subsections (a), (b), and (c) for the life of the operation.	N/A	

Public Consultation

Prior to submitting a redistricting and development permit application for an aggregate resource extraction use and prior to commencement of construction, the applicant must conduct at least the following two activities:	PAGE or Appendix	NOTES
a) One (1) information meeting that provides details on the development and compliance with the requirements of any relevant municipal policies. Mitigation factors related to aggregate resource extraction activity must be addressed. Additional terms of reference for an Environmental Impact Assessment shall be determined during this meeting.		John Thomas indicated that the letters were handed out by Tanya from LSA County, was waiting for response from County.
b) One (1) open house to present details of the development and to gather public feedback. The applicant shall provide to the County notice of the open house in stamped envelopes to be addressed by the County for any affected parties.	Appendix D	Held on April 29, 2015 at Fallis Community Hall. Information from meeting can be found in Appendix D.
During the application review process, the applicant must conduct a regulated public hearing, including: a) Notice of the public hearing, which shall: i) Include date, time, and place of event, purpose of proposal, and how to submit concerns; ii) Be published in at least two (2) issues of a newspaper circulating in the County, the publication date of the second issue being not less than five (5) days prior to the event; and iii) Be mailed to registered owners of the land, if not the applicant, registered owners of adjacent land, and any other affected parties;	Appendix D	Information can be found in Appendix D. Posted in April 13, 2015 issue of Lac Ste. Anne Bulletin
b) Presentation of details of the proposal to the public and provide means of representation for affected parties and the general public.	Appendix D	Information can be found in Appendix D, summary document dated May 1, 2015.
The results of above Section, including a description of how the proposal addresses public concerns, must be submitted to the Development Authority during the application review process.	Appendix D	Information can be found in Appendix D, summary document dated May 1, 2015.
The Applicant shall keep records from the open house and submit a report to the Development Authority which shall include the following information and address the following issues location and time of open house	Appendix D	Information can be found in Appendix D, summary document dated May 1, 2015.
How many people attended and the issues that are brought forward	Appendix D	7 people attended, see May 1 document for details.

How will the pit operator mitigate legitimate concerns brought forward	Appendix D	Refer to May 1, 2015 document. Maintain open lines of communication.
Whether the proposed pit will affect any Site rights of way, i.e. power lines, pipelines, gas co-ops etc.		The proposed pit will not affect any rights-of-way.
Location and hours of operation of a visitor's area, where visitors can visit the operation when it is operating and observe the operation for their own benefit		Visitors are encouraged to contact John Thomas to arrange a site visit, there will be no designated area will be established.
Whether the sand and gravel development conflicts with other land uses, long-term priorities for the community, and if so, what measures will be implemented to minimize these conflicts		Discussions will take place between concerned parties and operator and they will work together to come up with viable solutions.
Confirmation on whether or not all residents directly affected by the proposed resource extraction use (those adjacent and within 2 kilometers (1.24 miles) of the resource extraction Site) have been personally interviewed and/or notified in writing of the intent to develop the Site		This information was to be provided to John Thomas by the County of Lac Ste. Anne
Are there plans laid out for directly affected residents to be notified prior to activation of pit operations	Appendix D	Another open will be held after the development permit has been granted.
Have one or more open houses been held in the community	Appendix D	Yes, see May 1, 2015 Document.
Has input from citizens been integrated into the proposal for a development permit	Sec 2.2	
Are there provisions for affected residents to be consulted (on an annual basis) throughout the lifespan of the sand and gravel operation	Appendix D	Yearly contact with President John Thomas will be welcome (780 940 5283)
The County shall notify landowners within 400 meters of all new proposed long term haul routes on County roads identified at the development permit application stage required to service a new Aggregate Resource Extraction Site	Appendix D	Haul road is located in Parkland County, this has already been done for EPEA Approval 248371-00-00 (existing pit).

Reclamation

The applicant shall include site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) showing the following:	PAGE or Appendix	NOTES
a) Topsoil and subsoil salvage and replacement;	Sec 3.2	
b) Cross-sections, including the slopes and the gradients prior to gravel mining and the reclaimed slopes once the reclamation is completed; and	Appendix A Figures 5-15	
c) Contour elevations of the subject site before and after pit completion.	Appendix A Figure 2, 4	

A reclamation plan shall be required for all aggregate resource extraction use approvals. A County approved reclamation plan shall be prepared by a qualified professional and shall include, but not be limited to:		
a) A description of the operational plan for the site;	Sec 2.1	
b) The location of all improvements, stockpiles, equipment, access, signage, and pits;	Appendix A Figure 3	
c) A topographical map, at a minimum of 1:5000 scale with a minimum contour index of 1.0 m, showing the predicted contours of the site after completion of the reclamation, where the final contours shall be no steeper than 4:1;	Appendix A Figure 4	
d) A phasing diagram, in accordance with the Provincial Guide, Progressive Reclamation, showing the phasing scheme for the pit including the time frame when reclamation will be completed;	Appendix A Figure 3	
e) The amount of aggregate materials, in cubic metres (m ³), located on the site to be extracted under this permit. This information is for internal use only;	Sec 2.1	11, 780, 000 m ³ Aggregate over the lifetime of the pit
f) For pits not utilizing a scale on-site, the estimated amount of aggregate material, in cubic metres (m ³), for each phase;	Sec 2.3	84,000 m ³ of aggregate per phase
g) The estimated cost for reclamation, including estimated costs for each phase;	Appendix C	
h) A description of the steepness of slopes;	Sec 2.2, 1.7	
i) Potential end land use (i.e., agricultural, country, residential);	Appendix B	End land use will be hayland/pasture or cropping
j) Use(s) that may be effected;		The current activities on site will be disrupted but land uses stay the same.
k) Re-vegetation to be used on the reclaimed site;	Sec 3.5	
l) Details about pit reclamation, including subsoil and topsoil replacement and compaction; and	Sec 3.5	
m) Location of water bodies, if any.	N/A	No water bodies will be constructed.

The reclamation plan shall comply, at a minimum, with the following standards:	PAGE or Appendix	NOTES
a) Drainage: Prior to re-contouring, the pit floor area should be sloped to a low point located at the bottom of the pit area.		
b) Re-contouring: The slope must be developed in a manner similar to pre-disturbance topography.	Sec 3.4	
c) Subsoil and Topsoil Replacement: The available subsoil and topsoil should be spread evenly across the re-contoured areas of the site.	Sec 3.2, 3.3	
d) Seed Bed Preparation: The re-contoured and reclaimed areas of the site should accommodate conventional tillage equipment and, as a result, the soil should be adequately prepared for seeding at the site with an approved species of vegetation.	Sec 2.4, 3.5	
e) Seeding and Vegetation Establishment: The site should be seeded in a manner suitable to the applicant in consultation and approval with Lac Ste. Anne County.	Sec 3.5	

Operations, Safety and Emergency Response Plan

The applicant shall include the following information related to operations and safety at the aggregate extraction and processing site satisfactory to the Development Authority:	PAGE or Appendix	NOTES
a) Days and hours of operation including a breakdown of hours of operation for: i) Aggregate extraction activities; ii) Reclamation activities; iii) Transportation of aggregate off-site iv) Aggregate resource processing activities; v) Stripping operations; vi) Mining/crushing/washing operations; vii) Asphalt production; viii) Concrete production; and Hauling operations	Sec 2.1	
b) Descriptions of the extraction process including sequencing, stripping, and stockpiling details.	Sec 2.3	
c) Type of crusher being used.	Sec 2.4	
d) Total amount of sand and gravel to be mined out.	Sec 2.1	
e) The proposed number of years of operation and when reclamation will commence.	Sec 2.3	
f) Access and haul roads.	Sec 2.5	
g) Details on location, specifications and standards of construction of all main internal roadways located within the site.	Sec 2.5	
h) Location of stockpiles.	Figure 3	
i) Provisions for loading and parking;	Sec 2.3	
j) The garbage and storage area, fencing and screening proposed for this area, and methods of disposing of garbage.	Sec 2.10	
k) Location of servicing, fueling, and rinsing of trucks, including fuel storage areas.		
l) A plan to limit surface water from entering the site.	Sec 2.8	
m) Location of any potential containers to collect used oil and filters.	Sec 2.4	
n) A plan to prevent permeation of contaminants into the soil.	Sec 2.4	
o) Details about on-site sewage and garbage disposal: i) Method of effluent disposal; ii) Portable toilets; iii) Sewage hauling and removal protocols; iv) Garbage bins; and v) Any other important details.	Sec 2.10	
p) Details about the use of asphalt, wash, crush, or concrete plant part of the pit operation. If these materials are to be used as part of the pit operation, describe the type of equipment used in the asphalt, wash, crush, and/or concrete plant including its placement, the placement of the power source, the location of the water source, and where the	Sec 2.4	

source gravel will come from if it originates off-site.		
q) A written security plan that identifies: i) Potentially dangerous situations or areas; ii) Typical procedures to be used for monitoring the site during periods of activity; iii) When activities are suspended; iv) Information access; v) Fencing; vi) Security features; vii) Signage; and viii) Emergency response procedures, including procedures for responding directly to a complainant, the County, or regulatory body, and procedures for documenting and keeping records of complaints.	Sec 2.9	
r) Methods to be used to restrict public access and to protect wildlife and neighbouring livestock.	Sec 2.9	
s) Location of the nearest city, town, village, or summer village and its distance from the proposed pit.	Sec 1.2	
t) The name, address, and telephone number of any landowners or occupants that are affected by the proposed development, which at a minimum includes those landowners or occupants within 2.0 km (1.24 miles) of the proposed development and those whose residences are located on a haul route;		This information should be on file at the County of Lac Ste. Anne.
u) A list of emergency contact personnel to be used by the County for the pit operation, for active times, when the pit operation is suspended, and during final reclamation. An Emergency Management Plan, approved by the Director of Emergency Management, must be submitted.		Office 780-987-5221 President: John Thomas, This Foreman: Gary Thi This n s informatio

Setback and Screening

The applicant shall include the following information related to setbacks and screening at the aggregate extraction and processing site to the satisfaction of the Development Authority:	PAGE or Appendix	NOTES
a) Written consent from all pipeline and right-of-way holders within the pit or within the vicinity of the pit.	N/A	No pipelines travel through proposed pit area.
b) Details of the screening and landscaping to be undertaken by the applicant, to reduce the negative visual impact of the development. The details should include, but are not limited to, information related to: i) The location and area of native vegetation that will remain undisturbed; ii) The location, design, and staging of any visual barriers to be constructed by the applicant, such as fences or berms; iii) The location and area where the applicant will plant vegetation and trees; and iv) Details on any other measures to be taken by the applicant.	Appendix A Figure 2, Sec 2.6 Appendix E Acoustic report	
c) Proposed setbacks or buffers related to protection of natural heritage features, ecological function, or rare and	Sec 1.9	None encountered on site so not applicable.

endangered species.

Transportation of Aggregate On or Off-Site

The applicant shall include the following information related to transportation of aggregate to and from the proposed site to the satisfaction of the Development Authority:	PAGE or Appendix	NOTES
a) A description of all haul routes. The description shall indicate the shortest and most desired route from the proposed pit to a processing area, if off-site or from another site to the processing area if being transported on-site. The description shall also indicate the shortest route to the nearest provincial roadway within a suitable access to accommodate projected traffic from the proposed development, and approximate gravel truck counts and frequency per day for both full and empty gravel trucks.	Sec 2.5	
b) At the discretion of the Development Authority, details of alternate routes to the one being proposed.	TBD	
c) At the discretion of the Development Authority, site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) showing the proposed haul routes.	TBD	
d) Description of plans for removal of internal roads, fences, and barriers or any internal roads that may be left.	N/A	Temporary roads will be utilized within pit boundaries.
e) Details of the dust control measures to be implemented, including the suppressant materials or methods to be used on the haul roads and the estimated frequency for the application of these measures.	Sec 2.7	
<p>f) A report on the proposed haul route or haul routes (if more than one route is proposed) that shall include and address the following:</p> <ul style="list-style-type: none"> i) Anticipated generation of motor vehicle traffic on a daily, weekly, or monthly basis; ii) Number of vehicles that will be used in the hauling of materials and the proposed hauling route to and from site; iii) Access locations to and from the site, including municipal roads and highways; iv) A description of roads constructed within the site that are required for the operation of pit; v) A description of any road construction or road upgrading that is necessary to access the pit's working area; vi) Details on whether the haul route is on a school bus route; vii) Information on whether haul routes have been established and agreed to; viii) Information on the number of gravel trucks that will be operating and whether the number has been agreed to; ix) Details of any traffic impact assessment that has been undertaken and implemented to address potential traffic 	Appendix D	<p>Haul traffic will not be utilizing roads within Lac Ste. Anne county therefore this is not applicable. Road that accesses the pit has 3 other gravel operators on it already in addition to existing Bamber Pit. Road use agreement between T&T and Parkland county is attached in Appendix D.</p>

issues; and x) Details on moratoriums to be placed on hauling during spring road bans		
g) In addition to any other information required to be submitted by the applicant, a Traffic Impact Assessment (TIA) shall be prepared by a qualified professional and submitted to Lac Ste. Anne County if determined necessary by the Development Authority. The TIA shall include traffic impact on all county roads to be accessed by the resource extraction use and all proposed haul routes to the nearest provincial highway, off-site processing area, and from another site to a processing use on-site. The requirement for a TIA may be waived by the Development Authority, but such waiver shall not cause an application for an aggregate resource extraction use to be deemed a discretionary use; and	Appendix D	Please see Road Use Agreement in Appendix D
h) The Traffic Impact Assessment shall address cumulative impacts through the inclusion of anticipated traffic levels, including peak loading, from existing approved gravel operations, other resource extraction uses that have an active development permit application that has not yet been decided, and approvals that are not in operation. The applicant can submit a written request to the County for this information.	App E	

Ground Water

The applicant shall include the following information related to groundwater to the satisfaction of the Development Authority:	PAGE or Appendix	NOTES
a) An analysis of the potential for adverse impact on groundwater aquifers and water wells as a result of the extraction and reclamation.	Appendix E	A water well assessment was completed and attached in Appendix E
b) The quantity and quality of well water for any water supply system that may be used in conjunction with the proposed development. Analysis and testing must be consistent with the <i>Water Act</i> and <i>Alberta Environment Guide to Groundwater Authorizations</i> ;		Not applicable, no water being utilized as part of the development
c) A hydrogeology report prepared by a qualified hydrogeologist having a professional engineer or professional geoscientist designation. Any hydrogeology report submitted to Lac Ste. Anne County may be provided to the water portal and shared with all users of the water portal. The hydrogeology report shall be prepared in a manner consistent with must be consistent with the <i>Water Act</i> and <i>Alberta Environment Guide to Groundwater Authorizations</i> . Where extraction is occurring below the water table, the report will include the following: i) Location and description of existing water users (i.e., water wells); ii) Description of the geology, hydrogeology, and surface water features on and surrounding the site; iii)Hydrogeological cross-sections	Appendix E	

hydrostratigraphy and groundwater levels; iv) Aquifers; v) Surface water and groundwater interactions; vi) Proposed dewatering plan and discharge locations; vii) Groundwater quality; viii) Water diversions; ix) Site water budget; x) Impact assessment including existing water users and natural features; and xi) Mitigation and monitoring measures		
d) Any hydrogeology report prepared in support of a <i>Water Act</i> licence.	N/A	

Surface Water

The applicant shall include the following information related to surface water to the satisfaction of the Development Authority:	PAGE or Appendix	NOTES
a) Site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) showing the storm drainage plan including surface and groundwater management measures, and direction of drainage.	Appendix A Figure 2	
b) A description of the current surface drainage patterns on the site and the anticipated drainage patterns once the reclamation is complete.	Appendix A Figure 2	
c) Consideration of the presence (including downstream) of commercial, recreational, or Aboriginal fisheries that may be affected by changes in the surface water drainage patterns, including but not limited to: i) Water quality and sediment transport; ii) Changes in flow and velocity; iii) Fish passage; and iv) Thermal regime, as described under the Federal <i>Fisheries Act</i> .	N/A	
d) An analysis of the potential for adverse impact on surface water as a result of the extraction and reclamation.	N/A	

Noise

The applicant shall include the following information related to noise to the satisfaction of the Development Authority:	PAGE or Appendix	NOTES
a) Site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) which provides the acoustic mapping of the site;	Sec 2.6 Appendix E Appendix A	
b) A description of measures to be taken to minimize noise to neighboring properties;	Sec 2.6	
c) A written assessment including a description of mitigation measures that will be implemented as part of the overall	Appendix E	

resource extraction operation to reduce acoustic impacts on adjoining land uses; and		
d) Confirmation that any crusher located on the site shall be located at the bottom of the excavation area as soon as reasonably possible and shall be located so that any muffler located on the crusher is pointed towards the wall of the excavation area or any other structure or surface that may act as a noise barrier (e.g., berm or on-site building).	Sec 2.6	

Dust

	PAGE or Appendix	NOTES
To the satisfaction of the Development Authority, the applicant shall include the following information on the details of the dust control measures to be implemented, including the suppressant materials or methods to be used on the pit floor and on stockpiles located on the site, and the estimated frequency for the application.	Sec 2.7	

I hereby make application for a Development Permit in accordance with the plans and supporting information submitted herewith.

I authorize the Staff of Lac Ste. Anne County and other agencies as designated in Section 653(2) of the Municipal Government Act, R.S.A.2000, to enter my land for the purpose of conducting a site inspection to confirm existing site conditions in relation to compliance with existing bylaws and in connection with my development permit application.

The personal information provided will be used to process the Development Permit application and is collected under the authority of Section 642 of the Municipal Government Act. Personal information you provide may be recorded in the minutes of the Municipal Planning Commission, or otherwise made public pursuant to the provisions of the *Freedom of Information and Protection of Privacy (FOIP) Act*, including Section 39 through 42 therein. If you have any questions about the collection and use of this information, please contact the Lac Ste. Anne County FOIP Coordinator at 1-866-880-5722 ext.270. Box 219, 4928 Langston Street, Sangudo, AB T0E 2A0

Any documentation/information (including personal information) required for processing an application will become public once submitted to Municipal Planning Commission (MPC) or the Development Authority for review and processing.

Signature of Applicant(s)	Signature of Landowner(s)	Date

DEVELOPMENT APPLICATION PROCESSING - TIME EXTENSION AGREEMENT

I (We), _____, agree to enter into an agreement with Lac Ste. Anne County to extend the legislated development permit processing time limit for a period for 20 days (60 days instead of 40 days) for a decision. *(Name of applicant)*

Signature of Applicant(s)	Signature of Applicant(s)	Date

Multiple Landowners

I, _____ **T H A T I A M T H E R E G I S T E R E D O W N E R** _____
(Registered Land Owner – Print Name) *(Signature of Landowner)* *(Date)*

I, _____ **T H A T I A M T H E R E G I S T E R E D O W N E R** _____
(Registered Land Owner – Print Name) *(Signature of Landowner)* *(Date)*

I, _____ **T H A T I A M T H E R E G I S T E R E D O W N E R** _____
(Registered Land Owner – Print Name) *(Signature of Landowner)* *(Date)*

I, _____ **T H A T I A M T H E R E G I S T E R E D O W N E R** _____
(Registered Land Owner – Print Name) *(Signature of Landowner)* *(Date)*

Authorization Form *(Agent acting on behalf of registered owner)*

I (We), _____, being the registered owner(s) of _____ do hereby authorize
(Name of Registered owner) *(Legal Land Description)*

_____ to make application for development on the above mentioned property.
(Individual or firm making application)

Signed: _____
(Registered Land Owner) *(Registered Land Owner)* *(Date)*

Payment Method: Visa M/C Debit Cash Cheque - Cheque Number _____

Credit Card #:

Expiry Date: ____/____/____ Name of Cardholder (Print clearly): _____ Signature of Cardholder: _____

FEE'S

Gravel Pit/Granular Extraction of any kind	\$50,000.00
Re Application of an Existing approved Gravel Pit/Granular Extraction of any kind	\$15,000.00
Gravel Pit/Granular Extraction Annual Site Inspection Fee	\$2,000.00
Business License – Annual	\$50.00
Penalty for starting the Development <i>without</i> a permit is TRIPLE THE REGULAR FEE	
In addition to the development permit application fees specified in the schedule, the applicant is responsible for all reasonable fees and expenses incurred by the County in reviewing the development permit application, including but not limited to consultant fees.	

You may be required to submit some or all of the following, depending on the nature of the application:

OFFICE USE ONLY:

Additional Information, Schedules or Reports:

	REQUIRED:	SUBMITTED:
Adjacent Landowner Notification	<input type="checkbox"/>	<input type="checkbox"/>
Area Structure Plan	<input type="checkbox"/>	<input type="checkbox"/>
Biophysical Assessment	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Response Plan	<input type="checkbox"/>	<input type="checkbox"/>
Environmental Site Assessment	<input type="checkbox"/>	<input type="checkbox"/>
Full or Partial Professional Involvement	<input type="checkbox"/>	<input type="checkbox"/>
Geotechnical Report	<input type="checkbox"/>	<input type="checkbox"/>
Hydrogeological Report	<input type="checkbox"/>	<input type="checkbox"/>
Impact Study on the County (Benefits and Costs)	<input type="checkbox"/>	<input type="checkbox"/>
Landscaping Plan	<input type="checkbox"/>	<input type="checkbox"/>
Master Sign Plan	<input type="checkbox"/>	<input type="checkbox"/>
Parking Plan	<input type="checkbox"/>	<input type="checkbox"/>
Stormwater Management Plan	<input type="checkbox"/>	<input type="checkbox"/>
Surface Water Report	<input type="checkbox"/>	<input type="checkbox"/>
Traffic Impact Assessment	<input type="checkbox"/>	<input type="checkbox"/>



**APPLICATION FOR REDISTRICTING &/OR ADOPTING OR
AMENDING BYLAW OR STATUTORY PLAN**

Box 219, Sangudo, AB T0E 2A0

PH: (780) 785-3411 Fax: (780) 785-2985

Toll Free: 1-866-880-5722

Email: devassistant@lsac.ca

Application Type - Fees Submitted (Non-refundable):

I hereby make application for

Re-districting application \$2000.00

Re-districting re: amending Land Use District of existing parcel to a more appropriate Land Use District \$500.00

Amend Municipal Development Plan \$2000.00

Amend Land Use Bylaw \$2000.00

Amend provision of a Statutory Plan \$2000.00

Amend provision of an Intermunicipal Development Plan \$2000.00

Adoption of new Statutory Plan \$2000.00

in accordance with the plans and supporting information submitted herewith.

FILE#:	APPLICATION DATE:
TAX ROLL#:	DIVISION:

THIS FORM IS TO BE COMPLETED IN FULL WHEREVER APPLICABLE BY THE REGISTERED OWNER OF THE LAND THAT IS THE SUBJECT OF THE APPLICATION OR BY A PERSON AUTHORIZED TO ACT ON REGISTERED OWNER'S BEHALF.

APPLICANT/AGENT INFORMATION

LANDOWNER INFORMATION

Applicant:		Registered Owner:	
Mailing Address:		Mailing Address:	
City:		City:	
Postal Code:	Telephone:	Postal Code:	Telephone:
Applicant Email Address:		Registered Owner Email Address:	

LEGAL DESCRIPTION AND AREA OF LAND TO BE SUBDIVIDED

All/part of: Quarter _____ Section _____ Township _____ Range _____ W of 5th Meridian

All/part of: Lot _____ Block _____ Reg. Plan No. _____ Cert No.

Rural Address: _____

REASONS IN FAVOUR OF APPLICATION

CURRENT _____

PROPOSED _____

DESCRIBE THE EXISTING DEVELOPMENT:

Building Description (i.e.: house, garage, shed)	Building Size ___ m or ft. X ___ m or ft.	Sq. ft. or sq. m.	Date Built

DESCRIBE THE EXISTING PROPERTY:

Lot Dimensions	___ m or ft. X ___ m or ft.
Frontage	___ m or ft. X ___ m or ft.

IS THE DEVELOPMENT WITHIN ½ MILE OF ANY OF THE FOLLOWING (Answer YES or NO):

1. Is the subject property near a steep slope (exceeding 15%)? Yes No
2. Is the subject property within 0.5 mile (0.8km) or bounded by a body of water (river, stream, watercourse, lake or other permanent body of water, or a canal, or a drainage ditch)? Yes No
 - a. If YES, State its name _____
3. Is the subject property within 0.5 mile (0.8km) of the right-of-way of a highway? Yes No
 - a. If YES, the Highway No. is _____
4. Is the subject property within 0.5 mile (0.8km) of a Sour Gas facility? Yes No
5. Is the subject property within 0.5 mile (0.8km) of a Pipeline? Yes No
6. Is the subject property within 0.5 mile (0.8km) of an Oil facility? Yes No
7. Is the subject property within 0.5 mile (0.8km) of land that is or has been used as a municipal landfill for the disposal of garbage or refuse? Yes No
8. Is the subject property within 0.5 mile (0.8km) of land that is or has been used as a municipal sewage treatment facility or sewage lagoon? Yes No
9. Has the subject property had a history of flooding? Yes No
10. Is the subject property immediately adjacent to the municipal boundary? Yes No
 - a. If YES, the adjoining municipality is _____

Effective November 1st, 2012:**Regulatory Requirements for Surface Development in Proximity to Abandoned Wells**

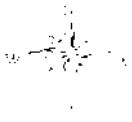
New Buildings larger than 47 sq. m. (500 sq. ft.) and Additions to Buildings that will as a result of the Addition become larger than 47 sq. m. (500 sq. ft.) must include documentation from the Energy Resources Conservation Board (ERCB) with this application.

