

# PLANNING AND DEVELOPMENT SERVICES

TO: Council

**DATE:** March 2, 2021

FILE: 06731002/4

DIVISION: 9 APPLICATION: PL20200034

**SUBJECT:** Master Site Development Plan – Summit Pit

Note: This application should be considered in conjunction with land use application PL20200031 (agenda item E-1).

**APPLICATION:** To adopt a new Master Site Development Plan to replace the existing approved Summit Pit MSDP to provide a policy framework to guide and evaluate the development of an aggregate facility within the site.

**GENERAL LOCATION:** Located at the southeast junction of Hwy. 567 and Rge Rd 40, approximately 5 km northeast of the town of Cochrane.

LAND USE DESIGNATION: Agricultural, General District

**EXECUTIVE SUMMARY:** The application is consistent with the relevant policies of the County Plan and the Land Use Bylaw:

- A redesignation application (PL20200031) was submitted to redesignate the subject lands from Agricultural, General District to Direct Control District. In accordance with the policies of the County Plan, a Master Site Development Plan (MSDP) has been submitted with the redesignation application.
- The submitted MSDP sufficiently demonstrates that impacts associated with the proposed aggregate development can be controlled to an acceptable level in accordance with existing operating standards established by the County and provincial government.
- All technical concerns, including consideration of the cumulative effects of several aggregate sites operating in close proximity to one another, have been addressed.

**ADMINISTRATION RECOMMENDATION:** Administration recommends approval in accordance with Option #1.

# **OPTIONS:**

- OPTION #1: THAT the Summit Pit Master Site Development Plan (approved April 24, 2018) be rescinded. THAT the Summit Pit Master Site Development Plan be approved as per Attachment 'C'.
- OPTION #2: THAT application PL20200034 be refused.



# AIR PHOTO & DEVELOPMENT CONTEXT:



# **APPLICATION EVALUATION:**

The application was evaluated based on the technical reports submitted with the application and the applicable policies and regulations.

APPLICABLE POLICY AND REGULATIONS:		TE	CHNICAL REPORTS SUBMITTED:
•	<i>Municipal Government Act;</i> Municipal Development Plan:	•	Air Quality Assessment, prepared by SLR Consulting (Canada) Ltd. dated May 21, 2020
•	Land Use Bylaw; and County Servicing Standards.	•	Acoustic Assessment Report prepared by SLR Consulting (Canada) Ltd. dated May 21, 2020
		•	Hydrogeological Assessment Report prepared by SLR Consulting (Canada) Ltd. dated January 14, 2020
		•	Summit Aggregate Pit TIA update prepared by Watt Consulting Group dated March 10, 2020
		•	Conceptual Stormwater Management Report prepared by SLR Global Environmental Solutions dated January 2020
		•	Biophysical Impact Assessment (BIA) prepared by SLR Global Environmental Solutions dated January 2020
		•	Wetland Assessment and Impact Report prepared by SLR global environmental solutions dated February 2020

# **POLICY ANALYSIS:**

This report focuses primarily on the technical aspects of the proposa, I including all development related considerations, while the report to consider the associated land use application (PL20200031) focuses on the compatibility with the relevant statutory plans.



# MASTER SITE DEVELOPMENT PLAN OVERVIEW:

As directed by the County Plan, the MSDP provides for a comprehensive overview of the proposed development addressing matters such as noise, air quality, stormwater, groundwater, visual and landscape impacts, reclamation and traffic impacts.

### **Overview**

The proposed Summit operation is located along Highway 567 northeast of the Town of Cochrane at NW/SW-1/4-31-26-3-W5M and is 322 acres in size. The lands are currently undeveloped, and access is provided by way of an existing approach from Highway 567 and Range Road 40. The lands are located in an area of the County that is primarily agricultural in nature; however, there is as an existing gravel operation less than  $\frac{1}{2}$  mile to the west.

The subject site is in an area with a mix of land uses including farming, farmsteads and a mix of nonresidential land uses such as other aggregate pits, oil and gas wells, and commercial development to the north and west.

On-site operations would include the stripping of topsoil and overburden materials and the mining of the underlying sand and gravel. The sand and gravel would be crushed and screened on-site and shipped to markets around Balzac, the Calgary International Airport, and north Calgary growth areas. Washing is not planned for the site. Reclamation of the pit would be phased and would follow closely behind mining operations, with a maximum of 40 acres open at any one time. The site would be returned to agricultural uses upon completion.

The Applicant anticipates a 30 to 40 year operating period.

## Existing Conditions

The subject site consists of an undivided quarter section with an existing road allowance in the southwest corner of the site and the adjacent undivided quarter section to the south. The lands are bound by Highway 567 to the north, Big Hill Springs Gravel Pit and farmland to the west, a large coulée and agricultural lands to the south, and another farmstead and equestrian business located to the east.