Obtain the information from ERCB's Abandoned Well Viewer available on the ERCB Website www.aer.ca

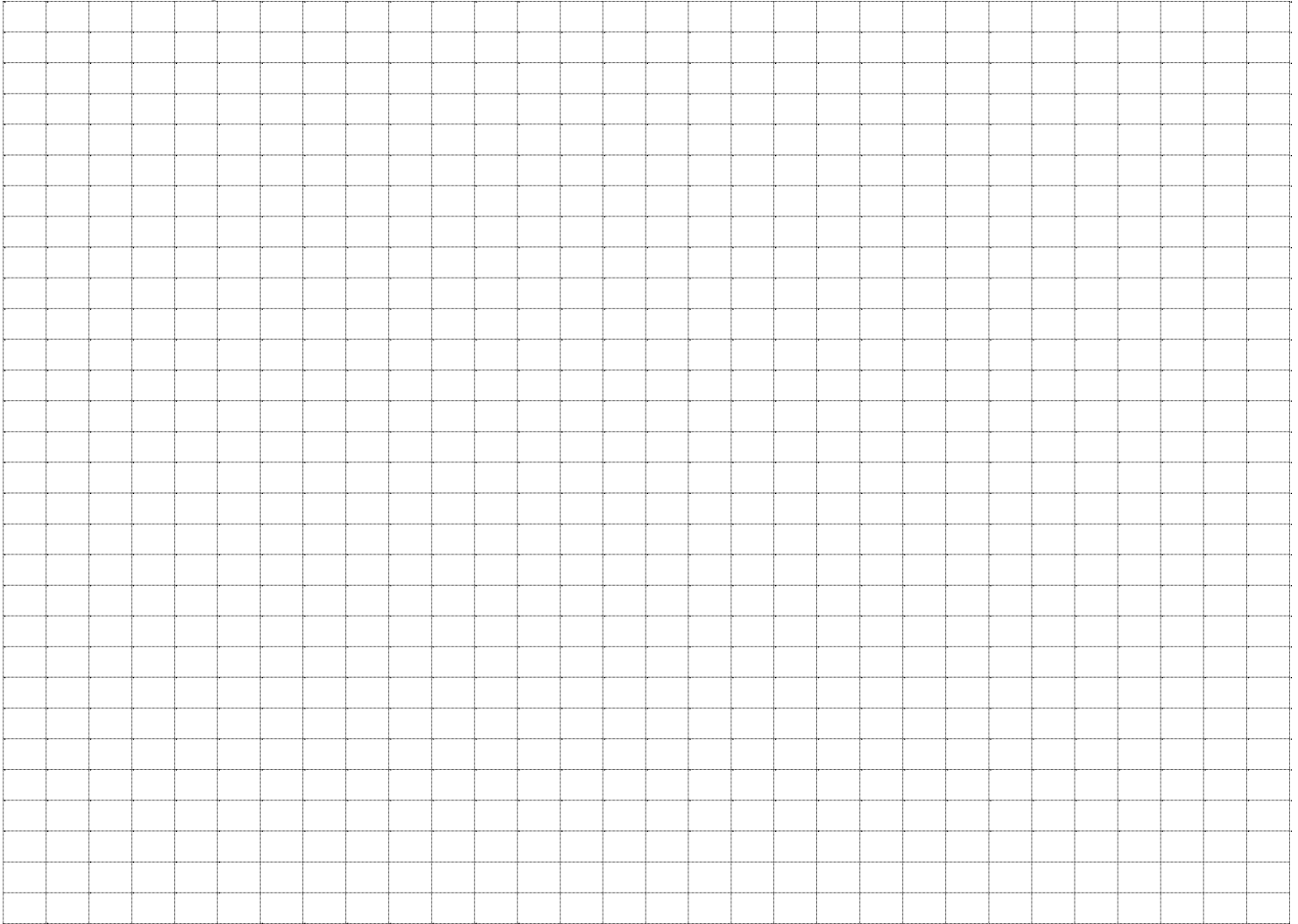
1. Abandoned Well Information Included: YES or NO,
2. If No Why Not: _____

If an abandoned gas or oil well is identified on the land that is subject (the quarter section) of the proposed development, the applicant must include a map that shows the actual well location, as identified in the field, and the setback established in ERCB Directive 079 in relation to existing or proposed building sites.

To obtain clarification about the information provided by the Abandoned Well Viewer, or if you do not have internet access, contact ERCB Customer Contact Centre by Telephone at 1-855-2197-8311 or by email at inquires@ aer.ca or contact Information Services by mail at ERCB, Suite 1000, 250 – 5 Street SW, Calgary, AB T2P 0R4

THE FOLLOWING <u>MUST</u> BE INCLUDED ON YOUR SKETCH:		
	Dimensions of proposed building(s) Location of all structures on property (existing & proposed) Proposed Locations of Power Poles Approximate distance from existing structure(s)	Public roads servicing the property Show the location of access to your property (approach) ***Your FRONT Yard Setback is the location of entrance (driveway) from a local road*** Show any pipeline crossing the property

Draw your site sketch in the grid below – All setbacks from proposed buildings to property lines **MUST** be included. Please include a legend.



Setbacks (indicate feet or meters):	North		South		East		West	
--	--------------	--	--------------	--	-------------	--	-------------	--

Quarter:		Section:		Township:		Range:		West of 5th M
-----------------	--	-----------------	--	------------------	--	---------------	--	---------------------------------

Please include a brief description of the property including any water bodies and steep embankments:

I authorize the Staff of Lac Ste. Anne County and other agencies as designated in Section 653(2) of the Municipal Government Act, R.S.A.2000, to enter my land for the purpose of conducting a site inspection to confirm existing site conditions in relation to compliance with existing bylaws and in connection with my development permit application.

The personal information provided will be used to process the Development Permit application and is collected under the authority of Section 642 of the Municipal Government Act. Personal information you provide may be recorded in the minutes of the Municipal Planning Commission, or otherwise made public pursuant to the provisions of the *Freedom of Information and Protection of Privacy (FOIP) Act*, including Section 39 through 42 therein. If you have any questions about the collection and use of this information, please contact the Lac Ste. Anne County FOIP Coordinator at 1-866-880-5722

Signature of Applicant(s)	Signature of Landowner(s)	Date

Multiple Landowners

I, _____ **THAT I AM THE REGISTERED OWNER** _____
 (Registered Land Owner) (Date)

I, _____ **THAT I AM THE REGISTERED OWNER** _____
 (Registered Land Owner) (Date)

I, _____ **THAT I AM THE REGISTERED OWNER** _____
 (Registered Land Owner) (Date)

I, _____ **THAT I AM THE REGISTERED OWNER** _____
 (Registered Land Owner) (Date)

Authorization Form (*Agent acting on behalf of registered owner*)

I (We), _____, being the registered owner(s) of _____, do hereby authorize
 (*Name of Registered owner*) (*Legal Land Description*)

_____, to make application for subdivision on the above mentioned
 property.
 (*Individual or firm making application*)

Signed: _____
 (*Registered Land Owner*) (*Registered Land Owner*) (*Date*)

GIC Well ID 471154
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received 1984/06/19

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name MYER, RON		Address GEN DEL, WABAMUN			Town		Province		Country		Postal Code T0E 2K0
Location	<i>1/4 or LSD</i> NE	<i>SEC</i> 35	<i>TWP</i> 053	<i>RGE</i> 06	<i>W of MER</i> 5	Lot	Block	Plan	Additional Description		
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)				Elevation			
_____ m from _____				Latitude <u>53.624649</u> Longitude <u>-114.622219</u>				Elevation _____ m			
_____ m from _____				How Location Obtained Not Verified				How Elevation Obtained Not Obtained			

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
22.86		Clay & Boulders	
25.30		Coal	
25.91		Brown Shale	
30.48		Coal	

Yield Test Summary			Measurement in Metric
Recommended Pump Rate 0.00 L/min			
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1984/06/07	45.46	11.58	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
30.48 m		1984/06/06	1984/06/07	
Borehole				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	30.48		
Surface Casing (if applicable)		Well Casing/Liner		
Steel		Steel		
Size OD: <u>14.12 cm</u>		Size OD: <u>11.58 cm</u>		
Wall Thickness: <u>0.396 cm</u>		Wall Thickness: <u>0.000 cm</u>		
Bottom at: <u>27.43 m</u>		Top at: <u>0.00 m</u>		
		Bottom at: <u>30.48 m</u>		
Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
27.43	30.48	0.318		30.48
Perforated by: Torch				
Annular Seal Driven				
Placed from <u>0.00 m</u> to <u>27.43 m</u>				
Amount _____				
Other Seals				
Type _____				At (m) _____
Screen Type				
Size OD: <u>0.00 cm</u>				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Filings: _____		Bottom Filings: _____		
Pack				
Type _____		Grain Size _____		
Amount _____				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name BIG IRON DRILLING LTD.	Copy of Well report provided to owner Date approval holder signed



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 471154
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/06/19

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

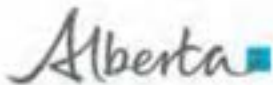
Well Identification and Location										Measurement in Metric	
Owner Name MYER, RON		Address GEN DEL, WABAMUN			Town		Province		Country		Postal Code T0E 2K0
Location	<i>1/4 or LSD</i> NE	<i>SEC</i> 35	<i>TWP</i> 053	<i>RGE</i> 06	<i>W of MER</i> 5	Lot	Block	Plan	Additional Description		
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)							
_____ m from _____				Latitude <u>53.624649</u> Longitude <u>-114.622219</u>				Elevation _____ m			
_____ m from _____				How Location Obtained Not Verified				How Elevation Obtained Not Obtained			

Additional Information										Measurement in Metric
Distance From Top of Casing to Ground Level _____ cm										
Is Artesian Flow _____					Is Flow Control Installed _____					
Rate _____ L/min					Describe _____					
Recommended Pump Rate _____ 0.00 L/min					Pump Installed Yes _____		Depth _____ m			
Recommended Pump Intake Depth (From TOC) _____ 24.99 m					Type SUB _____		Make _____		H.P. 1/2 _____	
Model (Output Rating) _____										
Did you Encounter Saline Water (>4000 ppm TDS) _____			Depth _____ m		Well Disinfected Upon Completion _____					
Gas _____			Depth _____ m		Geophysical Log Taken _____					
Submitted to ESRD _____										
Additional Comments on Well DRILLER REPORTS WATER IS MEDIUM HARD					Sample Collected for Potability _____		Submitted to ESRD Yes _____			

Yield Test			Taken From Ground Level		Measurement in Metric
			<i>Depth to water level</i>		
Test Date 1984/06/07	Start Time 12:00 AM	Static Water Level 11.58 m			
			Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
Method of Water Removal					
Type Bailer _____					
Removal Rate _____ 45.46 L/min					
Depth Withdrawn From _____ 14.33 m					
<i>If water removal period was < 2 hours, explain why</i>					

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification		
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER		Certification No 1
Company Name BIG IRON DRILLING LTD.		Copy of Well report provided to owner _____ Date approval holder signed _____



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 490405
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received 1998/01/20

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name CARRIE, DAVE		Address P.O. BOX 245 WABAMUN			Town		Province		Country		Postal Code T0E 2K0
Location	<i>1/4 or LSD</i>	<i>SEC</i>	<i>TWP</i>	<i>RGE</i>	<i>W of MER</i>	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>		
	16	35	053	05	5	14		4050TR			
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)							
182.88 m from North				Latitude 53.626621		Longitude -114.620744		Elevation _____ m			
304.80 m from East				How Location Obtained				How Elevation Obtained			
				Not Verified				Not Obtained			

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
7.01		Brown Sandy Clay	
13.72		Gray Clay	
17.37		Brown Coarse Grained Sandstone	
29.87		Brown Shale & Coal	
30.78		Gray Shale	
34.75		Coal	
37.80		Green Shale	
52.73		Brownish Gray Shale	
56.08		Coal	
57.91		Gray Shale	

Yield Test Summary			Measurement in Metric
Recommended Pump Rate			31.82 Lit/min
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1997/12/31	45.46	27.74	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
57.91 m		1997/12/30	1997/12/31	
Borehole				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	57.91		
Surface Casing (if applicable)		Well Casing/Liner		
Plastic		Plastic		
Size OD: 15.24 cm		Size OD: 11.43 cm		
Wall Thickness: 1.001 cm		Wall Thickness: 0.620 cm		
Bottom at: 36.58 m		Top at: 33.53 m		
		Bottom at: 57.91 m		
Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
51.82	57.91	0.025		3.81
Perforated by: Machine				
Annular Seal Driven & Bentonite				
Placed from 30.48 m to 36.58 m				
Amount _____				
Other Seals				
Type		At (m)		
Screen Type				
Size OD: 0.00 cm				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Filings: _____		Bottom Filings: _____		
Pack				
Type _____		Grain Size _____		
Amount _____				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name COBOB PUMPS & SERVICES LTD.	Copy of Well report provided to owner Date approval holder signed



Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 490405
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1998/01/20

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name CARRIE, DAVE		Address P.O. BOX 245 WABAMUN			Town		Province		Country		Postal Code T0E 2K0
Location	<i>1/4 or LSD</i>	<i>SEC</i>	<i>TWP</i>	<i>RGE</i>	<i>W of MER</i>	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>		
	16	35	053	05	5	14		4050TR			
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)							
182.68 m from North				Latitude 53.626621				Longitude -114.620744			
304.80 m from East				Elevation _____ m				How Elevation Obtained			
				How Location Obtained				Not Obtained			
				Not Verified							

Additional Information										Measurement in Metric
Distance From Top of Casing to Ground Level _____ cm										
Is Artesian Flow _____					Is Flow Control Installed _____					
Rate _____ L/min					Describe _____					
Recommended Pump Rate _____ 31.82 L/min					Pump Installed Yes _____		Depth _____ m			
Recommended Pump Intake Depth (From TOC) _____ 48.77 m					Type SUB _____		Make GOULD _____ H.P.		Model (Output Rating) _____	
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____			
Gas _____					Depth _____ m		Geophysical Log Taken _____			
							Submitted to ESRD _____			
							Sample Collected for Potability _____		Submitted to ESRD _____	
Additional Comments on Well										
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 18".										

Yield Test			Taken From Ground Level		Measurement in Metric
			Depth to water level		
Test Date 1997/12/31	Start Time 7:12 AM	Static Water Level 27.74 m			
Method of Water Removal					
Type Air _____					
Removal Rate 45.46 L/min					
Depth Withdrawn From 48.77 m					
If water removal period was < 2 hours, explain why					
			Drawdown (m)	Elapsed Time	Recovery (m)
				Minutes:Sec	
			27.74	0:00	48.77
			48.77	1:00	35.36
			48.77	2:00	32.31
			48.77	3:00	31.09
			48.77	4:00	30.48
			48.77	5:00	30.18
			48.77	6:00	29.87
			48.77	120:00	

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification		
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER		Certification No 1
Company Name COBOB PUMPS & SERVICES LTD.		Copy of Well report provided to owner _____ Date approval holder signed _____

GIC Well ID 1640390
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received 2014/01/13

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name GLESNER, MARK		Address TOWNSHIP ROAD 540			Town FALLIS		Province ALBERTA		Country CANADA	Postal Code T0E 0V0	
Location	<i>1/4 or LSD</i>	<i>SEC</i>	<i>TWP</i>	<i>RGE</i>	<i>W of MER</i>	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>		
	16	35	53	5	5						
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)							
_____ m from _____				Latitude <u>53.627560</u> Longitude <u>-114.620750</u>				Elevation <u>789.62 m</u>			
_____ m from _____				How Location Obtained				How Elevation Obtained			
				Differential corrected handheld GPS 5-10m				Differential corrected handheld GPS 5-10m			

Drilling Information	
Method of Drilling Rotary - Mud	Type of Work New Well
Proposed Well Use Domestic	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
7.32		Blue Clay	
11.28		Blue Clay	
14.63		Hard Sand	
17.98		Coal	
19.20		Brown Shale	
22.86		See Comments Coal	
29.57		Gray Soft Shale	
32.00		Brown Soft Shale	
45.11		Soft Shale	
46.63		Brown Hard Shale	
49.99		Green Shale	
58.52		Soft Coal	

Yield Test Summary			Measurement in Metric
Recommended Pump Rate <u>31.82 Lit/min</u>			
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
2013/09/26	36.37	5.34	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
58.52 m	26.21 m	2013/09/25	2013/09/26	
Borehole				
Diameter (cm)	From (m)	To (m)		
20.00	0.00	26.21		
Surface Casing (if applicable)		Well Casing/Liner		
Plastic				
Size OD	<u>15.24 cm</u>	Size OD	_____ cm	
Wall Thickness	<u>0.991 cm</u>	Wall Thickness	_____ cm	
Bottom at	<u>23.16 m</u>	Top at	_____ m	
		Bottom at	_____ m	

Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)

Perforated by _____

Annular Seal Bentonite Chips/Tablets
 Placed from 0.00 m to 21.34 m
 Amount 250.00 Pounds

Other Seals

Type	At (m)

Screen Type Stainless Steel
 Size OD: _____ cm

From (m)	To (m)	Slot Size (cm)
23.16	26.21	0.025

Attachment _____
 Top Fittings _____ Bottom Fittings _____

Pack

Type Artificial Grain Size 20.40
 Amount 200.00 Pounds

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well ROD MACINTOSH	Certification No 59770
Company Name RODCO DRILLING	Copy of Well report provided to owner Yes
	Date approval holder signed 2013/09/26

GIC Well ID 1640390
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received 2014/01/13

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name GLESNER, MARK		Address TOWNSHIP ROAD 540			Town FALLIS		Province ALBERTA	Country CANADA	Postal Code T0E 0V0		
Location	<i>1/4 or LSD</i> 16	<i>SEC</i> 35	<i>TWP</i> 53	<i>RGE</i> 5	<i>W of MER</i> 5	<i>Lot</i>	<i>Block</i>	<i>Plan</i>	<i>Additional Description</i>		
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)							
_____ m from				Latitude <u>53.627560</u> Longitude <u>-114.620750</u>				Elevation <u>789.62 m</u>			
_____ m from				How Location Obtained				How Elevation Obtained			
				Differential corrected handheld GPS 5-10m				Differential corrected handheld GPS 5-10m			

Additional Information										Measurement in Metric	
<i>Distance From Top of Casing to Ground Level</i>		<u>60.96 cm</u>									
<i>Is Artesian Flow</i>		Rate _____ L/min		<i>Is Flow Control Installed</i>		Describe _____					
<i>Recommended Pump Rate</i>		<u>31.82 L/min</u>		<i>Pump Installed</i>		Depth _____ m					
<i>Recommended Pump Intake Depth (From TOC)</i>		<u>18.29 m</u>		<i>Type</i>		<i>Make</i>		<i>H.P.</i>		<i>Model (Output Rating)</i>	
<i>Did you Encounter Saline Water (>4000 ppm TDS)</i>		_____		<i>Depth</i>		_____ m		<i>Well Disinfected Upon Completion</i> <u>Yes</u>			
<i>Gas</i>		_____		<i>Depth</i>		_____ m		<i>Geophysical Log Taken</i>			
								Submitted to ESRD _____			
<i>Additional Comments on Well</i>				<i>Sample Collected for Potability</i>		_____		<i>Submitted to ESRD</i>			
								Submitted to ESRD _____			

Yield Test			Taken From Top of Casing	Measurement in Metric	
			Depth to water level		
<i>Test Date</i> 2013/09/26	<i>Start Time</i> 11:00 AM	<i>Static Water Level</i> 5.34 m			
Method of Water Removal					
<i>Type</i> <u>Air</u>					
<i>Removal Rate</i> <u>36.37 L/min</u>					
<i>Depth Withdrawn From</i> <u>18.29 m</u>					
<i>If water removal period was < 2 hours, explain why</i>					
			Drawdown (m)	Elapsed Time Minutes:Sec	
				Recovery (m)	
				0:00	18.29
				1:00	13.27
				2:00	11.49
				3:00	
				4:00	7.38
				5:00	6.32
				6:00	5.69
				7:00	5.55
				8:00	5.54
				9:00	5.54

Water Diverted for Drilling		
<i>Water Source</i> MUNICIPAL SUPPLY	<i>Amount Taken</i> 9092.18 L	<i>Diversion Date & Time</i> 2013/09/25 2:15 PM

Contractor Certification		
<i>Name of Journeyman responsible for drilling/construction of well</i> ROD MACINTOSH	<i>Certification No</i> 59770	
<i>Company Name</i> RODCO DRILLING	<i>Copy of Well report provided to owner</i> Yes	<i>Date approval holder signed</i> 2013/09/26



Attachment B:

Industrial Haul Agreement and Development Permit with Parkland County





INDUSTRIAL HAUL AGREEMENT

ROAD MAINTENANCE & DRAINAGE

MEMORANDUM OF AGREEMENT entered into this 5th day of Aug, A.D., 2025.

BETWEEN:

PARKLAND COUNTY

OF THE FIRST PART,

and-

T & T SAND & GRAVEL / 214131 ENTERPRISE LTD

This information redacted as per information provided in copy of the original document

OF THE SECOND PART.

WHEREAS Parkland County (hereinafter referred to as "Parkland") is responsible for the control and management of certain public highways, roads, streets, lanes, alleys and bridges (hereinafter referred to as "the Parkland Roadways") within Parkland and T & T Sand & Gravel / 214131 Enterprise Ltd. has applied to Parkland for permission to haul certain goods and materials on the Parkland Roadways; and

WHEREAS Parkland is prepared to permit T & T Sand & Gravel / 214131 Enterprise Ltd., its servants, employees, agents, licensees and independent contractors (hereinafter referred to as the "Hauler") to haul the goods and materials requested by the Hauler on the Parkland Roadways, subject to the Hauler undertaking to repair any damage caused to the Parkland Roadways by the Hauler, all on the terms and subject to the conditions hereinafter set forth:

NOW THEREFORE THIS AGREEMENT WITNESS THAT, in consideration of the mutual covenants and agreements hereinafter set-forth and in consideration of Parkland permitting the Hauler to haul certain goods and materials, as specified on Schedule "A" hereto attached, over the Parkland Roadways during the period of time specified on Schedule "A", Parkland and the Hauler agree as follows:

- 1. Forthwith upon the execution of this Agreement by the Hauler and Parkland, the Hauler shall supply Parkland with security in the amount as may be specified on Schedule "A" to ensure

compliance by the Hauler with each of the terms, covenants and conditions of this Agreement. The security to be provided by the Hauler to Parkland pursuant to this Agreement shall consist of cash, certified cheque or bank draft or an irrevocable Letter or Letters of Credit issued by a chartered bank or the Treasury Branch in favour of Parkland in such form as may be required by Parkland. Such security shall secure all levies, taxes, fees, charges, and amounts owing to Parkland under this Agreement, including without limitation any levy in respect of a sand and gravel business operating in Parkland.

2. Parkland and the Hauler agree that any costs associated with the use of the security shall be formalized and invoiced by Parkland, and the Hauler shall have the option of paying such costs within sixty (60) days of such invoicing being sent to the Hauler. In the event the Hauler does not pay the invoiced amount within sixty (60) days, Parkland shall charge such invoiced costs against the security. Upon satisfactory inspection by Parkland at the completion of the haul or term of the Agreement, the residual security shall be refunded to the Hauler.

3. The Hauler shall not haul any goods or materials on the Parkland Roadways until such time as the following conditions shall have been met:

- a. this Agreement shall have been executed by the Hauler and by Parkland;
- b. the Hauler shall have paid to Parkland any applicable permit or administration fee identified in Parkland's current Fees and Charges Schedule as required by Parkland for the entering into of this Agreement and the granting of approval to the Hauler to haul the goods and materials specified on the Parkland Roadways.
- c. Parkland shall have acknowledged receipt of the specified security and authorized the Hauler in writing to proceed with the haulage.

4. The Hauler, while operating within Parkland, shall at all times comply with all relevant statutes, regulations, by-laws and resolutions, including, without restricting the generality of the foregoing, all permits, licenses and approvals issued by Parkland and the directions from time to time of Parkland.

-
5. The Hauler shall at all times ensure the hauling is carried out by drivers who are insured, qualified and licensed to carry out the hauling. Further, the Hauler shall at all times abide by and comply with the terms and conditions of this Agreement. In the event that the Hauler shall fail to abide by the terms and conditions of this Agreement, Parkland shall be entitled to any of the remedies hereinafter contained.
6. The Hauler acknowledges that he is responsible for and shall indemnify Parkland and save Parkland harmless from any and all liability or damages that result from any failure of the Hauler to abide by the terms and conditions of this Agreement.
7. The Hauler shall ensure that the goods and materials to be hauled by the Hauler are hauled only on those Parkland Roadways which are designated in Schedule "A". Upon the written request by Parkland, the Hauler shall provide Parkland with evidence satisfactory to Parkland respecting the nature of the goods and materials hauled and the quantity of each good or material hauled by the Hauler. The Hauler hereby grants to Parkland an easement for the purposes of entering onto any lands which are subject to the provisions of this Agreement for the purpose of ensuring that the terms of this Agreement are being complied with by the Hauler.
8. Parkland shall endeavour to provide a level of maintenance, including snow and ice control, for Parkland Roadways consistent with Parkland's Road Maintenance Guidelines and Procedures. The Hauler, at the sole cost and expense of the Hauler, shall be required to carry out additional maintenance including snow and ice control, when conditions warrant in order to allow the Hauler to maintain its hauling schedule and when its operations have the potential to result in unsafe traffic conditions due to increased traffic volumes. The Hauler shall ensure that during the times the Hauler is in use of the Parkland Roadways designated in Schedule "A" the said Parkland Roadways are at all times maintained and repaired by the Hauler in the manner set out in Schedule "A". Notwithstanding the foregoing, in the event Parkland determines in its sole discretion that inadequate dust control measures have been implemented by the Hauler, Parkland may, without notice to the Hauler, apply dust control measures and the costs of such dust control measures shall be paid by the Hauler to Parkland.
9. In the event that the Hauler shall fail to perform or carry out one or more of the obligations and undertakings to be performed or carried out by the Hauler pursuant to this Agreement, Parkland shall

be at liberty to issue a notice of deficiency to the Hauler advising the Hauler of his failure to perform or carry out one or more of his obligations or undertakings pursuant to this Agreement and the Hauler shall immediately undertake to perform or carry out such works or actions as might be stated in the notice of deficiency.

10. In the further event that the Hauler fails to commence to perform or carry out the works or actions stated in the notice of deficiency to the satisfaction of Parkland within a period of seventy two (72) hours from the receipt of such notice of deficiency by the Hauler, or within such other period of time which might be agreeable to Parkland, Parkland shall be at liberty, but not obligated, to perform and carry out the obligations and undertakings. Every reasonable cost and expense incurred by Parkland in carrying out the said obligations and undertakings shall be paid by the Hauler to Parkland within sixty (60) days of such invoicing being sent to the Hauler. In the event the Hauler does not pay the invoiced amount within sixty (60) days, Parkland shall charge such invoiced costs against the security.

11. Furthermore, in the event that the Hauler shall fail to perform or carry out any of the obligations or undertakings to be performed or carried out by the Hauler pursuant to this Agreement, the Hauler shall pay to Parkland every reasonable cost and expense incurred by Parkland in enforcing or in attempting to enforce, or both, the terms and conditions contained in this Agreement, including, without restricting the generality of the foregoing, all reasonable legal fees and disbursements incurred by Parkland on a solicitor and client basis. Such payment shall be due within sixty (60) days of such invoicing being sent to the Hauler. In the event the Hauler does not pay the invoiced amount within sixty (60) days, Parkland shall charge such invoiced costs against the Hauler's security.

12. The Hauler hereby agrees to authorize the release of any information collected by the Alberta Sand and Gravel Association with respect to any hauls within the County by the Hauler including number and type of complaints or calls from the public.

13. Notwithstanding any other provision contained in this Agreement to the contrary, in the event that Parkland's General Manager of Infrastructure Services or his designate shall declare in writing that an emergency exists as a result of the failure of the Hauler to perform or carry out one or more of its obligations and undertakings under this Agreement, Parkland shall be at liberty, but not obligated, to immediately perform or carry out the obligations or undertakings which the Hauler has failed to perform

or carry out without notice to the Hauler, and the Hauler shall pay on demand to Parkland every reasonable cost and expense incurred by Parkland in performing or carrying out any obligation or undertaking which the Hauler has failed to perform or carry out.

14. In the event that Parkland produces one or more certificates certifying that Parkland, or any person claiming from or through Parkland, is entitled to payment from the security provided by the Hauler for the sum or sums so certified, the Hauler undertakes jointly with the financial institution providing the security pursuant to paragraph 1 of this Agreement that the said sum or sums will be so paid immediately on demand without deduction, holdback or further proof and that the Hauler will not say or do anything to impede the prompt payment of such sum or sums by the said financial institution, whether or not the Hauler believes in the accuracy of such certificate. No such certificate shall be invalidated by want of, from, or error in wording and such certificates may be amended from time to time.

15. Any certificates above-described shall be sufficient and conclusive proof between the parties hereto that Parkland, or any person claiming from or through Parkland, is entitled to payment of any sum or sums under any of the clauses of this Agreement notwithstanding the fact that any bank Letter of Credit may have expired, or not have been granted, or that payment of any amount (including damages) due from the Hauler to Parkland may not be covered by the amount (or terms accepted by Parkland) of the security provided pursuant to paragraph 1 of this Agreement.

16. Upon the completion of the haul, the Parkland Roadways used by the Hauler shall forthwith be restored by the Hauler to a condition, reasonable wear and tear excepted, which is satisfactory to Parkland.

17. In the event the Hauler shall fail to comply with any of the terms or conditions of this Agreement, Parkland shall be at liberty to serve a notice upon the Hauler requiring the Hauler to quit hauling and upon the service of such a notice by Parkland on the Hauler, the Hauler shall forthwith stop all hauling activities within Parkland and the Hauler's rights under any permit or license issued by Parkland to haul goods or materials within Parkland on Parkland Roadways shall be suspended until such time as the suspension shall be lifted by Parkland.

18. This Agreement shall not be transferred or assigned by the Hauler without the consent in writing of Parkland.

19. All notices shall be valid and effective if personally delivered to, or sending it by facsimile transmission, or given by mail by registered letter, postage prepaid (unless at the time of or within forty-eight (48) hours thereof there shall be a general disruption in the postal service, in which case, service shall be by delivery only) addressed:

i. In the case of Parkland, to:

Parkland County
c/o Director, Road Maintenance & Drainage
53109A Hwy 779
Parkland County, Alberta T7Z 1R1

ii: In the case of the Hauler, to:

T & T Sand & Gravel / 214131 Ent. Ltd.
This information redacted as per
The information redacted (PEPA)
The information redacted (PEPA)
Protection of Privacy Act (DOPA)

and if mailed, shall be deemed to have been effectively given three (3) days after mailing and, if delivered, shall be deemed to have been given on the date on which it was delivered, and if transmitted by facsimile on the next business day following the day of transmission. Notices may also be communicated by any electronic means which can produce a written copy provided that written acknowledgement of the receipt of the electronic communication notice is obtained.

Any party may change its address for receipt of notice by giving notice of its new address to the other party as herein contemplated.

20. This Agreement may be terminated by either party by giving thirty (30) days written notice of the intention to terminate in accordance with the notice provision above.

21. The Hauler acknowledges and agrees that Parkland shall be at liberty to revise Schedule "A" from time to time.

[SIGNATURE PAGE IMMEDIATELY FOLLOWS]

T & T Sand & Gravel / 214131 Enterprise Ltd. has hereunto subscribed their name and executed an Affidavit of Corp Signing Authority OR the Operator has affixed its seal by the hands of its proper officers duly authorized in that behalf this 5 day of August, A.D., 2025.

SIGNED BY THE SAID

T & T Sand & Gravel / 214131 Enterprise Ltd.

IN THE PRESENCE OF:

)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

PARKLAND COUNTY has hereunto subscribed their name OR affixed its seal by the hands of its proper officers duly authorized in that behalf this 6th day of Aug, A.D., 2025.

PARKLAND COUNTY

This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)
This information redacted as per Protection of Privacy Act
(POPA)

53109A Hwy 779, Parkland County, AB, T7E 1R1 Tel: 780.968.8448 Fax: 780.968.8451 Toll free: 1.800.690.0058 www.parklandcounty.ab.ca

The personal information provided by you is being collected under the authority of the Municipal Government Act and will be used for the purposes under that Act. The personal information that you provide may be made public, subject to the provisions of the Freedom of Information and Protection of Privacy Act. Questions about the collection of this information can be directed to the Freedom of Information and Protection of Privacy Coordinator for Parkland County, 53109A Hwy 779, Parkland County, Alberta T7E 1R1 (780.968.8129).



SCHEDULE "A-1"
(STANDARD AGREEMENT)
FOR INDUSTRIAL HAUL AGREEMENT
BETWEEN

ROAD MAINTENANCE &
DRAINAGE

File #: 2025-H-025

PARKLAND COUNTY
and
T & T SAND AND GRAVEL/214131 ENTERPRISES LTD
(PERTAINING TO DEVELOPMENT PERMIT # 07-D-231)
(ALBERTA ENVIRONMENT APPROVAL # 248371-00-00)

1. Goods and materials to be hauled: sand and gravel from plant on located at NE 26-53-05-W5M. Municipal Address: 53418 Range Road 51.
2. Proposed period of haulage: August 16, 2025 to August 15, 2026.
3. Designated haul route: from NE 26-53-05-W5M on Range Road 51 to Hwy 16.
4. Maximum speed for haulage vehicles (except where lower limits are posted): as posted.
5. Permitted variations from legal or posted axle weight restrictions: NIL.
6. Security provided in the amount of: \$20,000.00 (on file).
7. Road maintenance requirements during haulage:
 - a. Gravel surface road;
 - i. Road to be maintained with a grader during haulage.
 - ii. Dust to be controlled at all times. Calcium Chloride or other similar approved products must be used for dust control.
 - iii. Soft spots and holes that develop shall be filled with gravel immediately.
 - iv. Water truck to be on site for dust control purposes as when required.
 - b. Oil surface road;
 - i. Holes to be repaired using material approved by Parkland County.
 - c. All road damage to be repaired as it develops. All repair materials subject to County approval.
 - d. Truck Haul In Progress signs to be installed at the following locations:
 - i. Truck entering sign North and South of pit entrance.
 - ii. Truck hauling in progress sign on Twp Rd 534 Immediately West of Range Rd 51.
 - iii. On Range Road 51 Immediately North of Hwy 16.
8. Prior to the commencement of hauling operations all drivers shall be given an orientation covering the minimum following topics:
 - a. Traffic Haul Safety Strategy
 - b. Speed limits
 - c. Stopping requirements
 - d. Traffic volume and spacing
 - e. High traffic flows times
 - f. School areas and bus times
 - g. Review traffic laws, rules & courtesy
 - h. The requirement for all trucks to be in a safe operating condition and the requirements for regular checks to ensure safety.
 - i. The requirement for regular cleaning of ASGA signs on trucks to ensure visibility.
 - j. Reporting all unsafe driving incidents encountered throughout the haul.

Traffic Haul Safety Strategy

9. The Hauler shall prepare a Traffic Haul Safety Strategy (THSS) detailing the measures he proposes to safely carryout hauling operations throughout the haul route including on the

Provincial Highway system. The Hauler should make every effort to minimize hazards and maximize public safety.

The Hauler shall submit the THSS to Parkland County 14 days prior to any hauling operation taking place. Parkland County will review the THSS and communicate any concerns to the Hauler within 7 days after receiving the THSS. Any issues or concerns regarding the Hauler's proposed THSS shall be addressed by the hauler to the satisfaction of Parkland County prior to the commencement of hauling operations.

The Hauler's THSS shall address the minimum following areas of vehicular and pedestrian traffic safety concerns:

- a. speeding, failing to stop, and other legislated traffic violations;
- b. trucks passing other vehicles along the haul route;
- c. unsafe driving habits (cell phone use, eating, meandering, driving outside the travel lane, etc);
- d. safe haul truck spacing;
- e. traffic control devices (signing);
- f. ensuring normal school bus operations are safely accommodated and not interfered with;
- g. safe access to all other vehicles maintained along the haul route;
- h. public safety when the number of haul trucks become intense;
- i. Potential split haul routes for loaded and unloaded haul vehicles (splitting up traffic volumes on different roads)
- j. listing of internal gravel truck safety infractions;
- k. listing of internal truck disciplinary process for safety infractions;

The Hauler shall notify Parkland County of any haul truck suspended from hauling operations.

Note: Self-reported infractions when accompanied by appropriate disciplinary actions will not be subject to further administrative penalties by Parkland County.

10. Hauler to notify all residents along haul route prior to start of haulage.
11. Hauler to supply company contact and phone number to residents as part of notification process.
12. All gravel trucks to be identified with signage as per the Alberta Sand and Gravel Truck Registry for gravel trucks. The signage shall be consistent with the decals as per the Alberta Sand and Gravel Truck Registry and will include the truck number on a minimum of three sides of the truck/trailer unit (front bumper, driver's side box and rear-most tail gate).
13. Hauler to ensure tires, hitches, sideboards, truck numbering and license plates are reasonably clear of dirt and debris for safety and identification purposes.
14. Prior to any driver commencing hauling under this Agreement, a complete listing of trucks used on the haul complete with names and identifying numbers must be provided to the County on a daily basis (prior to the start of hauling operations) during the haul period to Community and Protective Services Patrol, either by phone 780.968-8400, fax 780.968-8403 or email enforcementadmin@parklandcounty.com .
15. Maximum hours of operation for the hauling shall be:
6:00 am to 6:00 pm Monday to Friday
8:00 am to 4:00 pm Saturday
No hauling on Sunday.
16. If truck haul is discontinued; the Hauler shall cover all Truck Haul in Progress signs until such time as haul is resumed and notify Community and Protective Services Patrol, either by phone 780.968.8400, fax 780.968.8403 or email enforcementadmin@parklandcounty.com .

17. Road restoration requirements upon completion of the haul:
 - a) Restore oil surface breaks and damage, restore any failures and rutting in gravel surfaces, blading and re-gravel where required.
 - b) Restore dust controlled areas to pre-haul condition.
 - c) Re-shape shoulders and or road slopes that have been pushed out or damaged as a result of the haul.

18. The attached list of infractions and Penalties as noted below forms part of this agreement:

**HAUL AGREEMENTS
INFRACTIONS AND PENALTIES**

NOTE: These penalties are in addition to applicable fines under the applicable by-laws or provincial statutes. Also, a permit holder's record of penalties may affect ability to obtain a subsequent Development Permit.

Parkland County will not tolerate non-compliance of any of the above conditions. Parkland shall be at liberty to immediately suspend the truck haul operation if any of the conditions are breached.

<i>INFRACTIONS</i>	<i>PENALTIES</i>
Hauling outside designated Route without permission	Immediate 1 day suspension of haul 2 nd infraction – one week suspension 3 rd infraction – one month suspension of Haul Agreement. Removal of truck and driver from approved haul for first infraction
Other Traffic Safety Act, Regulations and Traffic Bylaw infractions	Removal of truck and driver from haul for 24 hours for each infraction 2 nd infraction within a 6 month period for the same driver – one day suspension of haul agreement
Fail to adhere to Haul Agreement Speed Limit	Removal of truck and driver from haul for 24 hours for each infraction 2 nd infraction within a 6 month period for the same driver – one day suspension of haul agreement
Failure to repair and maintain roadways and/or failure to provide adequate dust control in a reasonable time frame	1 st infraction – one day suspension of haul agreement 2 nd infraction – 5 day suspension of haul agreement 3 rd infraction – 1 month suspension of haul agreement 4 th infraction – cancellation of haul agreement
Missing or non visible/readable, expired or counterfeit truck numbering decals	One warning per truck and driver 2 nd infraction – removal of truck and driver for one day from haul and one day suspension of haul agreement regardless of driver 3 rd infraction – removal of truck and driver for one week and one week suspension of haul agreement regardless of driver
Truck movements before or after approved times or designated haul periods (Note: Trucks may not proceed to pit until hours of haul are in effect)	1 st infraction – truck and driver suspended for 1 day and haul agreement suspended for 1 day 2 nd infraction – truck and driver removed from haul and haul agreement suspended for one week 3 rd infraction – haul agreement suspended for one month 4 th infraction – haul agreement cancelled
Failure to provide list of trucks to Patrol prior to haul	1 st infraction – verbal warning 2 nd infraction – ½ day suspension of haul 3 rd infraction – 1 day suspension of haul

<i>INFRACTIONS</i>	<i>PENALTIES</i>
	4 th infraction – 3 day suspension of haul
Failure to erect proper signage as specified in Haul Agreement	1 st infraction – verbal warning 2 nd infraction – 1 day suspension of haul
Drivers not licensed and/or truck not insured.	Removal of driver and/or truck for 6 months from haul
Driver and/or truck operating while under administrative suspension	Removal of driver and/or truck for 6 months from haul and a 3 day suspension of haul

NOTE: Road shall be left in a condition which, in the opinion of the County, is equal to the condition prior to the commencement of the haul.

Where a driver and/or truck is under an administrative suspension or removed from a different haul in the County due to an infraction under a haul agreement, the driver and/or truck is prohibited from hauling under this haul agreement without prior written approval from the County. Parkland County will be responsible for providing information regarding driver and/or truck suspensions.

I have read and agree to the terms of this Industrial Haul Agreement.

This information redacted
Per as per Protection of
T & T Sand & Gravel / 214131 Enterprises Ltd

Contact Name: John Thomas
Phone #: *This information redacted as*
~~This information redacted as~~

331964 Hwy 775, Parkland County, AB, T2E 1R1 Tel: 780.966.8446 Fax: 780.966.0431 Toll Free: 1.800.460.0619 www.parklandcounty.ab.ca

The personal information provided for you is being collected under the authority of the Municipal Government Act and will be used for the purposes under that Act. The personal information that you provide may be made public, subject to the provisions of the Freedom of Information and Protection of Privacy Act. Questions about the collection of this information can be directed to the Freedom of Information and Protection of Privacy Coordinator for Parkland County, 331964 Hwy 775, Parkland County, Alberta T2E 1R1 (780.966.3229).

**DISCRETIONARY USE
APPROVED DEVELOPMENT PERMIT**APPLICATION NO.: 07-D-231
ROLL: 2881000

T & T Sand & Gravel Ltd

**This information redacted
as per Protection of**

YOUR APPLICATION FOR RENEWAL - Gravel Pit located at NE-26-53-5-W6 Municipal Address 53418 RGE RD 51 was considered by the Development Authority and conditionally approved.

This Development Permit authorizes the following use **Natural Resource Extraction/Processing (RENEWAL)** approved as a Discretionary Use in accordance with Section 4.1 and 12.12 of the County's Land Use Bylaw 2017-18.

In accordance with Section 16.14.1 of Land Use Bylaw 2017-18, this Development Permit is not valid unless and until:

- Any conditions, except those of a continuing nature, have been fulfilled; and
 - No notice of appeal had been served on the Subdivision and Development Appeal Board in accordance with Section 886(1) of the Municipal Government Act.
1. This approval is **CONTINGENT** on the applicant obtaining Registration under the Code of Practice for Pits approval from Alberta Environment and providing Parkland County with a copy of that approval. The applicant shall provide the County with a copy of the 5 year Report submitted to the Province.
 2. **Hours of Operation**
The hours of operation for the pit, including extraction, reclamation and the processing (crushing) of materials shall be specified below.

No operation between 6:00 p.m. Saturday and 5:59 a.m. Monday
 3. **Hours for Hauling**
The removal of sand and/or gravel from the pit location (hauling) shall take place only within the hours specified below.

6:00 a.m. to 6:00 p.m. Monday to Friday
8:00 a.m. to 4:00 p.m. Saturday
No hauling on Sunday
 4. The applicant shall enter into an Industrial Haul Agreement with Parkland County Public Works Department, prior to commencing hauling operations from the pit, and provide such security as required by Parkland County.
 5. The applicant shall preserve all existing stands of trees and shrubbery outside the development area for environmental and sound attenuation purposes.
 6. As per Parkland County Policy all commercial and industrial outdoor lighting installations and outdoor luminary replacements requiring an electrical permit shall be Dark Sky compliant.
 7. **Dust and Noise**
The applicant shall:

a) prevent noise from becoming an annoyance to neighbouring landowners at the request of and to the satisfaction of the Development Authority. Required prevention may include, but not be limited to, locating stockpiles to act as sound barriers and using methods of minimizing or reducing noise created by machinery and equipment; and

b) be responsible for ongoing monitoring of noise levels at the site and shall provide the results of this data to Community and Protective Services by the 15th day of each month for the previous month.
 8. The applicant shall locate appropriate safety and traffic signage on and about the subject lands and road

accesses.

9. The applicant shall keep the area subject to the development permit in a clean and tidy condition free from rubbish and non-aggregate debris, including and required screening or buffering to the satisfaction of the Development Authority, at all times.
10. The applicant is responsible to ensure the property is securely gated and locked when not in use.
11. The applicant shall ensure that all trucks/haulers associated with this development are registered with the Alberta Sand and Gravel Association Central Truck Registry Program and have their ASGA number on the truck visible to the public.
12. This development permit does not allow for the production of asphalt concrete pavement.
13. Any proposed changes shall first be submitted for review by the Development Authority. Any changes considered substantial or inconsistent with this approval, as determined by the Development Authority, may require separate development permit approval.
14. Failure to comply with the conditions of this permit may result in the permit being cancelled and or revoked.
15. The proposed development shall conform to the stamped approved plans and shall not be moved, altered or enlarged except where authorized or directed through this permit approval.

PERMIT NOTES:

1. The applicant is responsible to obtain any Provincial approval which may be required.
2. The applicant is responsible to obtain building, plumbing, electrical, gas and private sewage permits which may be required. Permits must be obtained from Parkland County.
3. The applicant is responsible to ensure compliance with the Alberta Fire Code.
4. The applicant is responsible to ensure compliance with the Environmental Protection & Enhancement Act regarding dust and air quality.
5. The applicant is responsible to ensure compliance with the Alberta Wildlife Act and the Migratory Birds Convention Act.
6. Weed control measures are to be in place for life of pit. The applicant shall consult with Parkland County's Agricultural Services to develop and implement an active weed control program for the gravel pit operation.
7. The applicant shall ensure that the Aggregate Production Quarterly Report is submitted to Parkland County as per the specified conditions and time lines in Bylaw No. 2014-14.
8. The applicant is responsible to obtain a Haul Agreement from Parkland County Public Works. 780-968-8448
9. It is the applicant's responsibility to contact Alberta One-Call at 1-800-242-3447 before any ground disturbance.

DATE OF ISSUE OF DECISION: May 05, 2020

The development must be started and diligently pursued within **twelve (12) months** from the date of decision, unless otherwise specified on this development permit approval or in the conditions of the development permit approval. If the authorized development is not commenced, the approval ceases and this permit is deemed void, expired and without effect, unless an extension to this permit has been previously granted.

Pursuant to the provisions of the Municipal Government Act, Statutes of Alberta, a Development Permit decision may be appealed to the Subdivision and Development Appeal Board. For further information contact Parkland County Legislative Services at 780-968-8888

PLEASE NOTE Parkland County requires that a non-refundable fee of **\$200.00** must be paid for and appeal served on the Subdivision and Development Appeal Board by the applicant.

This information redacted
 This information redacted
 This information redacted
 as per Section 27 of the
 Access to Information Act
 Planner



Attachment C:

EPEA Authorizations



REGISTRATION
PROVINCE OF ALBERTA

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended

REGISTRATION NO.: **248371-00-00**

APPLICATION NO.: **001-248371**

EFFECTIVE DATE: **October 13, 2009**

REGISTRATION HOLDER: **214131 Enterprises Ltd.**

Registration is issued for the following activity:

The construction, operation or reclamation of a pit located in the NE 26-053-05-W5M as described in the Activities Plan submitted with the registration application.

Designated Director under the Act **This information is confidential as per the information reflected as per**

Date Signed **October 13, 2009**

REGISTRATION
PROVINCE OF ALBERTA

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended

REGISTRATION NO.: 248371-00-01

APPLICATION NO.: 002-248371

EFFECTIVE DATE: March 05, 2020

REGISTRATION HOLDER: 214131 Enterprises Ltd.

Registration is issued for the following activity:

The construction, operation or reclamation of a Pit located in the NE 26-053-05 W5M; NW, SW & SE 35-053-05 W5M; NW & SW 36-053-05 W5M as described in the Updated Activities Plan submitted with the registration application.

Designated Director under the Act

This information redacted as per
Protection of Personal Information Act (POPIA)

Date Signed March 5, 2020



Attachment D:

Western Heritage's Evaluation and Clearance from Alberta Culture



Statement of Justification for *Historical Resources Act* Requirements for projects other than small-scale oil and gas

This document contains sensitive information about Historic Resources that are protected under the provisions of the *Alberta Historical Resources Act*. This information is to be used to assist in planning the proposed project only. It is not to be disseminated, and no copies of this document are to be made without written permission of the Historic Resources Management Branch, Alberta Culture & Tourism.

<u>Project Name or Project Identifier</u> T&T Sand and Gravel Bamber #2 Pit NE-26-053-05 W5M, NW/SW-36-053-05 W5M, NW/SW/SE-35-053-05 W5M						
<u>Disposition Type & Number</u>						
<u>Name:</u> Peter Stewart <u>Corporate name of consulting company:</u> Western Heritage P This information redacted as per Protection of Privacy Act (POPA) E This information redacted as per Protection of Privacy Act (POPA) E This information redacted as per Protection of Privacy Act (POPA) E This information redacted as per Protection of Privacy Act (POPA)						
<u>Name of proponent contact:</u> John Thomas <u>Corporate name of proponent:</u> T&T Sand and Gravel (214131 Enterprises Ltd.) This information redacted as per Protection of Privacy Act (POPA) This information redacted as per Protection of Privacy Act (POPA) This information redacted as per Protection of Privacy Act (POPA) This information redacted as per Protection of Privacy Act (POPA) This information redacted as per						
Lands Affected						
<i>Legal Description</i>						
MER	RGE	TWP	SEC	LSD	<i>Land Ownership Type</i>	<i>HRV</i>
5	5	53	35	1,2,3,4,5,6, 7,8,11,12,1 3,14	Freehold	No value
5	5	53	36	3,4,5,6,11, 12,13,14	Freehold	No value
<u>Activity Type and Anticipated Ground Disturbance</u> Refer to Figures 1 and 2. The activity type includes gravel pit development and stockpiling. The anticipated ground disturbance includes brush clearing, ripping topsoil and subsoil, blading, cut and fill landscape reshaping, and aggregate mining.						
<u>Project size</u> Total area is approximately 393.95 ha.						