The topography in the project area is undulating, with elevations ranging from 1288.0 m to 1295.0 m. The high point is located in the upper northeast portions of the subject lands. The subject lands slope towards the south and east. The majority of the northern portion of the site is relatively flat with a slight southwest facing aspect.

### Biophysical Impact Assessment

Summit undertook a Biophysical Impact Assessment that identified a number of wetlands and an undisturbed natural area. The area does not contain any rare plants, plant communities, or sensitive soils that would be negatively impacted by the proposed aggregate operations. Activities that may affect wetlands are subject to the Alberta Environment and Parks Water Act and Alberta Wetland Policy.

The County's GIS mapping system indicates that there is a tributary of the Big Hill Springs Creek within the south portion of the subject lands; however, the BIA indicated that there are no watercourses within the project development area. The BIA reviewed data from 1950 to current conditions; the historic air photos do identify an ephemeral drainage that has been cultivated through, but there are no other drainages or associated riparian areas. Based on this information, the area identified as Undisturbed Natural Area within the phasing plan would provide adequate protection for the identified natural areas.



# Development Concept

A Development Permit would be required prior to the commencement of each phase. Mining operations would commence in Phase 1 along the east property line of the subject lands and proceed from there as shown in the phasing plan.

In Phase 1, sight and sound berms would be constructed along the east boundary to ensure operations are not visible from adjacent lands and off-site transportation improvements would be in place. Dust control, sediment/erosion control, and weed management control practices would be implemented during stripping and stockpiling. Setbacks would be maintained in accordance with the Land Use Bylaw provisions.

# Groundwater

A Hydrogeological Impact Assessment was undertaken and concludes that the proposed aggregate extraction would not pose any significant or adverse impacts to the existing confined or unconfined groundwater aquifers, or the Big Hills Springs tributary as it pertains to water volume or water quality because aggregate resource would not be mined into the water table. The report therefore anticipated no changes to the groundwater flow system.

To ensure that there are no negative effects on the groundwater, Summit is proposing to excavate to a depth of 1.0 m above the groundwater depth. The site would be developed as a dry pit. At the Development Permit stage, the Applicant would be required to submit new groundwater readings within the boundaries of the proposed phase of the pit demonstrating that groundwater levels are below the proposed pit bottom. In addition, a two year groundwater monitoring program has been undertaken and Summit commits to additional monitoring on a quarterly bases for the life of the project.

# Stormwater Management

A Conceptual Stormwater Management Plan was submitted in support of this MSDP to demonstrate how rainfall & surface runoff within the proposed aggregate operation would be managed throughout the course of development. The strategy ensures that rainfall runoff is managed effectively onsite to prevent flooding downstream, to prevent pollution of the underlying aquifer or surface water bodies, to provide a gravity system that does not require active pumping, to separately manage runoff from undisturbed areas (clean runoff) whenever possible, and to ensure operations are not affected by stormwater runoff. Stormwater would be conveyed and collected through various onsite swales and ponds. Stormwater is then proposed to be released back to the environment through numerous groundwater recharge wells. The Applicant is aware that water shall not be released or conveyed to any existing wetlands without the written approval of Alberta Environment and Sustainable Resource Development (AESRD) and shall meet all water quality standards. It is to be noted that the applicant is not proposing to wash aggregate on site as part of their proposal.

Sedimentation and erosion control plans would be prepared at the Development Permit Stage.

# <u>Access</u>

Access to the site would be from Provincial Highway 567 on Range Road 40 approximately 200m south of the intersection. This access would be paved as part of Phase 1 to reduce dust as well as dirt leaving the site.

A Traffic Impact Assessment (TIA) was commissioned to study the effects of the Summit development on local traffic. The findings of this report indicate that a Type IIa intersection is required for Phase 1 with a Type IVa being required at the 20 year time horizon. Alberta Transportation has reviewed the TIA and agrees that at Type IVa intersection would be warranted to accommodate the proposed operations. Summit intends to construct a Type IVa intersection at Phase 1 at the DP stage.



Although there is only one (1) existing aggregate operation along Highway 567 in the Big Hill Springs area, there could be as many as four (4) aggregate operations operating in close proximity to each other, should pits that are still in early planning stages receive land use redesignation approval.

Alberta Transportation has agreed to allow Range Road 40 and Highway 567 to be used for Summit Aggregate trucking.

## **Reclamation**

Reclamation would be ongoing and continuous throughout the life of the project to maximize the amount of land under agricultural production during pit operations. The size of open areas being used for operations or un-reclaimed would be limited to 40 acres at any one time. The objective of the final reclamation plan is to return the land to an equivalent agricultural land capability after mining operations are complete. Weed management during and post reclamation would be in accordance with Land Use Bylaw and the Weed Control Act.