Existing Disturbance

Refer to Figures 1 and 2 for satellite imagery of the project area.

Almost the entirety of the proposed development appears to be currently impacted by agricultural activities. The proposed development footprint is bordered by farmland to the east and south, Highway 52 to the west, and Highway 540 to the north.

An existing development is currently ongoing in NE-26-53-W5M, which does not require an assessment.

Landscape and Environmental Information

The project area is within two sections of land that are dominated by cultivation disturbance, with several stands of trees left standing to act as a windbreak.

The majority of the landscape is flat and undifferentiated, with no obvious high potential landforms. The surficial geology is characterized as either moraine or stagnant ice moraine (Fenton, et al. 2013).

The proposed development footprint is located approximately 6.5 km southeast of Isle Lake and approximately 8 km north of Wabamun Lake.

Archaeological Resources

Refer to Figure 3 for the distribution of archaeological sites nearest to the development footprint.

Borden	HRV	Location	Site Type	Relationship to Proposed Development & Anticipated Impacts
FjPp-42	0	LSD 2-30-53-4-W5	homestead	Outside development footprint. Will not be impacted by proposed development.
FjPp-43	0	LSD 2-30-53-4-W5	isolated find	Outside development footprint. Will not be impacted by proposed development.
FjPp-44	0	LSD 1-30-53-4-W5	scatter <10	Outside development footprint. Will not be impacted by proposed development.
FjPp-45	0	LSDs 7 & 8-30-53-4-W5	scatter <10	Outside development footprint. Will not be impacted by proposed development.

Illustrative Materials

Refer to the end of the document.

Figure 1. 2013 development plan for Bamber #2 Pit, provided by developer.

Figure 2. More detailed project development map for Bamber #2 Pit provided by client.

Figure 3. Project area showing nearby archaeological sites plotted on 1:50,000 map.

Evaluation

The proposed development will impact both cultivated and possible native landscape within the project area. The development footprint is located on relatively level terrain that has been used previously for agricultural activities.

Five archaeological sites (FjPp-42, 43, 44, 45, and 46) have been identified within a 3 km radius of the proposed development. FjPp-43, 44, and 45 are isolated finds or small lithic scatters that were found on the surface. FjPp-42 and FjPp-46 are small scatters of historic artifacts. All of these sites are listed as HRV 0. There are no known archaeological sites within the development footprint that would be impacted by the proposed activities within the development. There is no evidence for historic structures within the proposed development area.

The disturbed nature of the soils would be consistent with archaeological sites in the area. Sites FjPp-43, 44, and 45 were all surface finds found within disturbed contexts. Sites FjPp-42 and FjPp-46 are historic surface scatters from farms dating to the 1910's and 1940's respectively.

The area of the proposed development exhibits low potential to contain intact archaeological deposits, because it is flat, featureless and spaced well back from any high potential landforms in the area (e.g.- Wabamun Lake). Additionally, the proposed development footprint appears to have been disturbed by agricultural activities, so it is likely that the upper soil layers have been disturbed.

Due to the lack of historic structures, the low HRV values of the pre-contact sites in the vicinity of the proposed development, and the fact that development has proceeded in NE- 26-53-W5M without the need for an assessment, an Historic Resources Impact Assessment (HRIA) does not appear to be necessary prior to the onset of development and clearance is recommended.

An existing development is currently ongoing in NE-26-53-W5M, which does not require an archaeological assessment.

<p>Recommendations</p> <p>It is recommended that the proposed development proceed.</p>
<p>Reference</p> <p>Fenton, Mark M., E. Joan Waters, Steven M. Pawley, Nigel Atkinson, Dan J. Utting and Kirk Mckay. 2013 Surficial Geology of Alberta. In <i>ERCB/AGS Map 601</i>. Scale: 1: 1,000,000. Energy Resources Conservation Board, Edmonton.</p>
<p>Recommendations made by</p> <p>This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of Privacy Act / PIPA</p> <p>Peter Stewart, M.A. Project Archaeologist</p>
<p>E & O Reviewer</p> <p>This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of This information redacted as per Protection of Privacy Act / PIPA</p> <p>Krista Gilliland, Ph.D. Manager, St. Albert Date: July 27, 2016</p>



Figure 1. Development plan for Bamber #2 Pit, provided by developer.

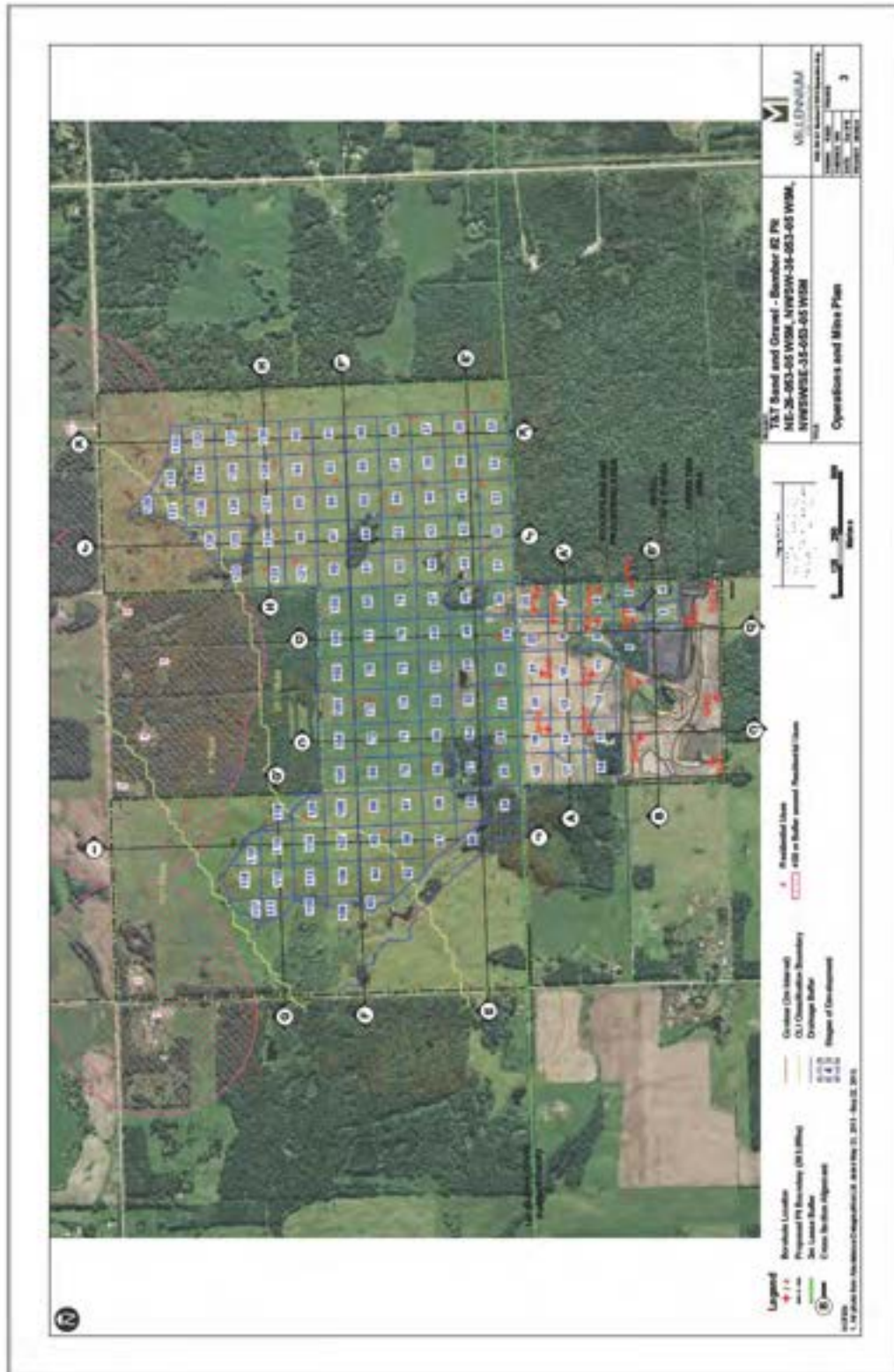


Figure 2. More detailed project development map for Bamber #2 Pit provided by client.

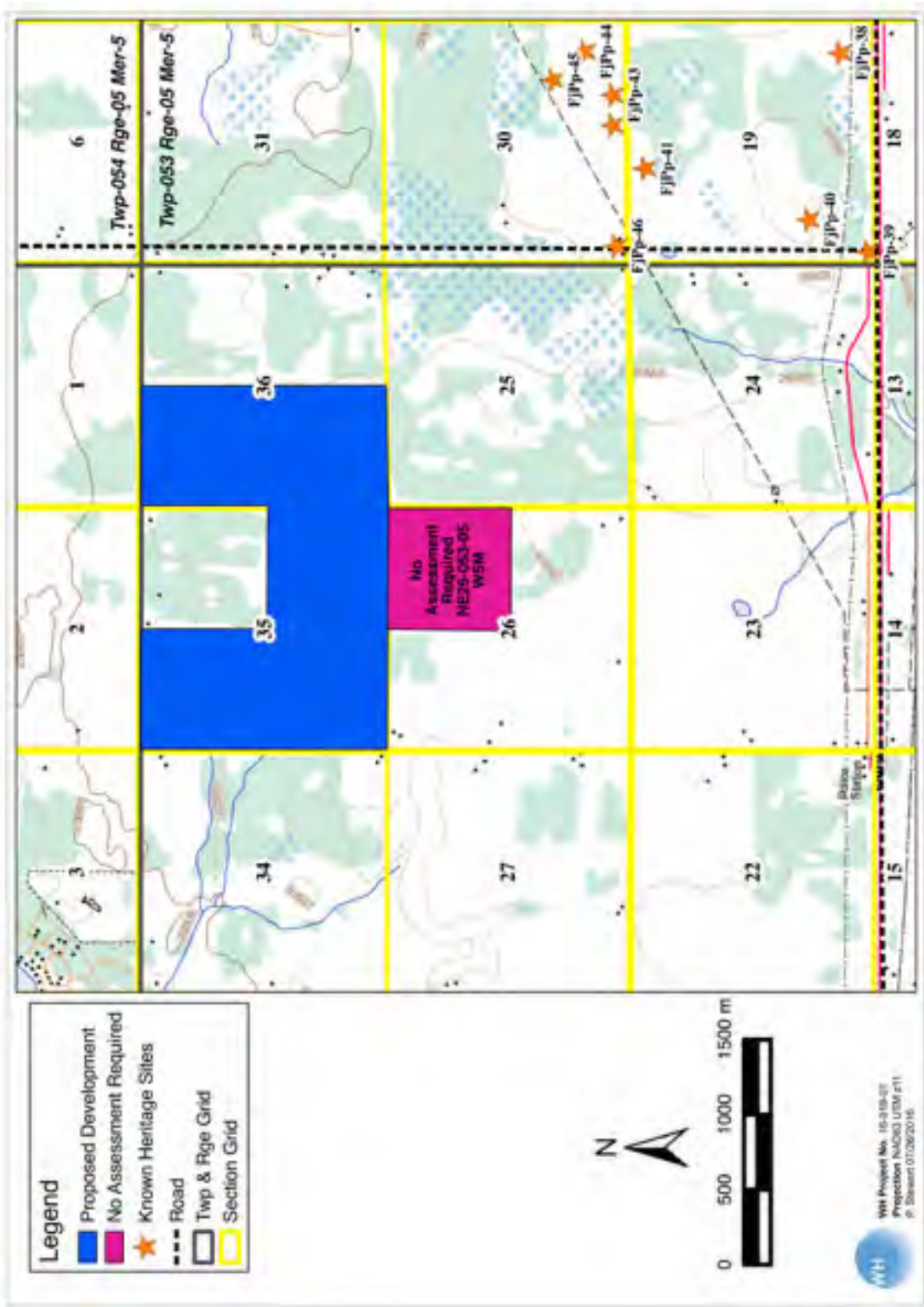


Figure 3. Project area showing nearby archaeological sites plotted on NTS 1:50,000 map.

Historical Resources Act Approval

Proponent: 214131 Enterprises Ltd.

This information redacted as

Contact: John Thomas ~~P t i f P i A t~~

Agent: Western Heritage

Contact: Peter Stewart

Project Name: **T&T Sand and Gravel Bamber #2 Pit NE-26-53-5-W5M, W 1/2-36-53-5-W5M, NW & S 1/2-35-53-5-W5M**

Project Components: Sand / Gravel Extraction

Application Purpose: Requesting HRA Approval / Requirements

Historical Resources Act approval is granted for the activities described in this application and its attached plan(s)/sketch(es) subject to Section 31, "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 chance discovery of historical resources is to be reported to the contacts identified within "Standard Requirements under the Historical Resources Act: Reporting the Discovery of Historic Resources."

This information redacted as per
~~This information redacted (POPA)~~
~~P t i f P i A t (POPA)~~
Martina Purdon
Head, Regulatory Approvals &
Information Management

Lands Affected: All New Lands

Proposed Development Area:

MER	RGE	TWP	SEC	LSD List
5	5	53	35	1-8,11-14
5	5	53	36	3-6,11-14
5	5	53	26	9,10,15,16

Documents Attached:

Document Name	Document Type
Proposed Development Plan	Illustrative Material



Attachment E:

T&T Sand & Gravel Ltd. HSE Manual



Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

Section 8. Emergency Response

8.1 Purpose

The emergency response program is in place to ensure that the company is prepared to handle any emergency situation that may arise. T&T Sand & Gravel Ltd. is responsible to ensure emergency response planning is developed, tested (e.g., mock drills or discussions) and updated annually at a minimum.

Emergency Response Plans (ERP) address emergencies that arise from within the worksite and nearby threats. Each worker is responsible understanding and participating in emergency response planning.

The principle focus of occupational HSE is the protection of people, environment and property. All worksite environments must have a written ERP that addresses both the real and potential hazards. A properly implemented ERP will:

- a) Enable the management team to effectively prepare for potential emergency situations
- b) Allow workers to respond to emergencies and maintain personal safety
- c) Ensure continual improvement through emergency drills and tests

8.2 Definitions

Competent first aider – Someone who is formally trained and accredited in Standard First Aid through a recognized program

Emergency Response Plan (ERP) – A comprehensive document that provides guidance on actions to be taken under various potential emergency conditions, including responsibilities of all workers, available organization resources, sources of aid outside of the organization, general methods or procedures to follow, authority to make decisions, requirements for implementing procedures, emergency response training, practice of emergency procedures, communications and reports required

Emergency Planning – A process to develop detailed procedures for responding to emergency situations such as fires, extreme weather, explosions, chemical spills or uncontrolled releases

Emergency Procedures – Actions to be taken in case of identified emergency

Emergency Rescue – A procedure for moving a victim from a dangerous location to safety

8.3 General

Responsibilities

Through the use of hazard assessments and controls, every effort will be made to prevent worksite incidents from occurring. ERPs will be maintained and tested to address emergencies that could occur, including medical emergencies, natural disasters, and threats to workers, to

T&T Sand & Gravel Ltd.
HSE Manual

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

the public and/or the environment. The ERP must contain defined, specific roles for all personnel that outline the lines of authority and communication. The following are to be included:

- a) A current emergency contact list
- b) The location of the nearest medical facility
- c) The location of muster points for worksite locations and evacuation routes
- d) Adequate modes of transportation

Based on the site-specific hazard assessment and control, all vehicles will contain the following safety equipment:

- a) Alberta #2 First aid kits
- b) Roadside hazard triangles for placement in front of and behind vehicles
- c) Any additional required safety equipment based on the hazard assessment

Workers who have emergency response training shall be identified and their contact information will be provided on the safety meeting form.

To ensure continual improvement is maintained for emergency preparedness, management will:

- a) Evaluate test and drill data at annual management meetings to determine if changes to the ERP are needed
- b) Evaluate inspection report information, worker performance, and safety meeting minutes for additional emergency response considerations

The ERP shall be reviewed in consultation with the joint HSE committee, senior management and safety representatives (where applicable).

Risk Assessment

Before commencing work at a worksite, management will review the worksite hazard assessment and controls and conduct a risk assessment as required. Where the assessment shows a need for evacuation or rescue, appropriate procedures will be developed and implemented, with a competent person assigned to coordinate the implementation.

During safety meetings the ERP will be discussed and identifies:

- a) The type of equipment to be used for an emergency
- b) The location of the emergency equipment and operating requirements
- c) The location of emergency
- d) If working off-site, the location of emergency equipment will be reviewed with workers before commencing work
- e) Emergency communication procedures will adhere to clients' requirements when working off-site
- f) Where work is occurring on company owned or leased worksites, the notification process will follow the emergency response procedures

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

Emergency Response Plan/Procedures

Emergency Response Plans assist in the proper management of an event or crisis to ensure a prompt and effective response. The ERP will reduce the possible consequence of an emergency by minimizing/preventing injuries, reducing damage to company property, and allowing normal operations to be resumed as soon as possible. In the event of an emergency, only designated competent personnel shall lead the procedures below:

- a) Ensure that personnel are safe and assess the emergency situation
- b) Use established alarm procedures
- c) Inform others of the emergency by means of:
 - i. Verbal communications
 - ii. Fire alarm
 - iii. Public address or paging system
- d) Stop work where applicable
- e) Evacuate workers and confirm that all personnel have been evacuated safely
- f) Ensure that first aid is administered by a competent first aider
- g) Call the appropriate emergency response agencies (e.g., 911 for Fire, notify the police, utility providers, etc.) as identified on the Emergency Response Contact List
- h) All workers are to proceed to the designated muster point where supervisors will conduct a head count to account for all workers.
 - i. If anyone is missing and it is safe to do so, have the designated rescue person return to find the personnel
 - ii. If conditions are unsafe, wait for emergency personnel
- i) Where possible, extinguish any fires using fire extinguishers and fire suppression equipment located in the designated areas

Evacuation and Rescue Personnel

In the event of an evacuation order, personnel are to go to the designated muster point to await further instructions, or be evacuated out of the area as ordered.

- a) Workers performing rescue or evacuation operations must wear personal protective clothing and equipment appropriate to the potential hazards
- b) Clear communication shall be maintained between workers engaged in rescue or evacuation activities and the support personnel
- c) Specific emergency teams will be established based on emergency response needs analysis

Types of Emergencies

The T&T Sand & Gravel Ltd. main worksite must have an ERP in place based on an annual hazard assessment that addresses foreseeable emergencies such as:

- a) Medical emergencies
- b) Fires
- c) Bomb threats
- d) Weather/natural disasters

**T&T Sand & Gravel Ltd.
HSE Manual**

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

- e) Structure/equipment failure
- f) Hazardous substance releases or spills

Medical

Necessary medical attention will be provided immediately, and all injuries will be reported as soon as possible. First aid may include treatment of minor scratches, cuts, burns and splinters, and can be provided on the worksite by a designated competent first aider. If the injury is severe and it requires emergency medical assessment, the ERP will be triggered and include:

- a) Contacting medics on location (if available)
- b) Reference the Emergency Response Contact List
- c) The designated first aider will assess the potential dangers (e.g., live intact or downed power lines, chemicals, danger of falling objects, etc.)
- d) If no external physical danger exists, the designated competent first aider shall administer first aid with attention to the following:
 - i. Airway
 - ii. Breathing, and
 - iii. Circulation
- e) Obtain confirmation that medical assistance has been contacted
- f) If a spinal injury is suspected, stabilize the injured person, but do not move him/her unless they are in a life-threatening situation
- g) Keep the injured person warm until medical assistance arrives
- h) When medical personnel arrive, brief them on situation and medical history of the injured (if known). Medical personnel will determine if/when it is necessary to transport the patient to the nearest medical facility
- i) If a fatality has occurred, follow all standard first aid steps
 - i. Secure the scene and ensure that nothing is disturbed until authorities arrive
- j) Do not make any statement or express opinions to the media
- k) Write down the history of the accident and include the first aid administered
- l) Provide a written history to the paramedics and other authorities upon arrival

Fire

Depending on the volatility and intensity of the fire, it may be possible to extinguish within the first 30 seconds of ignition or discovery. During the first 30 seconds, emergency response procedures shall be followed by anyone who discovers, or is involved in a fire.

The supervisor shall respond to the following as applicable:

- a) Call 911 or Provincial Forestry immediately (if telephone service is available)
- b) Determine if the fire can be controlled using fire extinguisher or suppression equipment
- c) Ensure that the evacuation procedure is carried out if required
- d) Secure the site to keep non-essential people out, safeguard records and equipment

T&T Sand & Gravel Ltd.
HSE Manual

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

When directed to evacuate a building under threat of fire, workers should adhere to the following:

- a) Leave lights on, doors closed and windows closed but not locked
- b) Stay as low as possible (crouch down) to stay under the smoke (the smoke may be toxic)
- c) If clothing catches fire, drop and roll to put out the flames

When directed to evacuate a remote worksite under threat of fire, workers should adhere to the following:

- a) Prepare fire suppression equipment if time permits
- b) Evaluate evacuation routes and modes of transportation available
- c) Communicate the route being taken

In All Cases, The Fire Department Must Be Contacted.

Bomb Threats

- a) Notify supervisor immediately
- b) Evacuate immediately and proceed to the muster point without disturbing the object
- c) Carry out a head count to account for personnel
- d) Wait for the all-clear sign to be given by supervisor or authorities before re-entering the work area

Should a bomb threat be received over the telephone, the following information should be written down:

- a) Time of call
- b) Date of call
- c) As close as possible to the exact words used by the person making the threat
- d) Speech characteristics
- e) Background noises

Weather Emergencies and Natural Disasters

In the event of a severe storm or tornado warning:

- a) The supervisor shall be advised
- b) All workers shall be directed to take shelter as required
- c) A head count shall be completed to account for all personnel
- d) In the event of pending blizzard conditions or extreme cold (making travel hazardous), the supervisor will determine if workers should be sent home early or not come in the next day
- e) Workers are expected to use their discretion in driving to and from work in adverse conditions. It is expected that they follow the "safe journey" management practices

In the event of a power failure or disruption:

- a) Workers shall assemble at designated muster points, and return to work only after power/lights are restored

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

- b) A head count shall be completed to account for all personnel

Types of Storm Fronts

When a severe storm goes through the worksite, the procedures detailed below shall be followed to ensure that workers are sheltered.

Severe Lightning Storms

- a) Avoid all lakes, sloughs and any other open water body
- b) Avoid the tops of buildings, high lines, or vessels
- c) Avoid construction equipment
- d) If driving, park the vehicle off the road and activate the 4-way flashers until the storm has passed

Tornado

- a) Keep as low to the ground as possible. Stay inside a structure if possible, but stay away from all exterior doors and windows
- b) Move away from equipment and take refuge in a shelter
- c) If shelter is not available, find low ground or a ditch and lie down with the head protected

Blizzard

When workers are working in remote areas where weather warnings are not always available, the following procedures must be adopted:

- a) Always be alert to prevailing weather conditions
- b) Wear clothing to suit conditions (e.g., heavy-duty winter protection or survival equipment)
- c) Avoid exposure to the cold. In cold weather, workers should work in pairs and conduct ongoing buddy checks for frostbite
- d) Know the pedestrian travel routes and use safety ropes to create a guide
- e) Workers should not travel unnecessarily or alone, carry survival equipment

Flooding

Workers working in areas where flooding could occur should be prepared to take the appropriate action when a weather warning is issued:

- a) Post a flood watch with an appropriate warning device
- b) Have procedures in place to leave on very short notice
- c) Take only equipment to do immediate tasks (i.e., only what can be mobilized in one trip)
- d) If evacuation occurs, shut down all equipment, etc. Do not touch wet electrical equipment; only work with dry electrical equipment
- e) Avoid travelling through flooded areas, especially at night when potential dangers cannot be seen

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

- f) Know the location of high ground safety areas, evacuation routes and the location of emergency equipment

Structure / Equipment Failure

If a structure has collapsed or equipment has been involved in an accident, the general procedures below shall be followed:

- a) Follow emergency response procedures
- b) Secure the area where the incident occurred
- c) Notify the nearest supervisor
- d) Only personnel who are providing medical aid and those stabilizing the structure can remain in the area; all other employees and contractors are to leave
- e) Conduct a head count to account for all personnel
- f) Turn off area utilities, if safe, (power, water, gas) as quickly as possible
- g) Make no attempt to clean up or make repairs until the supervisor has given the "all clear" signal

Hazardous Substance Releases or Spills

If there is a requirement to control a release of a hazardous substance, clean up a spill, or carry out testing before re-entry, the employer shall provide:

- a) Appropriate PPE (based on risk assessment), which must be adequately maintained and readily available
- b) Material and/or equipment necessary for controlling and disposing of the hazardous substance

Immediately upon a release or spill occurring, steps should be undertaken to implement the spill plan, which consists of the basic steps given below. Refer to the Safety Data Sheets (SDS) for detailed more information and procedures.

- a) Stop the flow by:
 - i. Shutting off pumps, valves or nozzles, or activating the emergency shut-down switch
 - ii. Warn others in the immediate vicinity of the spill or release
 - iii. If there is a danger of fire or explosion, enforce No Smoking and extinguish any open flames
- b) Secure the area
- c) Contain the spill (use PPE as required for personal protection).
 - i. Block ditch lines, culverts or drains
 - ii. Surround the spill with earth berms, spill booms, pads, etc.
 - iii. Notify applicable personnel (supervisor, client)
 - iv. Conduct a head count to account for all personnel.
 - v. See Emergency Response Contact List. If an airborne vapour release or an uncontrolled liquid spill, notify local police or RCMP immediately
 - vi. Police will evacuate public in the immediate vicinity

T&T Sand & Gravel Ltd.
HSE Manual

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

- vii. In most cases, commence spill clean-up procedures as soon as possible to prevent further spread of any liquid substance into storm drains, floor drains, flowing water or ground water:
- viii. Soak up excess fluids using suitable absorbent materials
- ix. Dig up affected material and put in proper environmental disposal containment bags if required
- x. Use a remediation agent on the remaining area
- xi. Report the spill to provincial regulatory bodies if reporting is required

Training

The success of the Emergency Response program depends on the training and competency of supervisors and workers. Management will ensure that workers designated to provide evacuation services receive emergency response training appropriate for the worksite and any hazards likely to be encountered.

- a) Training must include simulated exercises appropriate to the types of emergencies likely to occur
- b) Training must be repeated at regular intervals to ensure that designated personnel remain competent to carry out their duties in the event of an emergency
- c) All training records must be retained
- d) At least one member of a rescue team must be a first aider trained to immobilize an injured person
- e) All PPE and any other necessary equipment will be provided for emergency response both on and off-site

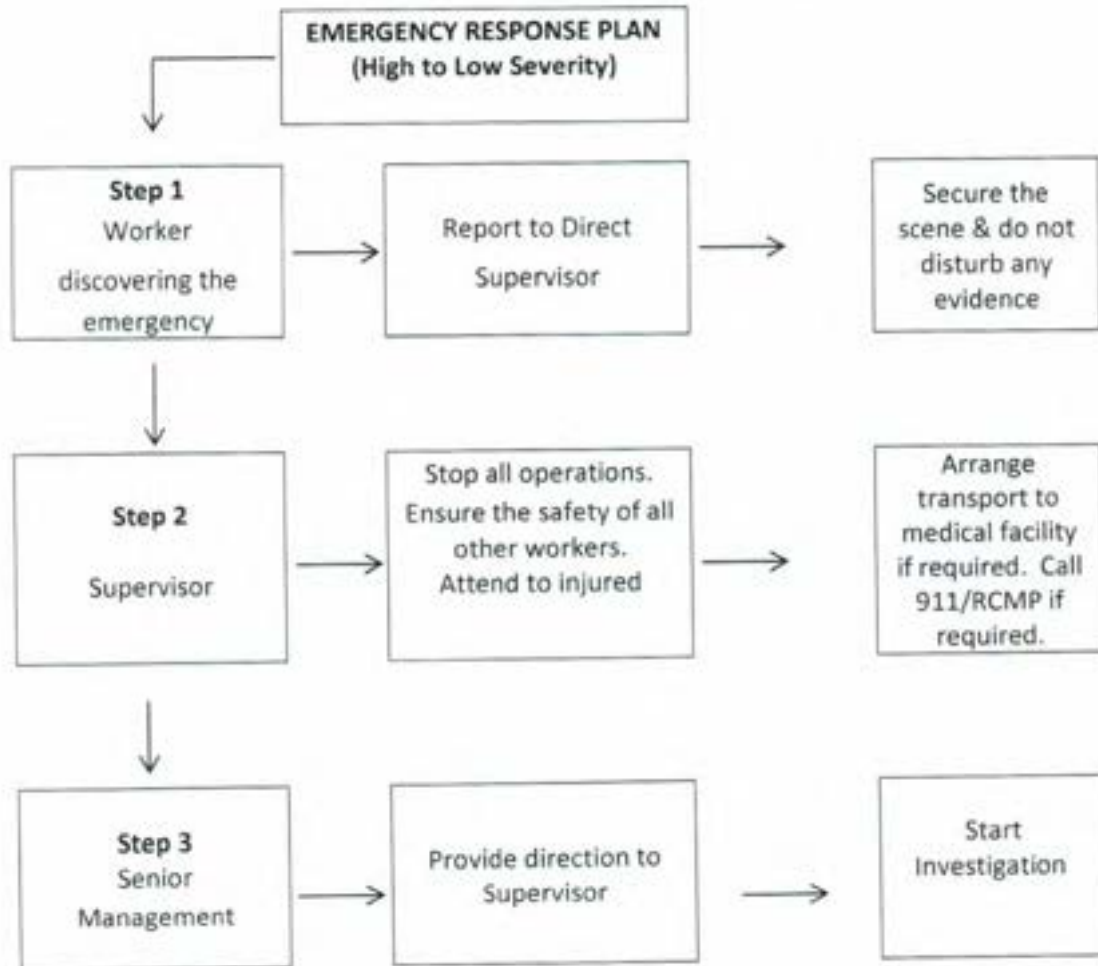
Emergency Communication

If the worksite is located in a remote area, communication must be established via cellphone, radio or a spot checker device. In areas where there is no cell phone coverage, personnel will work in teams of two at all times so that first aid can be administered in the case of an injury or illness.

T&T Sand & Gravel Ltd.
HSE Manual

Section 8	Emergency Response
Effective Date: February 1, 2019	Revision Date: December 1, 2019

Emergency Response Plan





Attachment F:

Acoustic Barrier Letter



August 2, 2025

T&T Sand and Gravel Ltd.
This information
is intended as per
the Access to Information
Act and the Privacy Act
(s. 83(93))
d t d

Re: Acoustic Barrier

Dear John,

Vertex Professional Services Ltd. thanks T&T Sand and Gravel Ltd. for the opportunity to assess noise from its operations and recommend best practices for acoustic mitigation. This work follows concerns raised by the local community during public consultation.

Regulatory Background

T&T's operations fall under:

- Lac Ste. Anne County's Community Standards Bylaw No. 16-2023
These bylaws prohibit continuous or disruptive noise that affects nearby residents, especially in residential zones. While they do not set specific decibel limits, they require noise to be minimized as much as practicable. In some cases, a permit may be issued by the CAO for noise that would otherwise violate the bylaw.

In addition, AER Directive 038—used broadly in industrial noise management—recommends:

- ≤50 dBA Leq (daytime)
- ≤40 dBA Leq (nighttime)
measured at the point of reception, meaning any location where noise is heard and results in a complaint.

Operating Hours (Permit #193193-16-D0012, Nov 7, 2018)

- Aggregate extraction:
 - Mon–Fri: 6:00 a.m. – 6:00 p.m.
 - Sat: 8:00 a.m. – 4:00 p.m.
 - No operation on Sundays or statutory holidays.
- Crushing plant:
 - Mon–Fri: 7:00 a.m. – 7:00 p.m.
 - Extended hours allowed for up to 10 weeks/year with County approval.



Noise Mitigation Approach

Vertex reviewed the noise sources and project boundaries in relation to nearby residences and recommended the following industry-standard practices, in line with the Alberta Code of Practice for Pits and applicable operating permit conditions:

- Enclosing loud equipment (e.g., pumps and crushers)
- Restricting high-noise activities (e.g., engine brakes)
- Using quieter equipment where possible
- Strategic equipment placement (e.g., using stockpiles as barriers)
- Noise monitoring near sensitive receptors
- Ongoing equipment maintenance to reduce rattling and exhaust noise

Acoustic Berm Plan

T&T Sand and Gravel Ltd. plans to construct a mobile earthen berm as an acoustic barrier, in line with Alberta's Code of Practice for Pits and reclamation standards.

Berm Details:

- Height: 3 to 5 meters
- Slope: 3:1 (horizontal: vertical) for stability and mobility
- Material: Compacted clean fill, overburden, or stockpiled soil
- Placement: Along the north, east, and west boundaries of the pit, as close to noise sources as safely possible
- Design: No gaps to prevent sound leakage; blocks line-of-sight to receptors
- Surface: Vegetated with native grasses/shrubs for erosion control and aesthetics
- Optional: Use of precast concrete panels in specific areas, if needed

The berm will be positioned closer to the noise source (the crusher) to achieve maximum sound reduction. The anticipated crusher location is marked by the red dot in the figure below. An interim earth berm, shown by the red line, will be constructed approximately 200 meters north of the crusher and adjusted as the pit advances. The berm will not impede natural drainage, and all materials used will be clean, free of contamination, and integrated into the site's final reclamation plan.

Additional Controls

Future initiatives include:

- Acoustic shrouds for crushers
- White noise (broadband) reverse alarms on mobile equipment to reduce tonal noise



A figure showing the proposed berm layout is attached for reference.

Sincerely,

VERTEX PROFESSIONAL SERVICES LTD.

This information redacted as per
Protection of Privacy Act (POPA)
This information redacted as per
Protection of Privacy Act (POPA)
Protection of Privacy Act (POPA)

Abdi Kabadeh, MSc, PAg.

SENIOR ENVIRONMENT & REGULATORY PLANNER

Figure 1: Recommended berm barrier location.





Attachment G:

Public Consultation Summary – Lac Ste. Anne County Proposed Re-Zoning





11213 Winterburn Rd NW
Edmonton, AB T5S 2B2

Office (780) 809 8191
Fax (780) 809 8190
Site aspenlandgroup.com

December 16, 2025

Lac Ste. Anne County
Planning and Development Services
56521 Rge Rd 65
Lac Ste. Anne County, AB T0E 2A0

**Reference: 214131 Enterprises Ltd.
Public Consultation Summary - Lac Ste. Anne County Proposed Re-Zoning
SE, SW and NW-35-53-05-W5M and SW and NW-36-53-05-W5M**

214131 Enterprises Ltd., also known as T & T Sand & Gravel (T & T) has had ongoing public consultation with members of the Lac Ste. Anne County community regarding the proposed re-zoning and subsequent development of a sand and gravel extraction operation within the SE, SW and NW-35 and SW and NW-36-53-05-W5M. This letter serves as a summary of: the public consultation that T & T has undertaken in response to the proposed project, the feedback received from the surrounding residents of the proposed operation within the 35 and 36-53-05-W5M, and how T & T responded and/or intends to provide further information in order to address the questions and concerns brought forward during consultation.

Invitations to attend an Open House were prepared by T & T and sent to the County to mail to adjacent residences. These invitations were sent on April 23, 2025, more than 14 days prior to the open house date. A newspaper advertisement was submitted to the Lac Ste. Anne Bulletin for printing in local newspaper for the April 21st, 28th and May 5th issues. Both of these were completed in accordance with the regulations and timelines in Section 3.5.2 of the Land Use Bylaw. A copy of the printed newspaper advertisements are included in Appendix A, and are the same invite mailed to residences.

A total of 7 physical comments were received in response to the Open House, and multiple more comments were received through email following the Open House and as part of the public hearing process. Copies of these comments are included in Appendix C. Overall, almost all of the responses returned were initially opposed to the proposed project, except for three submissions which acknowledged concerns but did not outright oppose the proposed development. One response received through email indicated an indifference towards the project and indicated their concerns regarding an existing unrelated aggregate operation, adjacent to their residence. A summary of the consultation is outlined in Table 1 below.

Table 1. Summary of Consultation Feedback

Respondent & Residential Address	Proximity to proposed operation	Form of Contact	Date of Contact	Form of Feedback Received	Level of Support (Support/ Oppose/ Neutral)	Summary of Consultation Comments/Concerns Raised
Allan and Virginia Wichuk	Adjacent, to the east of SW-36-53-5-W5M	Email	February 24, 2025	Email	Opposed	Concerns pertained to potential negative effects to human health through air pollution, noise and water quality. The consultee was also concerned with possible impacts on the environment, including negative impacts on the aquifer, the drainage regime and wildlife. Other concerns the landowner had include negative impacts on property values, her business, and possible infringements upon the enjoyment/use of property.
Adam Meek – This information	Adjacent, to the west of SW-35-53-5-W5M across RR 52	In-person	May 6, 2025	Open House feedback form	Oppose	Concerns included silica contamination in the water and air, noise pollution, negative impacts on property value and contamination issues of the well water supply.
Colleen Vowel – This information	Adjacent, to the west of SW-35-53-5-W5M across RR 52	In-person	May 6, 2025	Open House feedback form	Oppose	Concerns included increased traffic, increased crime, a creek running into Lake Isle, and various forms of pollution including silica dust, noise, light and hydraulic oil.
Dave Vowel – This information	Adjacent, to the west of SW-35-53-5-W5M across RR 52	In-person	May 6, 2025	Open House feedback form	Oppose	Concerns surrounded the facilitation of the Open House, believed that the questions asked were not adequately answered and was dissatisfied that the County was not present.
Deanna and Jodi Seaton – This information	To the east of SW-36-53-5-W5M, unable to locate residence	In-person	May 6, 2025	Open House feedback form	Oppose	Concerns surrounded negative impacts to the water table, wildlife habitat, wetlands, and the possibility of silica risk, long-term respiratory damage, noise pollution and increased highway usage.



Table 1. Summary of Consultation Feedback

Respondent & Residential Address	Proximity to proposed operation	Form of Contact	Date of Contact	Form of Feedback Received	Level of Support (Support/ Oppose/ Neutral)	Summary of Consultation Comments/Concerns Raised
Ray and Marilyn Langford – <small>UNABLE TO LOCATE</small>	Unable to locate residence	In-person	May 6, 2025	Open House feedback form	Oppose	No additional details were provided.
Terry Sims – This information is confidential	Residence approximately 3 km from SW-36-53-05-W5M across highway 765	In-person	May 6, 2025	Open House feedback form	Oppose	No additional details were provided.
Ward Mor – This information is confidential	Residence approximately 500 m from SW-36-53-05-W5M	In-person	May 6, 2025	Open House feedback form	Oppose	No additional details were provided.
Patricia Gleisner – This information is confidential	Unable to locate residence	Email	May 7, 2025	Email Following Open House	Neutral	Raised concern of noise pollution, mainly in reference to another aggregate operation adjacent to their land.



Table 1. Summary of Consultation Feedback

Respondent & Residential Address	Proximity to proposed operation	Form of Contact	Date of Contact	Form of Feedback Received	Level of Support (Support/ Oppose/ Neutral)	Summary of Consultation Comments/Concerns Raised
Virginia Wichuk – This information redacted as per	Adjacent, to the east of SW-36-53-5-W5M	Email	May 9, 2025	Emailed Letter after Open House	Opposed	Concerns pertained to potential negative effects to human health through air pollution, noise and water quality with a particular focus on dust and silica. The consultee was also concerned with possible impacts on the environment, including negative impacts on the aquifer, the drainage regime, wildlife, and possible long-lasting effects following the removal of gravel like algal blooms. Other concerns the landowner had include negative impacts on hunting, the haying of the land by a local farmer, property values, her business, and possible infringements upon the enjoyment/use of property.
Allen Wilkie	Adjacent, to the north across Township Road 540	Email	May 9, 2025	Email Following Open House	Opposed	Concerned with human health deterioration due to silica dust pollution, effects on surface and ground water resources, the reduction of wildlife habitat, the promotion of noxious weeds and the disruption of adjacent land owners use and enjoyment of their land. Also provided operational recommendations including only permitting operations during the week, increased setbacks, and the establishment of large vegetated sight/sound berms.
Craig Langford	Unknown	Email	May 22, 2025	Email Following Open House	Oppose	Requested a copy of the rezoning application and follow-up to their initial questions presented at the open house.



Table 1. Summary of Consultation Feedback

Respondent & Residential Address	Proximity to proposed operation	Form of Contact	Date of Contact	Form of Feedback Received	Level of Support (Support/ Oppose/ Neutral)	Summary of Consultation Comments/Concerns Raised
Adam Meek - This information has been redacted as per		Email		Notice of Objection Petition	Opposed	Prepared notice of objection due to concerns regarding safety and health concerns. Signed by twelve individuals.



Out of all the responses received following the open house, five provided detailed concerns in relation to the proposed project. The concerns listed within these responses included:

- Increased truck traffic of proximal roadways,
- a potential decrease in property value,
- silica dust, light, oil and noise pollution from operations,
- long term respiratory health concerns, stemming from silica exposure,
- the disturbance of water tables, natural habitats, wildlife and wetlands,
- potential for water well disturbance or contamination.

Additionally, a petition was created by Adam Meek in opposition to the proposed expansion and received 12 signatures from community members. However, as no direct concerns were indicated by the signatories, aside from “safety and health concerns, T & T is under the assumption that the following responses will adequately address these concerns.

The following section outlines T & T’s response to the concerns listed above.

Response to Concerns Raised

Please see the below responses from T & T to the concerns raised throughout the public consultation process.

Traffic

The haul route on Range Road 51 is proposed to be directly to Highway 16, no hauling of material will occur north of the pit access within Lac Ste Anne County, or along Township Road 530. Given this the continuation of T&T’s existing operation that overlaps into Parkland County and Lac Ste Anne County, traffic volumes will remain consistent with the current operation, truck traffic will be intermittent and based on market demand. T & T will ensure trucks travelling to and from the proposed operation are following the posted speed limit and are well maintained. T & T will work with residents along the haul route to address any concerns that may arise during operations. Additionally, hauling will abide by the provisions of their Road Use Agreement with Parkland County, and no hauling will take place on Sundays or statutory holidays.

Noise

All operations within the pit will be conducted in accordance with municipal and provincial regulations governing noise levels. In an effort to mitigate the noise levels of the operation, T & T strives to ensure that all equipment is properly maintained, that all trucks hauling from the pit are in good working order, the use of retarder brakes are prohibited at or near the pit, and that the crusher is placed at the lowest elevation of



the pit when possible. T&T is prepared to establish sight and sound barriers between the pit operations and adjacent residents.

T & T is proposing a 24 hours/day operation (with no operations from Saturday 6:00 PM to Monday 6:00 AM); however, this is dependent on market demand and the specific extraction phase of the operation.

Having the ability to operate 24 hours/day will allow for a more efficient operation, which will in turn reduce the total output of noise over the life of the project if reduced hours were in place. Further, T & T will submit an application for a variance and supply notification to the County and affected residences in the event that non-routine hauling is required (i.e. extended hauling hours to accommodate larger contracts). T&T has retained Vertex Professional Services Ltd. (Vertex) to provide information on noise reduction efforts and will implement their recommendations; a copy of the document is available in Appendix D. In addition to that, the area of extraction previously permitted and requested for renewal includes a minimum of a 400 m setback from all adjacent residences. A copy of the operations plan is included in Appendix E.

Dust

Mitigation measures to control dust will include watering active areas within the pit and the haul roads as required. T & T will initiate operations and determine the most appropriate mitigation measure; should water be determined to be the most effective, the volume requirements will be determined via a Temporary Diversion Licence (TDL) before application is made for a term Licence in the next operating season. Crushers will be situated at the lowest possible elevation where possible, all loads of aggregate material will be properly enclosed, and speed limits along municipal roadways will be strictly adhered to in an effort to help reduce the overall dust emission from the operation.

Some of the concerns presented focused solely on silica dust, and its effects on human health. All crushing will be done at low elevation points of the pit, as to reduce the release of airborne contaminants. Additionally, T & T will ensure that dust is controlled through the watering of active areas and hauling trucks. T & T will continue to work with proximal landowners throughout the duration of the project to ensure any ongoing concerns are sufficiently addressed. T & T retained Vertex to provide address the silica dust concerns, their letter is provided in Appendix F.

Oil and Light

T & T will ensure that all operations within the pit are conducted in accordance with all municipal regulations governing waste management. All sanitary waste will be properly collected and hauled to an approved wastewater management treatment facility. Additionally, foreign materials and/or waste will not be disposed of in the excavation area that would not normally be found in the natural resource extraction process.



As all activities will operate during the allotted hours of operation in accordance with the Lac Ste. Anne County development permit, it is unlikely that light pollution will sufficiently burden adjacent occupants. In such an occurrence, T & T will work with those residents to reach an equitable solution.

Residential Water Well Impacts

This pit will operate as a dry pit excavation. T & T will ensure that all extraction operations stay 1 m above the high groundwater elevation. Based on the depth of the surrounding water wells and excavation not intercepting the groundwater table, T & T does not anticipate any impacts to surrounding residential water wells or other users. Should T & T decide to operate past the groundwater table, the necessary approvals will be obtained under the *Water Act*.

Environmental Impacts

T & T will reclaim the disturbed land immediately following extraction activities. Most of the land within the re-zoning area is currently used for agricultural purposes. Proper re-distribution of soil, landscape grading and seeding will promote regeneration of pre-disturbance land use.

Property Value

It is not likely that the current operating plan for the pit will have any impact to surrounding property value in the area as there are currently other operating aggregate operations in the area. As mentioned previously, operations at the pit will be intermittent and subject to market demand. Mitigation measures for dust, noise, and traffic will all be in place to minimize impacts to surrounding residents. With these measures in place, the value of surrounding properties is not expected to be significantly impacted, as it will continually allow for the enjoyment of each respective property with brief periods of minor disturbance.

Summary of Public Consultation

The concerns which were raised during the Open House pertained predominantly to increased traffic, noise/silica dust/light, potential water well impacts, wildlife impacts, wetland impacts, as well as potential decreases in property value. T & T's proposed operation and reclamation has attempted to address the concerns raised, they are committed to work with the adjacent residents during operations. T & T will also continue to monitor feedback from surrounding residents during operation of the pit, and will continue to address any concerns moving forward.





Appendix A:

Open House Invitation Package and Public Notice Tear Sheets

Continued from page 12

A complete list of Community Wildfire Prevention Grants recipients and their projects can be found on wawanesa.com.

About The Wawanesa Mutual Insurance Company

The Wawanesa Mutual Insurance Company, founded in 1896, is one of Canada's largest mutual insurers, with over \$3.5 billion in annual revenue and assets of \$10 billion. Wawanesa Mutual, with its National Headquarters in Winnipeg, is the parent company of Wawanesa Life, which provides life insurance products and services throughout Canada, and Western Financial Group, which distributes personal and business insurance across Canada. Wawanesa proudly serves more than 1.7 million members in Canada. The company actively gives back to organizations that strengthen communities, donating more than \$3.5 million annually to charitable organizations, including over \$2 million annually in support of people on the front lines of climate change. Learn more at wawanesa.com

Garden Glow-Up: 5 Tips To Improve The Look Of Your Yard

(NC) Spring brings sunshine and warmth, motivating us to get outdoors, start new projects and improve our yards, which typically look less than stellar after the winter. Give your garden the refresh it deserves with these simple steps.

Tidy up the yard. The very first step is to remove dead leaves, trim overgrown bushes and prune any plants that need a little extra care. This simple clean-up will immediately make your garden look more inviting. If your gardening tools need an update, online marketplaces like Temu offer a wide range of affordable, high-quality products.

Add flowers. Consider adding seasonal flowers such as dahlias, snapdragons and cosmos that

Continued on page 14

**OPEN HOUSE
&
PUBLIC CONSULTATION**

FOR T & T Sand & Gravel Ltd.

FALLIS COMMUNITY HALL
North of Hwy 16 on RR 52, (53303 RGE RD 52) Wabamun
May 6th, 2025 1:00 pm to 4:00 pm

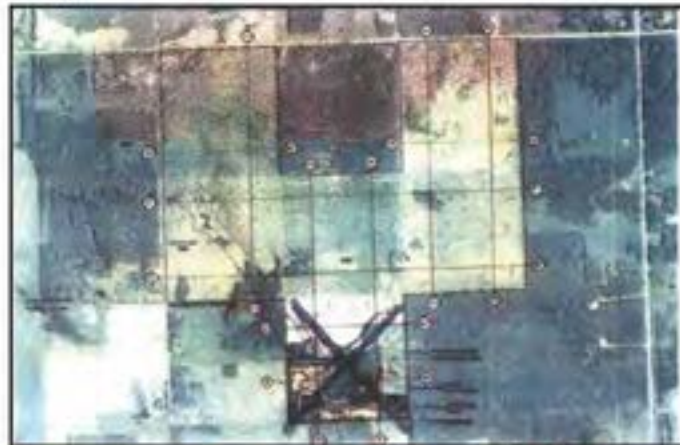
Please take Notice!

As a stakeholder near the vicinity of the proposed development, you are invited to attend a "Public Open House". The open house will give information about the proposed Aggregate Resource Extraction/Processing, where you can review and discuss documents and drawings.

The proposal of the Aggregate Resource Extraction/Processing is within the requirements and standards set by Lac Ste. Anne County. The land parcel is 327.79 Ha for Lac Ste Anne County. Access to the site will be made via RR 51.

The land districting change is proposed to be redistricted from the existing Agricultural 1 land use to an Aggregate Resource Extraction and Processing land use in accordance with the Lac Ste Anne's Land Use Bylaw #22-2017. Scope of work that is proposed on lands located within Lac Ste Anne County will entail drilling, stripping, crushing, screenings, stockpiling, scaling and loading trucks, as well as reclamation.

* Please note personal mail addresses were NOT shared and privacy of this information was maintained by Lac Ste. Anne County.



Lands located within Lac Ste Anne County
NW35-53-05-W5M, NW36-53-5-W5M, SW35-53-05-W5M, SE35-53-05-W5M, and SW36-53-05-W5M

Should you have any questions or concerns, please feel free to contact John Thomas, President, T & T Sand & Gravel Ltd. (Cell)780-940-5283 / debjo@telusplanet.net

Continued from page 12

Does the future mean we will no longer round the corner in the Village and see it anymore or will it have an interesting part in the history of our town and the folks who used prayer, wisdom, labor, funds and TLC to "Save The Church" so many years ago?