## Offsite Impacts

Hours of operation are proposed to be from 7:00 a.m. to 7:00 p.m. on Monday through Friday, 7:00 a.m. to 5:00 p.m. with no crushing on Saturday, and no pit activity on Sunday or Statutory Holidays. Generally, operations on site would be seasonal in nature with limited operations between November and March.

Typical extraction and aggregate production operations at full pit development would include the operation of one portable crusher, one loader, one bulldozer, and three scrapers during stripping and reclamation/grading phases of development.

Water and sanitary servicing would be supplied by portable water and sanitary facilities. Garbage facilities would be provided onsite and removed on a weekly basis.

The preferred method of dust control for this site is the application of calcium chloride to gravel roads due to its ease of application, low cost, and dust reduction effectiveness.

### <u>Air Quality</u>

The applicant provided an Air Quality Assessment. The assessment modelled the projected emissions to be generated by the proposed mining operation in accordance with AESRD guidelines. The assessment concludes that the proposed mining operation is not expected to exceed air quality objectives beyond the subject lands, and would have minimal impact to nearby residences. It is to be noted that this study did not take into consideration the other proposed gravel operations nearby the subject lands and could affect the findings of this report. At the Development Permit stage, the Applicant would be required to provide an updated Air Quality Assessment, taking into consideration any active new developments (neighboring gravel operations) in the vicinity of the site.

### <u>Noise</u>

SLR Consulting was retained by Summit to conduct an Acoustic Assessment at the proposed location. SLR examined the noise impacts of proposed operations on the closest six (6) dwellings to the subject site.

Currently, there are no standardized methods for conducting aggregate operation noise measurements in the County. The County regulates noise through the Noise Control Bylaw No. C-5772-2003. The Bylaw states that no person shall "make, continue, cause, or allow to be made or continued any excessive, unnecessary, or unusual noise of any type" and that noise must be "minimized as much as practicable." This Bylaw does not prescribe quantitative limits for noise emissions.

Summit proposes to use the lowest maximum allowable sound levels as defined by any of the Alberta Energy Regulator (AER) Directive 038, City of Calgary and City of Edmonton Bylaws. AER Directive 038 imposes noise limits by specifying daytime and nighttime Permissible Sound Levels (PSLs) that



should not be exceeded at nearby residential dwellings. The PSL values are based on an assumed ambient sound level at the dwelling, which is determined on the basis of local population density (dwelling unit density) and proximity to transportation noise sources.

A key feature of Summit's noise reduction strategy is the construction of a 3 metre (m) high berm around the gravel pit. Summit would also implement the following additional noise control measures:

- 1. Limit the hours of operations;
- 2. Use low-noise equipment selection, or an acoustical shroud, barrier, or enclosure to limit the crusher noise levels when required;
- 3. Prioritize construction of the berm at locations where equipment would be operating closest to the property line;
- 4. Ensure all equipment is equipped with engine exhaust silencers, and that all equipment noise control systems (including but not limited to exhaust silencers) are in good condition and functioning properly; and
- 5. Inform nearby residents of upcoming activities that are expected to have higher noise impacts, including the nature of the activity and expected duration.

Noise would be monitored hourly at two (2) monitoring locations to confirm actual noise originating from the site. This information would be used to support the modification of onsite activities when required. At the time of Development Permit, the Applicant would be required to provide an update to the Noise Assessment, prepared by a qualified professional, taking into consideration any new developments (neighboring gravel operations) in the vicinity of the site. Based on the findings, the applicant may be required to implement further noise mitigation measures to lessen the impact of the proposed pit to nearby residences.

# Big Hill Springs Aggregate Producers Group (BHSAPG) & Cumulative Impacts

It is to be noted that there are three other Council adopted Master Site Development Plans (MSDPs) for gravel pits near the subject lands. In 2017, the Applicant, together with the other gravel operators in the area, created a group called the Big Hill Springs Aggregate Producers Group (BHSAPG) for which all operators were to share a joint set of operating standards. Despite the subsequent Court of Queen's Bench decisions revoking the land use approvals for these projects, the adopted MSDP's remain in place committing the operators to the joint operating standards. Section F of the proposed MSDP incorporates each of the joint commitments as previously adopted by Council.

Respectfully submitted,

Concurrence,

"Theresa Cochran"

"Al Hoggan"

Executive Director Community Development Services Chief Administrative Officer

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ATTACHMENTS:

ATTACHMENT 'A': Application Information ATTACHMENT 'B': Application Referrals ATTACHMENT 'C': Summit Master Site Development Plan ATTACHMENT 'D': Map Set