Given the historical importance, there is belief that the building possesses historical value and is worthy of preservation and appreciation by current and future generations. Would this enhance the cultural heritage of our community? It has been suggested that the Church would be a good candidate for the Municipal Heritage Designation.

Others have shared different ideas on how this could be utilized to benefit us all... special occasions, foodbank, museum events, fund raising, and welcome center.

Thank you to those of you reading this article. Please pass the word to the community that we are all in this together with the hope that we can find the best possible solution. Please share that the building is sound and, yes, needs work to the roof. The foundation, siding, and floor all appear to be solid. The furnace worked when the propane tank was removed and the Church is wired. At present, there is no water and sewer plumbing in the building.

If you wish more information, call the Alberta Beach Alliance Church or come by. We can let you see inside the building and talk with you.

Blessings,
Wendy Lipka
Member of the Committee
(780) 913 0063



OPEN HOUSE & PUBLIC CONSULTATION

FOR T & T Sand & Gravel Ltd.

FALLIS COMMUNITY HALL
 North of Hwy 16 on RR 52, (53303 RGE RD 52) Wabamun
May 6th, 2025 1:00 pm to 4:00 pm

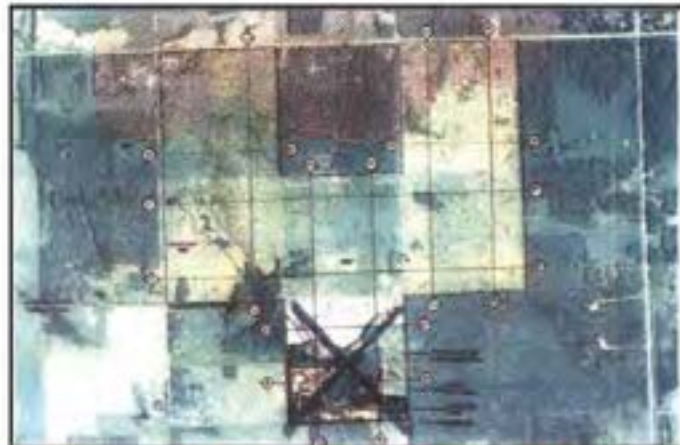
Please take Notice!

As a stakeholder near the vicinity of the proposed development, you are invited to attend a "Public Open House". The open house will give information about the proposed Aggregate Resource Extraction/Processing, where you can review and discuss documents and drawings.

The proposal of the Aggregate Resource Extraction/Processing is within the requirements and standards set by Lac Ste. Anne County. The land parcel is 327.79 Ha for Lac Ste Anne County. Access to the site will be made via RR 51.

The land districting change is proposed to be redistricted from the existing Agricultural 1 land use to an Aggregate Resource Extraction and Processing land use in accordance with the Lac Ste Anne's Land Use Bylaw #22-2017. Scope of work that is proposed on lands located within Lac Ste Anne County will entail drilling, stripping, crushing, screenings, stockpiling, scaling and loading trucks, as well as reclamation.

* Please note personal mail addresses were NOT shared and privacy of this information was maintained by Lac Ste. Anne County.



Lands located within Lac Ste Anne County
 NW35-53-05-W5M, NW36-53-5-W5M, SW35-53-05-W5M, SE35-53-05-W5M, and SW36-53-05-W5M

Should you have any questions or concerns, please feel free to contact John Thomas, President, T & T Sand & Gravel Ltd. (Cell)780-940-5283 / debjo@telusplanet.net

Continued from page 9

While your bank does require you to disclose certain personal information to confirm your identity and provide you with services, there are strict rules governing what they can ask you to disclose, and how they're allowed to do it.

One of the best ways to protect yourself is to learn what your bank would never do or ask you to do. Your bank would never:

1. Call you to ask for personal information.
2. Ask you to keep a secret or be dishonest.
3. Threaten to cancel your services or ask to remote into your device.
4. Try to rush you into doing something.
5. Ask you to help with an investigation.
6. Ask you to purchase gift cards or cryptocurrency.
7. Ask you to transfer money as part of an investigation.
8. Request access to your computer.

How to help protect yourself from scams

Here are some other tips to help you stay safe from fraudsters:

- **Get educated.** Understand your responsibilities as an account holder or cardholder. This information is provided by your bank. The Canadian Anti-Fraud Centre can also help you learn more about common fraud scams.
- **Enable two-factor authentication.** Investigate the security settings of your email provider, social media platforms and banking apps, and enable two-factor authentication wherever available. This offers a higher level of security for your on-line profiles.
- **Stay informed.** Take advantage of bank services that can help warn you of problems. For example, if you're a TD customer, their fraud alerts service can send you text messages notifying you if suspicious activity is detected on your credit card or access card, as long as a current mobile phone number is on file.

OPEN HOUSE & PUBLIC CONSULTATION

FOR T & T Sand & Gravel Ltd.

FALLIS COMMUNITY HALL
North of Hwy 16 on RR 52, (53303 RGE RD 52) Wabamun
May 6th, 2025 1:00 pm to 4:00 pm

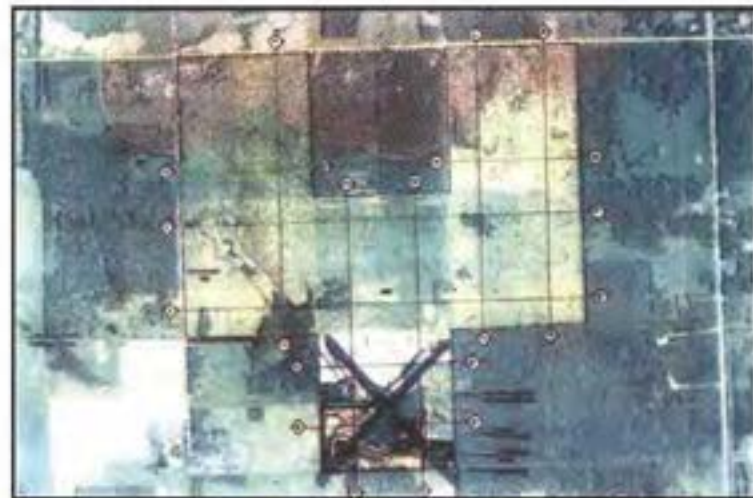
Please take Notice!

As a stakeholder near the vicinity of the proposed development, you are invited to attend a "Public Open House". The open house will give information about the proposed Aggregate Resource Extraction/Processing, where you can review and discuss documents and drawings.

The proposal of the Aggregate Resource Extraction/Processing is within the requirements and standards set by Lac Ste. Anne County. The land parcel is 327.79 Ha for Lac Ste Anne County. Access to the site will be made via RR 51.

The land districting change is proposed to be redistricted from the existing Agricultural 1 land use to an Aggregate Resource Extraction and Processing land use in accordance with the Lac Ste Anne's Land Use Bylaw #22-2017. Scope of work that is proposed on lands located within Lac Ste Anne County will entail drilling, stripping, crushing, screenings, stockpiling, sealing and loading trucks, as well as reclamation.

* Please note personal mail addresses were NOT shared and privacy of this information was maintained by Lac Ste. Anne County.



Lands located within Lac Ste Anne County
NW35-53-05-W5M, NW36-53-5-W5M, SW35-53-05-W5M, SE35-53-05-W5M, and SW36-53-05-W5M

Should you have any questions or concerns, please feel free to contact John Thomas, President, T & T Sand & Gravel Ltd. (Cell)780-940-5283 / debjo@telusplanet.net



Appendix B:

List of Open House Attendees

Welcome! Public Open House for Proposed Re-Zoning

Name	Address	Phone #	Email Address
NEIL + ROBERTA BOURGEAULT	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Allen Lorna Wilk	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
DARREL R WILKSE	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Darren Buryniuk	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Laura Erickson	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Michael Grey	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
CORINNE HONNE	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Liz Turnbull	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Virginia Wichuk	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Jeannie Taylor	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Ross Hoyle	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Kai Taylor	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
ELLI CROD	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Deanna + Joeli Seaton	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
GORD SATERN	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Suzan Sharke	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Pam Hennig	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)

Welcome ! Public Open House for Proposed Re-Zoning

Name	Address	Phone #	Email Address
Bernie Poulis	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Leona Davis	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Melanie Fisher	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Don Gray	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Adam Meek	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
Raymond ^{Marilyn} Langford	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
DAVE VOWEL	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
COLLEEN VOWEL	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
WARD MAR	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
TERRY SIMS	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
MARK GLEISNER	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)
	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)	This information redacted as per Protection of Privacy Act (POPA)



Appendix C:

Comments From Attendees and Subsequent Email Correspondence

I AM MORE THAN HAPPY TO
HAVE MY WELLS WELL
TESTED MORE THAN HAPPY
TO HAVE WELLS A/C
QUALITY TESTED, JUST TO
GIVE NOTICE OF LIABILITY.

ON LAWFUL GROUNDS OF
DAMAGES & HAZARD.

Adam Meek

This information redacted as
personal or confidential data
under the Protection of Privacy Act

THIS MEETING CAME
ALTOGETHER AS A FARCE.
SHOULD HAVE BEEN CANTY
REPRESENTATION WITHIN
A MINUTE.

STRONGLY OBJECT

SILICA WATER SUE?

AIR BORN SILICA?

HYDROCARBON CONTAINMENT?

NOISE POLLUTION?

WELL ISSUES?

PROPERTY VALUE ↓?

Pollution

silica dust
noise
light
hydraulic oil

Increased traffic
Man Camps - more crime
A creek that runs into Lake Isle

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

Colleen & Dave Vinnick

This information redacted as per Protection of
Privacy Act (POPA)
This information redacted as per Protection of
Privacy Act (POPA)
This information redacted as per Protection of
Privacy Act (POPA)



STRONGLY

OBJECT



Dave Vowel

Strongly Object

No Answers to any
Questions why on a
Tuesday + Not a week
end
Why Wasn't the County
Here to see what a Joke
this was.

Deanna & Jodi Secaton

- water tables
- natural habitats for wildlife.
- natural wetlands
- silica risk - is there public record of this?
- long term resp. damage
- noise concern
- highway usage increasing.

NO! Please NO!

Ray & Marilyn Langford

For all the reasons brought up and more we do not want your project in our backyard or anywhere else!

No No No!!

Ray and Marilyn Langford

Email

This information redacted as per Protection of Privacy Act (POPA)
This information redacted as per Protection of Privacy Act (POPA)

EPEA Approval
Environmental Impact Assessment

✓ SIMS

NO

WANT MORE

NO NO NO





Appendix D:

Acoustic Barrier Letter prepared by Vertex Professional Services Ltd. dated August 2, 2025 (Noise Reduction Efforts)

August 2, 2025

T&T Sand and Gravel Ltd.

Re: Acoustic Barrier

Dear John,

Vertex Professional Services Ltd. thanks T&T Sand and Gravel Ltd. for the opportunity to assess noise from its operations and recommend best practices for acoustic mitigation. This work follows concerns raised by the local community during public consultation.

Regulatory Background

T&T's operations fall under:

- Lac Ste. Anne County's Community Standards Bylaw No. 16-2023
These bylaws prohibit continuous or disruptive noise that affects nearby residents, especially in residential zones. While they do not set specific decibel limits, they require noise to be minimized as much as practicable. In some cases, a permit may be issued by the CAO for noise that would otherwise violate the bylaw.

In addition, AER Directive 038—used broadly in industrial noise management—recommends:

- ≤50 dBA Leq (daytime)
- ≤40 dBA Leq (nighttime)
measured at the point of reception, meaning any location where noise is heard and results in a complaint.

Operating Hours (Permit #193193-16-D0012, Nov 7, 2018)

- Aggregate extraction:
 - Mon–Fri: 6:00 a.m. – 6:00 p.m.
 - Sat: 8:00 a.m. – 4:00 p.m.
 - No operation on Sundays or statutory holidays.
- Crushing plant:
 - Mon–Fri: 7:00 a.m. – 7:00 p.m.
 - Extended hours allowed for up to 10 weeks/year with County approval.



Noise Mitigation Approach

Vertex reviewed the noise sources and project boundaries in relation to nearby residences and recommended the following industry-standard practices, in line with the Alberta Code of Practice for Pits and applicable operating permit conditions:

- Enclosing loud equipment (e.g., pumps and crushers)
- Restricting high-noise activities (e.g., engine brakes)
- Using quieter equipment where possible
- Strategic equipment placement (e.g., using stockpiles as barriers)
- Noise monitoring near sensitive receptors
- Ongoing equipment maintenance to reduce rattling and exhaust noise

Acoustic Berm Plan

T&T Sand and Gravel Ltd. plans to construct a mobile earthen berm as an acoustic barrier, in line with Alberta's Code of Practice for Pits and reclamation standards.

Berm Details:

- Height: 3 to 5 meters
- Slope: 3:1 (horizontal: vertical) for stability and mobility
- Material: Compacted clean fill, overburden, or stockpiled soil
- Placement: Along the north, east, and west boundaries of the pit, as close to noise sources as safely possible
- Design: No gaps to prevent sound leakage; blocks line-of-sight to receptors
- Surface: Vegetated with native grasses/shrubs for erosion control and aesthetics
- Optional: Use of precast concrete panels in specific areas, if needed

The berm will be positioned closer to the noise source (the crusher) to achieve maximum sound reduction. The anticipated crusher location is marked by the red dot in the figure below. An interim earth berm, shown by the red line, will be constructed approximately 200 meters north of the crusher and adjusted as the pit advances. The berm will not impede natural drainage, and all materials used will be clean, free of contamination, and integrated into the site's final reclamation plan.

Additional Controls

Future initiatives include:

- Acoustic shrouds for crushers
- White noise (broadband) reverse alarms on mobile equipment to reduce tonal noise



A figure showing the proposed berm layout is attached for reference.

Sincerely,

VERTEX PROFESSIONAL SERVICES LTD.

This information redacted as per
Privacy Information Redacted (PIRA)
P f i i f P i A (POPA)

Abdi Kabadeh, MSc, PAg.

SENIOR ENVIRONMENT & REGULATORY PLANNER

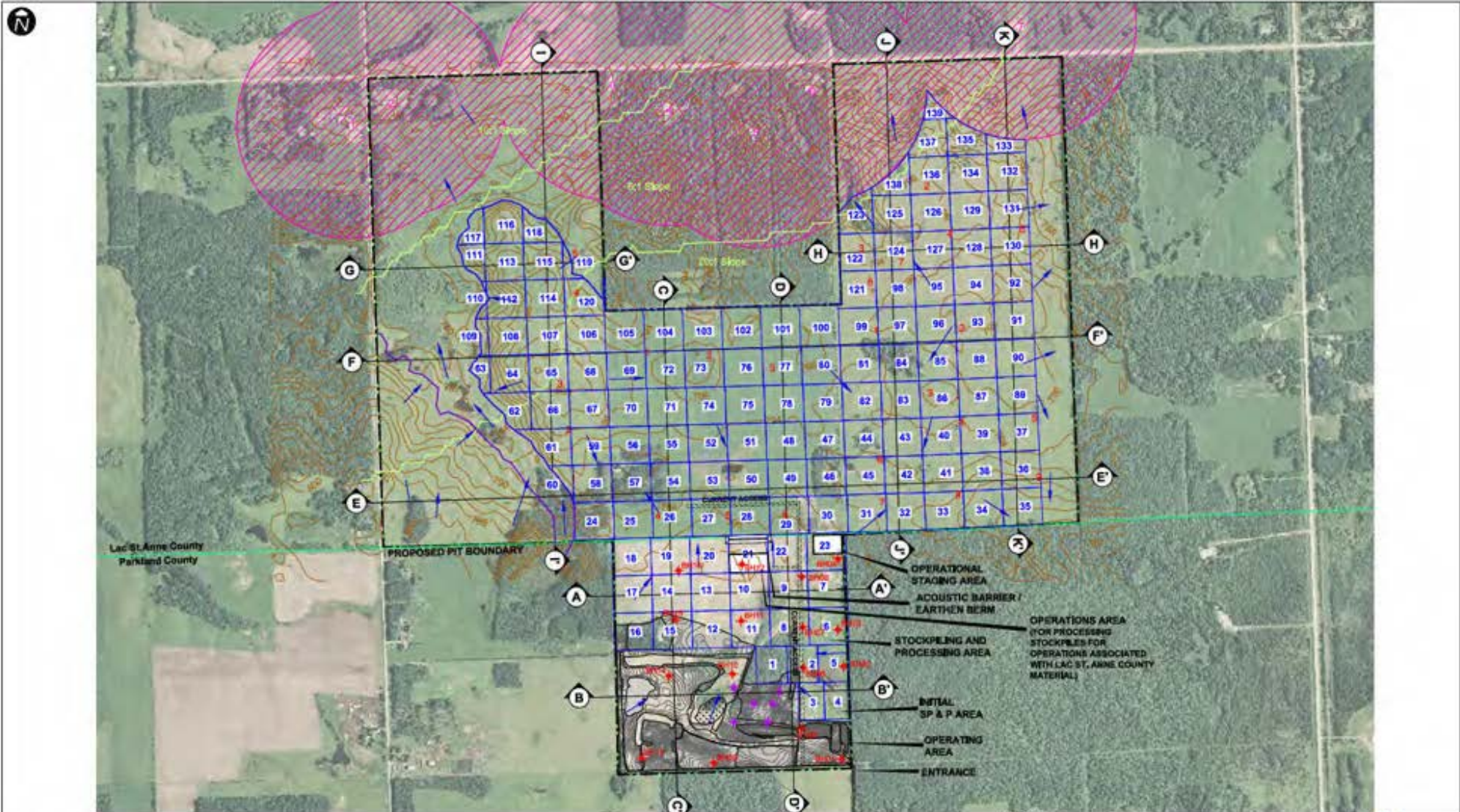
Figure 1: Recommended berm barrier location.



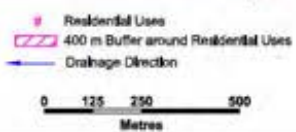


Appendix E:

Operations and Mine Plan prepared by Millenium EMS Solutions Ltd. dated
February 27, 2017



- Legend**
- + / x Borehole Location
 - Proposed Pit Boundary (393.95ha)
 - 3m Lease Buffer
 - Cross Section Alignment
 - Contour (2m Interval)
 - CLI Classification Boundary
 - Drainage Buffer
 - Drainage Direction
 - 4 Stages of Development



Staging Block Size	
Blocks 1,2,5	1.40 Ha/Block
Blocks 3,4	1.17 Ha/Block
Blocks 6-139	Based on 130 m x 130 m 1.77 Ha/Block

PROJECT
T&T Sand and Gravel - Bamber #2 Pit
 NE-26-053-05 W5M, NW/SW-36-053-05 W5M,
 NW/SW/SE-35-053-05 W5M

TITLE
Operations and Mine Plan

MILLENNIUM
Environmental Solutions

PROJECT: FE 05 06 141 Bamber 2 2010 Expansion
 DRAWN: RLVJ
 CHECKED: SW
 DATE: Feb 2017
 PROJECT: 26-053-05

3

NOTES:
 1. Air photo from Abetatekua Geographics Ltd, dated May 21, 2013 - Sep 22, 2015.



Appendix F:

Lac St. Anne County, T&T's Open House Letter prepared by Vertex Professional Services Ltd. dated August 2, 2025 (Addressing Silica Dust Concerns)



August 2, 2025

T&T Sand and Gravel Ltd.

This information
redacted as per
this
Protection of
Information
Privacy Act (POPA)
redacted as

Re: Lac St. Anne County, T&T's Open House

Dear John,

Vertex Professional Services Ltd. thanks T&T Sand and Gravel Ltd. for the opportunity to provide some information on silica dust and its applicability to the Lac St. Anne County Development Permit.

Background

Silica dust is generated in the workplace during mechanical processes such as cutting, crushing, drilling, grinding, sawing, or polishing natural stone or man-made products containing silica.

Silica dust particles are microscopic, typically ranging from 1 to 7 micrometers in diameter. Silica dust particles are not visible to the naked eye and can remain in the air for long periods, which workers can easily breathe. Inhaling very fine particles of crystalline silica can create a health hazard. The 'respirable fraction' refers to the size fraction of airborne dust that can reach the lungs where air exchange takes place. Particles larger than about seven microns (1 micron = 1/1000 mm) in diameter are no longer respirable.

Silica is one of the most common substances on earth. It is found in natural materials such as sand, sandstone, granite, clay, shale and slate, and building products like concrete and brick. Silica dust can exist in different forms, including crystalline silica (such as quartz, cristobalite, and tridymite) and non-crystalline or amorphous silica. Crystalline silica is the most concerning form due to its association with severe health hazards. However, non-crystalline or amorphous forms of silica do not pose this risk.

What are the concerns related to crystalline silica emissions regarding T&T sand and gravel pit operations? This issue is primarily an occupational health concern rather than an environmental one. Crystalline silica, when released from sand and gravel pits, has the potential to cause lung damage—specifically silicosis—after prolonged exposure. In Alberta, the occupational exposure limit for respirable crystalline silica is 0.025 mg/m³, as specified in Alberta Regulation 191/2021, Schedule 1, Table 2. [Chemical Substances | Occupational Health and Safety Legislation](#)

Excerpt from Table 2. Occupational Exposure Limits for Chemical Substances.

Substance	CAS Number	8-hour occupational exposure limit			15-minute or ceiling (c) occupational exposure limit		Substance Interaction 1,2,3	Carcinogenicity A1, A2
		ppm	mg/m ³	f/cc	ppm	mg/m ³		
Silica -Crystalline, Respirable_particulate								
Cistobalite	14464-46-1	-	0.025	-	-	-	-	A2
Quartz	14808-60-7	-	0.025	-	-	-	-	A2

- CAS – Chemical Abstracts Service.
- "A1" would be a Confirmed Human Carcinogen and means that the agent is carcinogenic to humans.
- "A2" would be a Suspected Human Carcinogen and means that human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as A1 (*American Conference of Governmental Industrial Hygienists*).

Sincerely,

VERTEX PROFESSIONAL SERVICES LTD.

This information redacted as per
 This information redacted (POPA)
 This information redacted (POPA)
 This information redacted (POPA)
 Protection of Personal Information Act (PIPA)

Grant Woynarowich, B.Sc., P.Ag.

Project Manager



Attachment H:

Development Permit Application – Aggregate – Lac Ste. Anne County



APPLICATION REQUIREMENTS

If you are building in a subdivision, please check the Planning & Development section of the Lac Ste. Anne County website to review requirements. Some subdivisions may have different guidelines than others.

1. Applications are **NOT** considered complete until **ALL** of the required information has been provided. Please ensure that you have completed the application form accurately and clearly and enclosed payment. Lack of information may delay consideration of your application.
2. Modular, Manufactured (Mobile) Home — indicate size and year; include photographs of all four (4) sides and floor plan and must be no more than 20 years of age at the time of application.
3. Moved In House – Indicate size and year; include photographs of all four (4) sides and floor plan.
4. Incomplete applications, including unpaid applications will be held for 30 days for submission of additional documentation. After 30 days the application will be disposed of.
5. Should additional information be required, you will be contacted directly by the Planning and Development Department via phone, email, fax or regular mail.
6. You will be notified of the decision by written notification letter including any conditions you must complete.
7. Fees can be paid by credit card via the County's secure payment portal at LSAC.ca/payments, or in person at the County Administration Office located at 56521 Rge Rd 65 (1.5km east of Sangudo).
8. If the property is owned by more than one landowner, **ALL** landowners must be listed on page 3 (Applicant/Agent Information) and must sign the application where indicated on page 7.
9. It is the applicant's responsibility to ensure all pages are received by the department. If sending by fax, please check your fax confirmation that the correct number of pages sent was received.
10. A current (within 14 days of today's date) Certificate of Title must be submitted with this application. If you are unable to supply a current title, an additional charge of \$20 will apply.

Please note: Any documentation/information (including personal information) required for processing an application will become public once submitted to Municipal Planning Commission (MPC) or the Development Authority for review and processing.

NOTES

1. Developmental changes such as structural size, material quality, and completion of progressive homes under construction are just some factors that affect the market value and will cause assessments to increase. If this applies to your property, you may want to make higher monthly payments earlier in the year to accommodate for potential tax increases on your next tax notice.
2. Any development permit application for construction of an accessory building prior to the construction of the main building or use (residence) becomes a discretionary permit application. Therefore the application must be presented to Municipal Planning Commission (MPC) for approval. A detailed description of the building and use must accompany the permit application. The processing time for discretionary permit applications can be 3 to 6 weeks.
3. Please note all development permits issued by Lac Ste. Anne County will require a blanket drainage easement to be placed on title with exception to those parcels that have an approved stormwater plan. If a site specific easement is preferred, please note this preference in your application.

FOR OFFICE USE ONLY

Permit no.: _____ Tax roll no.: _____ Receipt no.: _____

I hereby make application for a development permit in accordance with the plans and supporting information submitted herewith.

Incomplete applications will not be accepted. If an incomplete application is submitted by mail, the application will be returned to the submitter for further information.

BUSINESS OPERATING NAME INFORMATION

Full name of Applicant: 214131 Enterprises LTD

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)

Please note: by providing your email address above, you are hereby consenting to receiving correspondence (including decision) solely by email in relation to this application.

LANDOWNER/AGENT INFORMATION (if different from Applicant)

Name of registered owner: Kim and Barb Bamber

This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)
 This information redacted as per Protection of Privacy Act (POPA)

LAND INFORMATION

Lot: _____ Block: _____ Plan: _____ Subdivision/Hamlet: _____

Rural address: NE 26, NW & S 35, NW & SW 36-053-05-W# Division: 1 2 3 4 5 6 7

Quarter: NE / NW, S\ Section: 26 / 35 / 36 Township: 53 Range: 05 West of 5th meridian

Zoning: AR Use: Aggregate Resource Extraction & Processing Parcel size: 393.95 Acres/Ha
 Redistricted to

PROPOSED DEVELOPMENT (Require ALL new building sizes and wall height)

- Natural Resource (Class I) Extraction Crushing Preparation of asphalt
- Natural Resource (Class II) Processing Washing

Existing building present use: _____

N/A

Estimated cost of project: N/A Start date: 3/5/20 Estimated completion date: 5/1/46

IS THE DEVELOPMENT WITHIN ½ MILE OF ANY OF THE FOLLOWING?

1. Is the subject property near a steep slope (exceeding 15%)? YES NO
2. Is the subject property within 0.5 mile (0.8km) or bounded by a body of water (river, stream, watercourse, lake or other permanent body of water, or a canal or drainage ditch)? YES NO

If YES, state its name Unnamed Drainage Course
3. Is the subject property within 0.5 mile (0.8km) of the right-of-way of a highway? YES NO

If YES, the highway no. is _____
4. Is the subject property within 0.5 mile (0.8km) of a sour gas facility? YES NO
5. Is the subject property within 0.5 mile (0.8km) of a pipeline? YES NO

Natural Gas Co-op
Fibre Optic Line
6. Is the subject property within 0.5 mile (0.8km) of an oil facility? YES NO
7. Is the subject property within 0.5 mile (0.8km) of land that is or has been used as a municipal landfill for the disposal of garbage or refuse? YES NO
8. Is the subject property within 0.5 mile (0.8km) of land that is or has been used as a municipal sewage treatment facility or sewage lagoon? YES NO
9. Has the land had a history of flooding? YES NO
10. Is the subject property immediately adjacent to the municipal boundary? YES NO

If YES, the adjoining municipality is Parkland County

REGULATORY REQUIREMENTS FOR SURFACE DEVELOPMENT IN PROXIMITY TO ABANDONED WELLS

New subdivision applications, except for lot line adjustments, must include documentation from the Energy Resources Conservation Board (ERCB) identifying the presence or absence of abandoned wells.

1. Obtain the information from ERCB's Abandoned Well Viewer available on the ERCB Website www.aer.ca
2. Abandoned well Information Included: YES NO

If NO, why not: _____

If an abandoned gas or oil well is identified on the land that is subject (the quarter section) of the subdivision application, the applicant must include a map that shows the actual well location, as identified in the field, and the setback established in ERCB Directive 079 in relation to existing or proposed building sites.

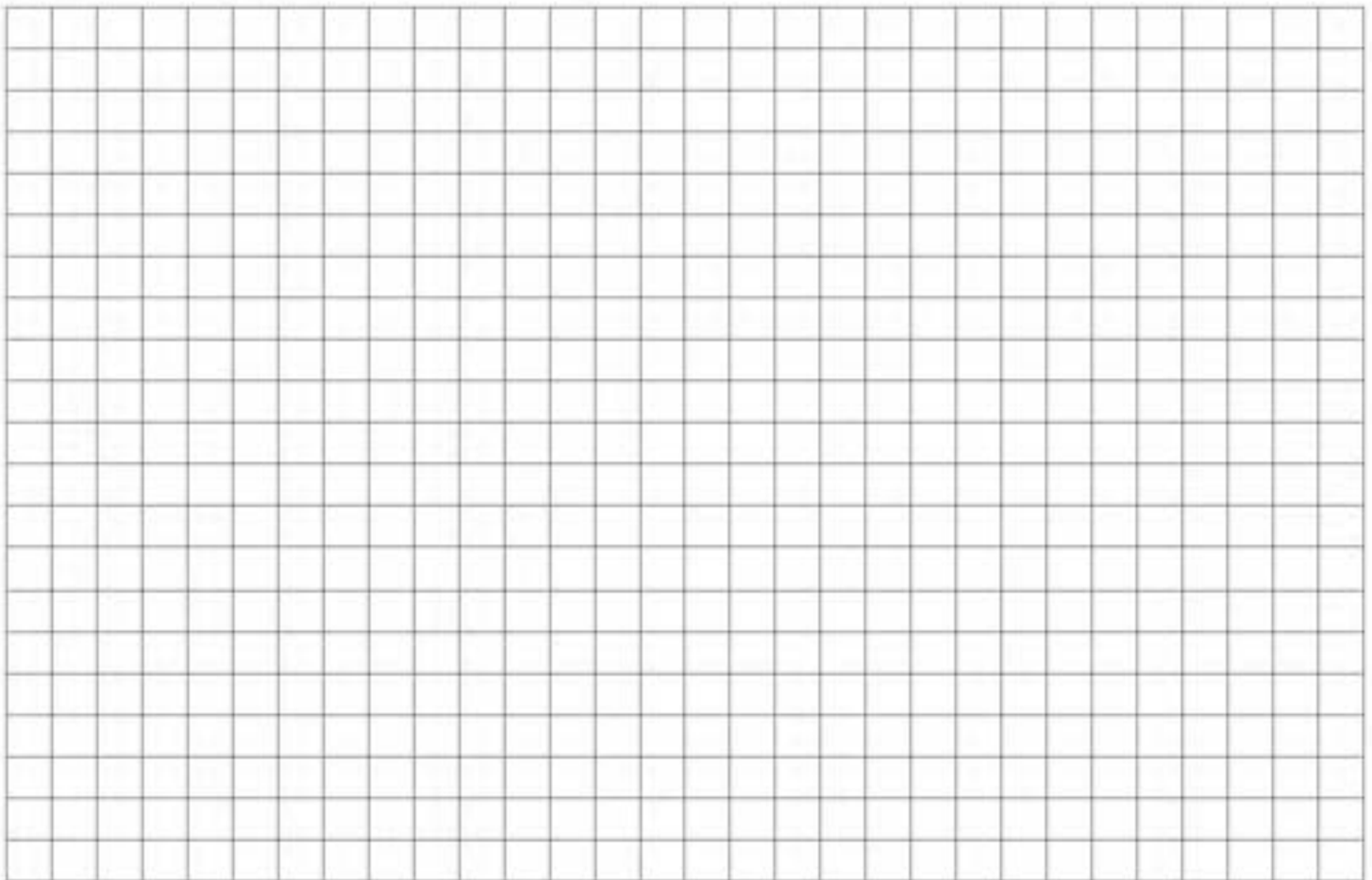
To obtain clarification about the information provided by the Abandoned Well Viewer, or if you do not have internet access, contact ERCB Customer Contact Centre by Telephone at 1.855.297.8311 or by email at inquires@aecr.ca. Alternately, you can contact Information Services by mail at ERCB, Suite 1000, 250 – 5 Street SW, Calgary, AB T2P 0R4.

SITE SKETCH

The following must be included on your sketch:

- North indicated on sketch
- Dimensions of proposed building(s)
- Location of all structures on property (existing and proposed)
- Proposed locations of power poles
- Show any pipeline crossing the property
- Public roads servicing the property (approach) ***Your FRONT yard setback is the location of entrance (driveway) from a local road***
- Show the location of access to your property

Draw your site sketch in the grid below. All setback from proposed buildings to property lines must be included. Please include a legend.



Setbacks in metres or feet: North: _____ South: _____ East: _____ West: _____
 Quarter: _____ Section: _____ Township: _____ Range: _____ W of 5 Meridian

Brief description of the property, including any water bodies or steep embankments: _____

Please see attached drawings in Appendix A of Attachment A

AGGREGATE APPLICATIONS PROCESSING FORM

Do you plan on mining a roadway?: **YE** **N**

If **YES**, Rge Rd to be mined: _____ **OR** Twp Rd to be mined: _____

Explanation or Intent of Project	Page / Appendix	Notes
The features of the project that make it desirable to the general public and Lac. Ste. Anne County. This is to include an evaluation of how the project may contribute to the present and projected need.	Section 1.1, Attachment A	- Approximately \$2.94-\$4.8 million from the CAP levy and a estimated total \$7.69 million in revenue to the County. - 11,780,000 m3 of aggregate, the majority of which will be used for local projects. - Potential employment opportunities with T&T.
An economic analysis of the proposal's anticipated economic impact on Lac Ste. Anne.	Section 1.1, Attachment A	
An Environmental Impact Assessment report prepared by a qualified professional.	Appendix E, Attachment A	
Information related to the source of Aggregate for processing, including projected volumes from on and off-site that will be processed on the Site.	Sections 1.1 and 3.1, Attachment A	
Any other pertinent information or tests required by the Development Authority respecting the Site or adjacent lands.	Please see the Letter and all Attachments	
Such additional requirements as are determined necessary by the Development Authority having regard to the nature of the proposed development and the surrounding use(s), which may be affected.	Please see the Letter and all Attachments	
If your development permit application is for an extension for a discretionary use, ensure that the application information submitted with the original development permit application in whole or in part satisfies the application requirements for the development permit for the extension.	Noted	
Determine that additional information shall be submitted for the development permit for the extension, even if such information was not required for processing the original development permit application.	Please refer to the submitted Letter and Attachments for all additional requested information for the Redistricting and Development Permit Application.	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

An application for a development permit for an aggregate resource extraction shall be made to the Development Authority in writing, and shall:

	Page / Appendix	Notes
a. Be submitted together with a re-districting application to re-district the subject lands to the Aggregate Resource Extraction and Processing (AR) district.		Submitted under separate cover.
b. Be signed by the registered owner or his or her agent where a person other than the owner is authorized by the owner to make application. The correctness of the information supplied shall, when required by the Development Authority, be verified by a statutory declaration.		Please see page 18 of this form for landowner signatures.
c. State proposed use or occupancy of all parts of the land and buildings.	Section 1.4 and Section 2.7/Table 1 within Attachment A.	There are no occupants.
d. Include the results of the information meeting, as required in above Section, with detailed descriptions of how the proposed development complies with the requirements of any relevant municipal policies and regulations.	Attachment G	
e. Include an Environmental Impact Assessment completed in accordance with Section 3.4.13 and any additional terms of reference from the meeting described above.	Appendix E, Attachment A	

GENERAL REQUIREMENTS

i. A completed application form;	Attachment H	
ii. A written and graphical description of adjoining land uses within a minimum distance of 3.2 km (2.0 miles) of the legal property line of the subject site;	Table 1 in Section 2.7, Attachment A	
iii. Maximum tonnes of aggregate to be extracted per year;	Sections 3.1 and 3.3, Attachment A	There will be 11,780,000 m3 tonnes extracted during the pit's 15-25 year lifespan.
iv. The proposed development area, including the total area that will be disturbed by the aggregate resource extraction use over the life of the development;	Section 3.3 and Appendix A, Attachment A	
v. A list of all other approvals required (which may include: Provincial water diversion licence for pit de-watering, Federal requirements);		Please refer to response #5 within the submitted Letter.
vi. A copy of any applications as well as a copy of any responses or approvals from other authorities such as Alberta Environment and Sustainable Resource Development (AESRD) and Alberta Transportation, to allow the County to maintain complete records and to ensure that all relevant land use criteria are being satisfactorily addressed;	Attachment C	
vii. A description of the gravel mining method;	Section 3.0, Attachment A	
viii. A description of the extraction process;	Section 3.0, Attachment A	
ix. The type of crusher to be used; and	Section 3.4, Attachment A	
x. Total amount of aggregate to be mined out.	Section 3.1, Attachment A	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

The applicant shall submit as part of the application one (1) or more parcel plans, at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum), showing all of the following:

	Page / Appendix	Notes
a. North point;	Appendix A, Attachment A	
b. Legal description of parcel;	Appendix A, Attachment A	
c. Site dimensions and location with respect to parcel boundaries;	Appendix A, Attachment A	
d. Pre-disturbance topographical map at a minimum of 1:5000 scale with a minimum contour index of 1.0 m;	Appendix A, Attachment A	
e. Location of existing facilities (i.e., water wells, buildings and major landscaped area including buffering and screening area) and where the proposed activity is to be located within the property;	Appendix A, Attachment A	
f. Location of existing drainage features, and significant natural features on and within 0.5 km (0.31 miles) of the site;	Appendix A, Attachment A	
g. Access and egress points to and from the site;	Appendix A, Attachment A	
h. Extraction locations and final extraction elevation;	Appendix A, Attachment A	
i. Stockpile locations (e.g.: for topsoil, subsoil overburden, and aggregate)	Appendix A, Attachment A	
j. A phasing diagram showing phasing scheme for the pit;	Appendix A, Attachment A	
k. Locations and extents of designated processing buffer areas containing production, washing, fueling, and crushing activities (including an explanation of the placement of such things as fuel storage, crushers, asphalt, and wash machines, as well as the orientation of the engines for such machines);	Appendix A, Attachment A	
l. Line-of-sight data from the site to all residential uses within a minimum of 400.0 m (1312.34 ft) or as determined by the Development Authority;	Appendix A, Attachment A	
m. Accompanying text to site plan explaining the sequence of mining, the placement of fuel storage areas, and the placement of the crusher (i.e., bottom of pit);	Appendix A, Attachment A	
n. The location of existing and proposed municipal and private local improvements as well as a time and engineering cost estimate of the installation of these improvements;	Appendix A, Attachment A	
o. If there is a pipeline in the area and its location in conjunction with the proposed development; and	Section 3.1, Attachment A	There is one natural gas pipeline which is located over 300 m away.
p. Estimated cost of the project, excluding land prices.	N/A	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

For all applications within 0.5 km (0.31 miles) of a water body, the applicant shall provide the following as part of the application:

	Page / Appendix	Notes
a. Identification of all upstream, downstream, and associated hydraulically connected water bodies.	Figure 2, Appendix A, Attachment A and Appendix E, Attachment A	
b. Identification of surface water and groundwater flows, volumes, and directions to water bodies identified in Subsection (a).	Figure 2, Appendix A, Attachment A and Appendix E, Attachment A	
c. Identification of natural in-stream flow requirements required for maintaining the health of water bodies identified in Subsection (a), as determined by a registered professional.	Appendix E, Attachment A	
d. Itemized cost of establishing and maintaining the applicable environmental continuous monitoring of the items identified in Subsections (a), (b), and (c) for the life of the operation.	N/A - no monitoring is required	

PUBLIC CONSULTATION

Prior to submitting a redistricting and development permit application for an aggregate resource extraction use and prior to commencement of construction, the applicant must conduct at least the following two activities:

	Page / Appendix	Notes
a. One (1) information meeting that provides details on the development and compliance with the requirements of any relevant municipal policies. Mitigation factors related to aggregate resource extraction activity must be addressed. Additional terms of reference for an Environmental Impact Assessment shall be determined during this meeting.		Requests to meet prior to submission - were never responded to.
b. One (1) open house to present details of the development and to gather public feedback. The applicant shall provide to the County notice of the open house in stamped envelopes to be addressed by the County for any affected parties.	Attachment G	

During the application review process, the applicant must conduct a regulated public hearing, including:

	Page / Appendix	Notes
a. Notice of the public hearing, which shall: <ul style="list-style-type: none"> i. Include date, time, and place of event, purpose of proposal, and how to submit concerns; ii. Be published in at least two (2) issues of a newspaper circulating in the County, the publication date of the second issue being not less than five (5) days prior to the event; and iii. Be mailed to registered owners of the land, if not the applicant, registered owners of adjacent land, and any other affected parties. 	Appendix A, Attachment G	
b. Presentation of details of the proposal to the public and provide means of representation for affected parties and the general public.	Attachment G	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

PUBLIC CONSULTATION (CONT.)

The results of above Section, including a description of how the proposal addresses public concerns, must be submitted to the Development Authority during the application review process.

The Applicant shall keep records from the open house and submit a report to the Development Authority. These records shall include the location and time of open house, and shall address the following issues:

	Attachment L Page / Appendix	Notes
a. The number of people that attended, and the issues that were brought forward.	Appendices B and C within Attachment G	31 people attended the open house.
b. How the pit operator plans to mitigate any legitimate concerns that were brought forward.	Attachment G	See Appendix D & F as well as the responses within Attachment G.
c. Whether the proposed pit will affect any Site rights of way, i.e.: power lines, pipelines, gas co-ops, etc.	Attachment G	No rights of way or lines will be affected.
d. Location and hours of operation of a visitor's area, where visitors can visit the operation when it is operating and observe the operation for their own benefit.	Attachment G	To gain access to the site, visitors will need to contact John Thomas. All surrounding residents have been provided his contact information.
e. Whether the sand and gravel development conflicts with other land uses, long-term priorities for the community, and if so, what measures will be implemented to minimize these conflicts.	Attachment G	There are no conflicts with other land uses.
f. Confirmation on whether or not all residents directly affected by the proposed resource extraction use (those adjacent and within 2 kilometers (1.24 miles) of the resource extraction Site) have been personally interviewed and/or notified in writing of the intent to develop the Site.	Attachment G	Invites were mailed on April 23, 2025 to all addresses provided by the County. Contacting processes were followed as outlined by the Land Use Bylaw and Tanya Vanderwell.
g. Whether plans are laid out for directly affected residents to be notified prior to activation of pit operations.	Attachment G	The residents have been contacted according to Land Use Bylaw Section 3.5 and directions from Tanya Vanderwell.
h. Whether one or more open houses have been held in the community.	Attachment G	An Open House was also held in 2015. Please see Appendix F of Attachment A for a record.
i. Whether provisions exist for affected residents to be consulted (on an annual basis) throughout the lifespan of the sand and gravel operation.	Attachment G	Residents have been provided with John Thomas' information and are able to contact him at any point with concerns.

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

RECLAMATION

The applicant shall include site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) showing the following:

	Page / Appendix	Notes
a. Topsoil and subsoil salvage and replacement.	Section 4.2, Attachment A	
b. Cross-sections, including the slopes and the gradients prior to gravel mining and the reclaimed slopes once the reclamation is completed.	Appendix A, Attachment A	
c. Contour elevations of the subject site before and after pit completion.	Appendix A, Attachment A	
A reclamation plan shall be required for all aggregate resource extraction use approvals. A County approved reclamation plan shall be prepared by a qualified professional and shall include, but not be limited to:		
a. A description of the operational plan for the site.	Section 3.0, Attachment A	
b. The location of all improvements, stockpiles, equipment, access, signage, and pits.;	Appendix A, Attachment A	
c. A topographical map, at a minimum of 1:5000 scale with a minimum contour index of 1.0 m, showing the predicted contours of the site after completion of the reclamation, where the final contours shall be no steeper than 4:1.	Appendix A, Attachment A	
d. A phasing diagram, in accordance with the Provincial Guide, Progressive Reclamation, showing the phasing scheme for the pit including the time frame when reclamation will be completed.	Appendix A, Attachment A	
e. The amount of aggregate materials, in cubic metres (m3), located on the site to be extracted under this permit. This information is for internal use only.	Section 3.1, Attachment A	11,780,00 m3
f. For pits not utilizing a scale on-site, the estimated amount of aggregate material, in cubic metres (m3), for each phase.	Section 3.1, Attachment A	
g. Estimated cost for reclamation including estimated costs for each phase.	Updated security for reclamation has been submitted to and accepted by EPEA.	
h. A description of the steepness of slopes.	Appendix A, Attachment A	
i. Potential end land use (i.e., agricultural, country, residential).	Section 4.1, Attachment A	
j. Use(s) that may be effected.	Section 4.1, Attachment A	No uses are expected to be affected.
k. Re-vegetation to be used on the reclaimed site.	Section 4.4, Attachment A	
l. Details about pit reclamation, including subsoil and topsoil replacement and compaction.	Section 4.0, Attachment A	
m. Location of water bodies, if any.	There are no large water bodies, only landowner dugouts.	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

RECLAMATION (CONT.)

The reclamation plan shall comply, at a minimum, with the following standards:

	Page / Appendix	Notes
a. Drainage: Prior to re-contouring, the pit floor area should be sloped to a low point located at the bottom of the pit area.	Please refer to Section 4.0 within Attachment A for complete reclamation plans. Figures 4-15 within Appendix A, Attachment A display the reclaimed conditions.	
b. Re-contouring: The slope must be developed in a manner similar to pre-disturbance topography.		
c. Subsoil and Topsoil Replacement: The available subsoil and topsoil should be spread evenly across the recontoured areas of the site.		
d. Seed Bed Preparation: The re-contoured and reclaimed areas of the site should accommodate conventional tillage equipment and, as a result, the soil should be adequately prepared for seeding at the site with an approved species of vegetation.		
e. Seeding and Vegetation Establishment: The site should be seeded in a manner suitable to the applicant in consultation and approval with Lac Ste. Anne County.		

OPERATIONS, SAFETY AND EMERGENCY RESPONSE PLAN

The applicant shall include the following information related to operations and safety at the aggregate extraction and processing site satisfactory to the Development Authority:

	Page / Appendix	Notes
a. Days and hours of operation including a breakdown of hours of operation for: <ul style="list-style-type: none"> i. Aggregate extraction activities; ii. Reclamation activities; iii. Transportation of aggregate off-site iv. Aggregate resource processing activities; v. Stripping operations; vi. Mining/crushing/washing operations; vii. Asphalt production; viii. Concrete production; and ix. Hauling operations 	Section 3.1, Attachment A	
b. Descriptions of the extraction process including sequencing, stripping, and stockpiling details.	Section 3.0, Attachment A	
c. Type of crusher being used.	Section 3.4, Attachment A	
d. Total amount of sand and gravel to be mined out.	Section 3.1, Attachment A	
e. The proposed number of years of operation and when reclamation will commence.	Section 3.3, Attachment A	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

OPERATIONS, SAFETY AND EMERGENCY RESPONSE PLAN (CONT.)

f. Access and haul roads.	Section 3.5, Attachment A	The haul road will be on Range Road 51. Hauling will exclusively be within Parkland County.
g. Details on location, specifications and standards of construction of all main internal roadways located within the site	Section 3.5, Attachment A	
h. Location of stockpiles.	Section 3.3, Attachment A	
i. Provisions for loading and parking.	Section 3.3, Attachment A	
j. The garbage and storage area, fencing and screening proposed for this area, and methods of disposing of garbage.	Section 3.10, Attachment A	
k. Location of servicing, fueling, and rinsing of trucks, including fuel storage areas.	Section 3.4, Attachment A	
l. A plan to limit surface water from entering the site.	Section 3.8, Attachment A	
m. Location of any potential containers to collect used oil and filters.	Section 3.4, Attachment A	Containers will be located in the fuelling area.
n. A plan to prevent permeation of contaminants into the soil.	Section 3.4, Attachment A	
o. Details about on-site sewage and garbage disposal:		
i. Method of effluent disposal;		
ii. Portable toilets;		
iii. Sewage hauling and removal protocols;	Section 3.10, Attachment A	
iv. Garbage bins; and		
v. Any other important details.		
p. Details about the use of asphalt, wash, crush, or concrete plant part of the pit operation. If these materials are to be used as part of the pit operation, describe the type of equipment used in the asphalt, wash, crush, and/or concrete plant including its placement, the placement of the power source, the location of the water source, and where the source gravel will come from if it originates off-site.	Section 3.4, Attachment A	
q. A written security plan that identifies:		
i. Potentially dangerous situations or areas;		
ii. Typical procedures to be used for monitoring the site during periods of activity;		
iii. When activities are suspended;		
iv. Information access;	Attachment E	
v. Fencing;		
vi. Security features;		
vii. Signage; and		
viii. Emergency response procedures, including procedures for responding directly to a complainant, the County, or regulatory body, and procedures for documenting and keeping records of complaints.		

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

OPERATIONS, SAFETY AND EMERGENCY RESPONSE PLAN (CONT.)

r. Methods to be used to restrict public access and to protect wildlife and neighbouring livestock.		
s. Location of the nearest city, town, village, or summer village and its distance from the proposed pit.	Figure 1, Appendix A, Attachment A	The pit is located approximately 15km from the Town of Wabamun.
t. The name, address, and telephone number of any landowners or occupants that are affected by the proposed development, which at a minimum includes those landowners or occupants within 2.0 km (1.24 miles) of the proposed development and those whose residences are located on a haul route.		To protect landowner information LSAC did not share this information with T&T.
u. A list of emergency contact personnel to be used by the County for the pit operation, for active times, when the pit operation is suspended, and during final reclamation. An Emergency Management Plan, approved by the Director of Emergency Management, must be submitted.	Attachment E	

SETBACK AND SCREENING

The applicant shall include the following information related to setbacks and screening at the aggregate extraction and processing site to the satisfaction of the Development Authority:

	Page / Appendix	Notes
a. Written consent from all pipeline and right-of-way holders within the pit or within the vicinity of the pit.		No pipelines are within the vicinity of the pit.
b. Details of the screening and landscaping to be undertaken by the applicant, to reduce the negative visual impact of the development. The details should include, but are not limited to, information related to: <ul style="list-style-type: none"> i. The location and area of native vegetation that will remain undisturbed; ii. The location, design, and staging of any visual barriers to be constructed by the applicant, such as fences or berms; iii. The location and area where the applicant will plant vegetation and trees; and iv. Details on any other measures to be taken by the applicant. 	- Appendix A, Attachment A - Attachment F	
c. Proposed setbacks or buffers related to protection of natural heritage features, ecological function, or rare and endangered species.	Section 3.2, Attachment A	Section 3.2 contains details about setbacks and buffers. None of these features are on site. Please see Attachment D for Clearance from Alberta Culture, and Appendix E of Attachment A for the Environmental Impacts Assessment.

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

TRANSPORTATION OF AGGREGATE ON OR OFF-SITE

The applicant shall include the following information related to transportation of aggregate to and from the proposed site to the satisfaction of the Development Authority:

	Page / Appendix	Notes
a. A description of all haul routes that indicates the shortest and most desired route from the proposed pit to a processing area if off-site, or from another site to the processing area if being transported on-site. The description shall also indicate the shortest route to the nearest provincial roadway within a suitable access to accommodate projected traffic from the proposed development, and approximate gravel truck counts and frequency per day for both full and empty gravel trucks.	Section 3.5, Attachment A, and Attachment B	Range Road 51 will be the only road used for hauling. Accordingly, all hauling will take place in Parkland County. An average of 10-15 trucks daily will haul within Parkland County.
b. At the discretion of the Development Authority, details of alternate routes to the one being proposed.	N/A	Range Road 51 will be the only road used for hauling.
c. At the discretion of the Development Authority, site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) showing the proposed haul routes.	N/A	No hauling will take place in Lac Ste. Anne County. All hauling will be on Range Road 55.
d. Description of plans for removal of internal roads, fences, and barriers or any internal roads that may be left.	N/A	Only temporary roads will be used within the pit boundaries.
e. Details of the dust control measures to be implemented, including the suppressant materials or methods to be used on the haul roads and the estimated frequency for the application of these measures.	Section 3.7, Attachment A	
f. A report on the proposed haul route or haul routes (if more than one route is proposed) that shall include and address the following:	Section 3.5, Attachment A and Attachment B	
<ul style="list-style-type: none"> i. Anticipated daily/weekly/monthly motor vehicle traffic generation; ii. Number of vehicles that will be used in the hauling of materials and the proposed hauling route to and from site; iii. Access locations to and from the site, including municipal roads and highways; iv. A description of roads constructed within the site that are required for the operation of pit; v. A description of any road construction or road upgrading that is necessary to access the pit's working area; vi. Details on whether the haul route is on a school bus route; vii. Information on whether haul routes have been established and agreed upon; viii. Information on the number of gravel trucks that will be operating and whether the number has been agreed upon; ix. Details of any traffic impact assessment that has been undertaken and implemented to address potential traffic issues; and x. Details on moratoria to be placed on hauling during spring road bans. 		The only haul route is Range Road 51, which is already established, and located entirely within Parkland County. This haul route is described in the 2025 Industrial Haul Agreement with Parkland County, found in Attachment B.

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

TRANSPORTATION OF AGGREGATE ON OR OFF-SITE (CONT.)

<p>g. A Traffic Impact Assessment (TIA) shall be prepared by a qualified professional and submitted to the County if determined necessary by the Development Authority. The TIA shall include traffic impact on all County roads to be accessed by the resource extraction use and all proposed haul routes to the nearest provincial highway, off-site processing area, and from another site to a processing use on-site. The TIA requirement may be waived by the Development Authority, but such waiver shall not cause an application for an aggregate resource extraction use to be deemed a discretionary use.</p>		<p>Please refer to response #2 within the submitted Letter.</p>
<p>h. The TIA shall cite cumulative impacts by including anticipated traffic levels (incl. peak loading) from existing approved gravel operations; other resource extraction uses with an active but not yet decided development permit application; and approvals not in operation. The County can provide this information upon written request.</p>		<p>Please refer to response #2 within the submitted Letter.</p>

SURFACE WATER

The applicant shall include the following information related to surface water to the satisfaction of the Development Authority:

	Page / Appendix	Notes
<p>a. Site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) showing the storm drainage plan including surface and groundwater management measures, and direction of drainage.</p>	<p>Appendix A, Attachment A</p>	
<p>b. A description of the current surface drainage patterns on the site and the anticipated drainage patterns once the reclamation is complete.</p>	<p>Appendix E, Attachment A</p>	
<p>c. Consideration of the presence (including downstream) of commercial, recreational, or Aboriginal fisheries that may be affected by changes in the surface water drainage patterns, including but not limited to:</p> <ul style="list-style-type: none"> i. Water quality and sediment transport; ii. Changes in flow and velocity; iii. Fish passage; and iv. Thermal regime, as described under the <i>Federal Fisheries Act</i>. 	<p>Appendix D of Appendix E, Attachment A</p>	<p>No streams will be affected.</p>
<p>d. An analysis of the potential for adverse impact on surface water as a result of the extraction and reclamation.</p>	<p>Appendix E, Attachment A</p>	

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

GROUND WATER

The applicant shall include the following information related to groundwater to the satisfaction of the Development Authority:

	Page / Appendix	Notes
a. An analysis of the potential for adverse impact on groundwater aquifers and water wells as a result of the extraction and reclamation.	Appendix D of Appendix E, Attachment A	
b. The quantity and quality of well water for any water supply system that may be used in conjunction with the proposed development. Analysis and testing must be consistent with the <i>Water Act</i> and <i>Alberta Environment Guide to Groundwater Authorizations</i> ;	N/A	No well water will be used in conjunction with the development.
c. A hydrogeology report prepared by a qualified hydrogeologist with a P.Eng. or P.Geo. designation. Hydrogeology reports submitted to the County may be provided to, and shared with users of, the water portal. The report shall be consistent with the <i>Water Act</i> and <i>Alberta Environment Guide to Groundwater Authorizations</i> . Where extraction occurs below the water table, the report shall include: <ul style="list-style-type: none"> i. Location and description of existing water users (i.e.: water wells); ii. Description of the geology, hydrogeology, and surface water features on and surrounding the site; iii. Hydrogeological cross-sections showing hydrostratigraphy and groundwater levels; iv. Aquifers; v. Surface water and groundwater interactions; vi. Proposed dewatering plan and discharge locations; vii. Groundwater quality; viii. Water diversions; ix. Site water budget; x. Impact assessment including existing water uses and natural features; and xi. Mitigation and monitoring measures 	Appendix D of Appendix E, Attachment A	
d. Any hydrogeology report prepared in support of a <i>Water Act</i> licence.	N/A	There are no <i>Water Act</i> licences required for the operations at the pit.

AGGREGATE APPLICATIONS PROCESSING FORM (CONT.)

NOISE

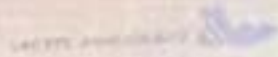
The applicant shall include the following information related to noise to the satisfaction of the Development Authority:

	Page / Appendix	Notes
a. Site plans in duplicate at a scale satisfactory to the Development Authority (it is recommended that the scale drawings be developed and printed on 11" X 17" paper at a minimum) which provides the acoustic mapping of the site;	Appendix A, Attachment A	
b. A description of measures to be taken to minimize noise to neighboring properties;	- Section 3.6, Attachment A - Appendix F, Attachment A - Attachment F	
c. A written assessment including a description of mitigation measures that will be implemented as part of the overall resource extraction operation to reduce acoustic impacts on adjoining land uses; and	- Section 3.6, Attachment A - Appendix F, Attachment A - Attachment F	
d. Confirmation that any crusher located on the site shall be located at the bottom of the excavation area as soon as reasonably possible and shall be located so that any muffler located on the crusher is pointed towards the wall of the excavation area or any other structure or surface that may act as a noise barrier (e.g.: berm or on-site building).	Section 3.6, Attachment A	

DUST

To the satisfaction of the Development Authority, the applicant shall include the following information on the details of the dust control measures to be implemented, including the suppressant materials or methods to be used on the pit floor and on stockpiles located on the site, and the estimated frequency for the application.

Please find details regarding dust within:
- Section 3.7, Attachment A
- Appendix F, Attachment G



APPLICANT DECLARATION

I hereby make application for a Development Permit in accordance with the plans and supporting information submitted herewith.

I hereby expressly consent to allow any subordination between provisions of Section 5.12 of the Municipal Government Act and the rules to which the land and/or buildings with respect to this application or potential verification of permit conditions, arising from this application.

I hereby acknowledge that if this permit is issued I may be required to provide a drainage easement on my property.

This information redacted as per Protection of Privacy Act

Jan 2/26

TIME EXTENSION AGREEMENT

2-14-31 E.T. M.O.

This information redacted as per Protection of Privacy Act (POPA)

JAN 02/26

Please complete if there are multiple landowners:

Kim Bamber
Barbara Bamber

This information redacted as per Protection of Privacy Act

AUTHORIZATION FORM

Agent acting on behalf of a registered owner

This information redacted as per Protection of Privacy Act

This information redacted as per Protection of Privacy Act

This information redacted as per Protection of Privacy Act (POPA)

Jan 2/26
Application date

AGGREGATE DEVELOPMENT PERMIT FEE SCHEDULE

Gravel pit / granular extraction of any kind	\$	50,000.00
Re-application of a gravel pit / granular extraction of any kind	\$	15,000.00
Gravel pit / granular annual site inspection fee	\$	2,000.00
Business licence (new application)	\$	100.00
Business licence (annual renewal)	\$	50.00

In addition to the development permit application fees specified in this schedule, the applicant is responsible for all reasonable fees and expenses incurred by the County in reviewing the development permit application, including but not limited to consultant fees.

Fees can be paid by credit card via the County's secure payment portal at LSAC.ca/payments, or in person at the County Administration Office located at 56521 Rge Rd 65 (1.5km east of Sangudo).

The penalty for starting a development without a permit is triple the regular fee.

ADDITIONAL DOCUMENTATION, SCHEDULES OR REPORTS

Please note: You may be required to submit some or all of the following, depending on the nature of the application.

FOR OFFICE USE ONLY			
Adjacent landowner notification	<input type="checkbox"/>	<input type="checkbox"/>	
Area structure plan	<input type="checkbox"/>	<input type="checkbox"/>	
Biophysical assessment	<input type="checkbox"/>	<input type="checkbox"/>	
Environmental site assessment	<input type="checkbox"/>	<input type="checkbox"/>	
Full/partial professional involvement	<input type="checkbox"/>	<input type="checkbox"/>	
Geotechnical report	<input type="checkbox"/>	<input type="checkbox"/>	
	REQUIRED	SUBMITTED	
Hydrogeological report	<input type="checkbox"/>	<input type="checkbox"/>	
Landscaping plan	<input type="checkbox"/>	<input type="checkbox"/>	
Master sign plan	<input type="checkbox"/>	<input type="checkbox"/>	
Parking plan	<input type="checkbox"/>	<input type="checkbox"/>	
Stormwater management plan	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic impact assessment	<input type="checkbox"/>	<input type="checkbox"/>	
	REQUIRED	SUBMITTED	

The personal information you provide will be used to process this application, and is collected under the authority of Section 642 of the *Municipal Government Act*. Personal information provided may be recorded in the minutes of Municipal Planning Commission meetings, or otherwise made public pursuant to the provisions of the *Freedom of Information and Protection of Privacy (FOIP) Act*, including sections 39 through 42 therein. For details on the collection, use or disclosure of this information, please contact the County FOIP Coordinator at the address below.

Box 219, 56521 Rge Rd 65, Sangudo AB T0E 2A0

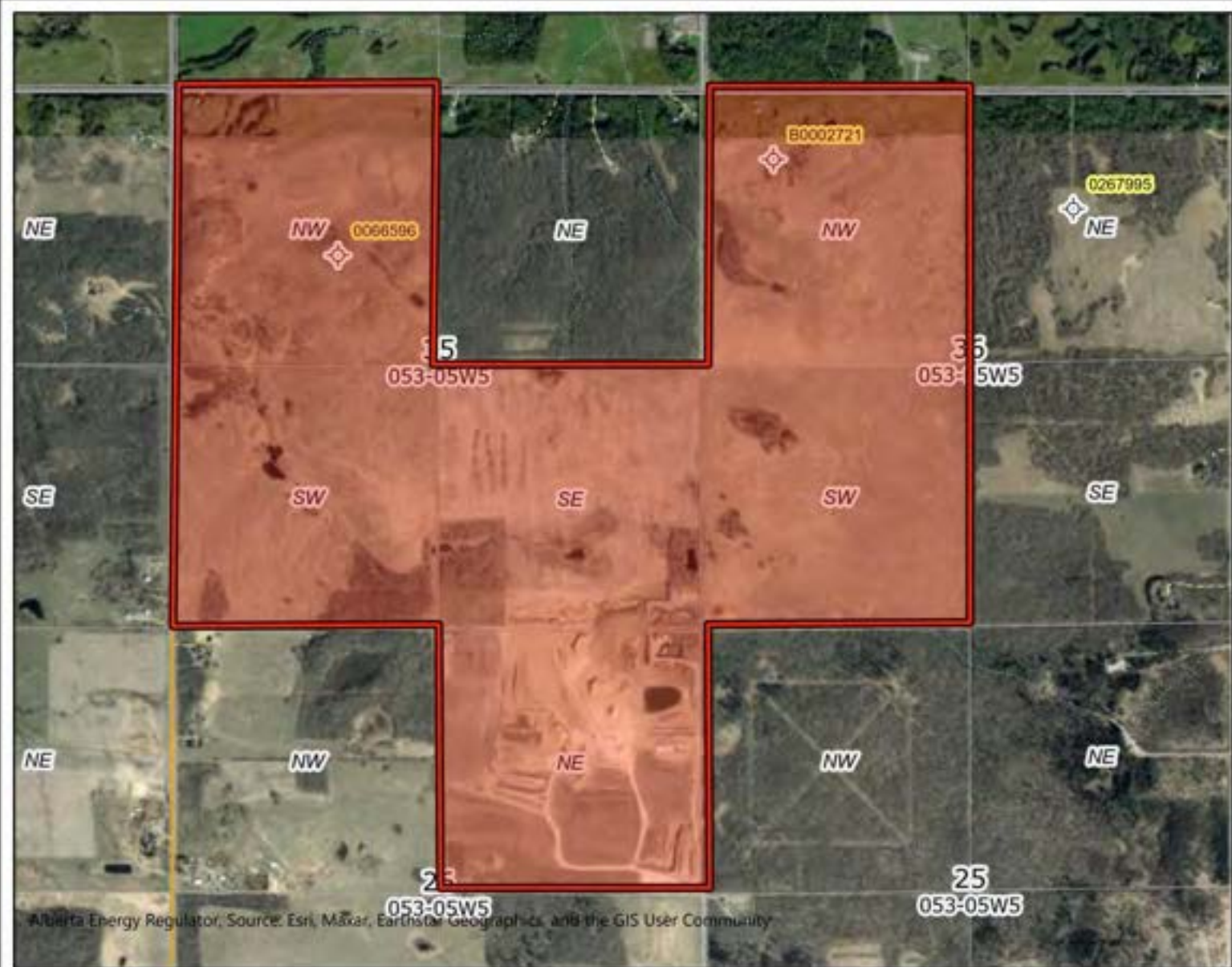
T 780.785.3411 TF 1.866.880.5722 F 780.785.2985 E devassistant@LSAC.ca W LSAC.ca/planning



Attachment I:

AER Abandoned Well Search Results





Alberta Energy Regulator, Source: Esri, Maxar, Earthstar, GeoGraphics, and the GIS User Community

Bamber #2 Pit


Base Data provided by: Government of Alberta

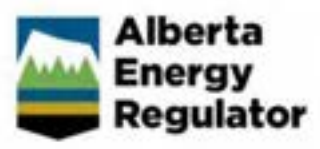
Author:
Aspen Land Group

Print Date:
10/7/2025

Legend	
<ul style="list-style-type: none"> Abandoned Well Revised Location Revised Location Point 	<ul style="list-style-type: none"> Unimproved Unclassified Truck Trail Water Road Water Crossing Ferry Route
<ul style="list-style-type: none"> Paved Road (20K) <ul style="list-style-type: none"> Primary Divided Primary Undivided Primary Undivided 4L Primary Undivided 4R Primary Undivided 3L Primary Undivided 3R Primary Undivided 2L Primary Undivided 2R Interchange Ramp Interchange Ramp Secondary Divided Secondary Undivided Secondary Undivided 4L Secondary Undivided 4R Secondary Undivided 3L Secondary Undivided 3R Secondary Undivided 2L Secondary Undivided 2R 	<ul style="list-style-type: none"> Gravel Road (20K) <ul style="list-style-type: none"> Primary Undivided 3L Primary Undivided 3R Primary Undivided 2L Primary Undivided 2R Secondary Undivided 3L Secondary Undivided 3R Secondary Undivided 2L Secondary Undivided 2R Railway (20K Large Scale) <ul style="list-style-type: none"> Single Line Double Line Multiple Line Spur Line Abandoned ATS Quarter Section label
<ul style="list-style-type: none"> ATS Quarter Section with ATS Section label (medium) ATS Section with Road ATS Township (large scale) Provincial Boundaries Lake Label (20K) Water Label (20K) 	<ul style="list-style-type: none"> Lake/River (20K) <ul style="list-style-type: none"> Lake or River Lake or River Reservoir Islands Major Canal Oxbow Quarry Dugout Intermittent Lake <ul style="list-style-type: none"> Intermittent Lake Intermittent Oxbow Sandbar / Wetland / <ul style="list-style-type: none"> Sandbar Sandbar Sandbar

The Alberta Energy Regulator (AER) has not verified and makes no representation or warranty as to the accuracy, completeness, or reliability of any information or data in this document or that it will be suitable for any particular purpose or use. The AER is not responsible for any inaccuracies, errors or omissions in the information or data and is not liable for any direct or indirect losses arising out of any use of this information. For additional information about the limitations and restrictions applicable to this document, please refer to the AER Copyright & Disclaimer webpage: <http://www.aer.ca/copyright-disclaimer>


 Projection and Datum
 WGS 1984 Web Mercator Auxiliary Sphere
 Scale 1:31,246





Attachment J:

Certificates of Title





LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 600 712 5;5;53;36;SW 122 352 153

LEGAL DESCRIPTION
MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 36
QUARTER SOUTH WEST
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

BOTH OF:

This information is not to be used for legal purposes. f P i

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
122 352 154	24/10/2012	MORTGAGE MORTGAGEE - ALBERTA TREASURY BRANCHES. BOX 3180,5014 50 STREET STONY PLAIN

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

ALBERTA

ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 7 DAY OF
JANUARY, 2026 AT 02:28 P.M.

ORDER NUMBER: 55937355

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 619 985 5;5;53;26;NE 132 180 917

LEGAL DESCRIPTION
MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 26
QUARTER NORTH EAST
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: PARKLAND COUNTY

REFERENCE NUMBER: 012 116 700

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
132 180 917	18/06/2013	TRANSFER OF LAND	\$2,784,000	SEE INSTRUMENT

OWNERS

1577784 ALBERTA LTD.

This information is reported as per Protection

ENCUMBRANCES, LIENS & INTERESTS		
REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
902 067 565	09/03/1990	UTILITY RIGHT OF WAY GRANTEE - ALBERTA GOVERNMENT TELEPHONES. AS TO PORTION OR PLAN:9020474

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 7 DAY OF
JANUARY, 2026 AT 02:28 P.M.

ORDER NUMBER: 55937355

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 205 596 5;5;53;35;SE 222 191 313

LEGAL DESCRIPTION
MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 35
QUARTER SOUTH EAST
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 64.3 HECTARES (159 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 183 916

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
222 191 313	29/08/2022	TRANSFER OF LAND	\$2,178,000	\$2,178,000

OWNERS

1577784 ALBERTA LTD.

This information is reported as per Protection of Information Act

ENCUMBRANCES, LIENS & INTERESTS		
REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
902 067 563	09/03/1990	UTILITY RIGHT OF WAY GRANTEE - ALBERTA GOVERNMENT TELEPHONES. AS TO PORTION OR PLAN:9020474 "TAKES PRIORITY DATE OF CAVEAT NO 882089315 28 04 1988"
202 255 483	17/11/2020	UTILITY RIGHT OF WAY GRANTEE - EQUUS REA LTD.

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 7 DAY OF
JANUARY, 2026 AT 02:28 P.M.

ORDER NUMBER: 55937355

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S		
LINC	SHORT LEGAL	TITLE NUMBER
0022 643 779	5;5;53;36;NW	122 352 153 +1

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 36
QUARTER NORTH WEST
CONTAINING 66.4 HECTARES (164 ACRES) MORE OR LESS
EXCEPTING THEREOUT : ALL THAT PORTION DESCRIBED AS FOLLOWS:--
COMMENCING AT THE NORTH WEST CORNER OF THE SAID QUARTER
SECTION, THENCE SOUTHERLY ALONG THE WEST BOUNDARY THEREOF 1,320
FEET, THENCE EASTERLY AND PARALLEL TO THE NORTH BOUNDARY OF THE
SAID QUARTER SECTION 1220 FEET, THENCE NORTHERLY AND PARALLEL TO
THE WEST BOUNDARY OF THE SAID QUARTER SECTION TO AN INTERSECTION
WITH SAID NORTH BOUNDARY, THENCE WESTERLY ALONG THE NORTH BOUNDARY
OF THE SAID QUARTER SECTION TO THE POINT OF COMMENCEMENT
CONTAINING 14.9 HECTARES (36.97 ACRES) MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +1

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND			SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

BOTH OF:

This information
related to this
information is
available on
the Alberta
Land Title
Registry
System
(www.alberta.ca)

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

122 352 153 +1

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

3113VE 23/10/1974 CAVEAT
CAVEATOR - EDMONTON REGIONAL PLANNING COMMISSION.

122 352 154 24/10/2012 MORTGAGE
MORTGAGEE - ALBERTA TREASURY BRANCHES.
BOX 3180,5014 50 STREET
STONY PLAIN
ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 7 DAY OF
JANUARY, 2026 AT 02:28 P.M.

ORDER NUMBER: 55937355

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0010 118 271 5;5;53;35;SW 122 352 153 +2

LEGAL DESCRIPTION

THE SOUTH WEST QUARTER OF SECTION THIRTY FIVE (35)
TOWNSHIP FIFTY THREE (53)
RANGE FIVE (5)
WEST OF THE FIFTH MERIDIAN,
CONTAINING 64.3 HECTARES (159) ACRES MORE OR LESS.
EXCEPTING THEREOUT:
0.417 HECTARES (1.03) ACRES MORE OR LESS FOR ROAD PLAN
7721629.
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +2

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND			SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

This information is protected under the Access to Information Act and the Privacy Act. This information is protected under the Access to Information Act and the Privacy Act.

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

122 352 153 +2

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

122 352 154 24/10/2012 MORTGAGE
MORTGAGEE - ALBERTA TREASURY BRANCHES.
BOX 3180,5014 50 STREET
STONY PLAIN
ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 7 DAY OF
JANUARY, 2026 AT 02:28 P.M.

ORDER NUMBER: 55937355

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0027 059 641 5;5;53;35;NW 122 352 153 +3

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 35
QUARTER NORTH WEST
CONTAINING 66.8 HECTARES (165 ACRES) MORE OR LESS
EXCEPTING THEREOUT: HECTARES (ACRES) MORE OR LESS
A) PLAN 7721629 ROAD 0.429 1.06
B) PLAN 9721580 DESCRIPTIVE 4.636 11.46
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +3

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND		SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

This information is provided for informational purposes only. It is not intended to constitute an offer of insurance or any other financial product. For more information, please contact your agent or the appropriate regulatory authority.



LAND TITLE CERTIFICATE

S
LINC SHORT LEGAL TITLE NUMBER
0022 643 761 5;5;53;36;NW 122 352 153 +4

LEGAL DESCRIPTION

MERIDIAN 5 RANGE 5 TOWNSHIP 53
SECTION 36
ALL THAT PORTION OF THE NORTH WEST QUARTER
DESCRIBED AS FOLLOWS:--
COMMENCING AT THE NORTH WEST CORNER OF THE SAID QUARTER
SECTION, THENCE SOUTHERLY ALONG THE WEST BOUNDARY THEREOF
1,320 FEET, THENCE EASTERLY AND PARALLEL TO THE NORTH BOUNDARY
OF THE SAID QUARTER SECTION 1,220 FEET, THENCE NORTHERLY AND
PARALLEL TO THE WEST BOUNDARY OF THE SAID QUARTER SECTION TO AN
INTERSECTION WITH SAID NORTH BOUNDARY, THENCE WESTERLY ALONG THE
NORTH BOUNDARY OF THE SAID QUARTER SECTION TO THE POINT OF COMMENCEMENT
CONTAINING 14.9 HECTARES (36.97 ACRES) MORE OR LESS
EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: LAC STE. ANNE COUNTY

REFERENCE NUMBER: 112 287 057 +4

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
122 352 153	24/10/2012	TRANSFER OF LAND			SEE INSTRUMENT

OWNERS

KIM GARY BAMBER

AND

BARBARA JEAN BAMBER

This information is reported as per the information Protection Act and the Access to Information Act / This information is reported as per the information Protection Act and the Access to Information Act

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

122 352 154 24/10/2012 MORTGAGE
MORTGAGEE - ALBERTA TREASURY BRANCHES.
BOX 3180,5014 50 STREET
STONY PLAIN
ALBERTA
ORIGINAL PRINCIPAL AMOUNT: \$657,250

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN
ACCURATE REPRODUCTION OF THE CERTIFICATE OF
TITLE REPRESENTED HEREIN THIS 7 DAY OF
JANUARY, 2026 AT 02:28 P.M.

ORDER NUMBER: 55937355

CUSTOMER FILE NUMBER:



END OF CERTIFICATE

THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).