
PLANNING AND DEVELOPMENT SERVICES

TO: Council

DATE: February 2, 2021 **DIVISION:** 8

FILE: 06605001/002/003/004/005 **APPLICATION:** PL20200094

SUBJECT: Master Site Development Plan – Scott Property (Aggregate Extraction and Processing)

Note: This application should be considered in conjunction with land use application PL20200093 (agenda item E-1).

POLICY DIRECTION:

The City of Calgary/Rocky View County Intermunicipal Development Plan, County Plan, Bearspaw Area Structure Plan, and the Land Use Bylaw.

EXECUTIVE SUMMARY:

The purpose of this application is to adopt a Master Site Development Plan to provide the policy framework for an aggregate extraction operation on the subject lands. In accordance with the policies of the County Plan and the Bearspaw Area Structure Plan, a Master Site Development Plan (MSDP) is required to support aggregate redesignation applications. Application PL20200093 was submitted to redesignate the subject lands from Agricultural, General District to Direct Control District.

This proposal was circulated to 684 adjacent landowners; in response, 8 letters were received in support and 401 in opposition (see Attachment 'D' in PL20200093). The application was also circulated to several internal and external agencies; those responses are available in Attachment 'A'.

This report focuses primarily on the technical aspects of the proposal including all development related considerations, while the report to consider the associated land use application focuses on the compatibility with the relevant statutory plans. As directed by the County Plan and the Bearspaw Area Structure Plan, the MSDP provides for a comprehensive overview of the proposed development, addressing matters such as development rationale, operation summary, site development plan, site access and traffic impacts, phasing, noise, air quality, stormwater, groundwater, visual and landscape impacts, reclamation, and cumulative effects.

The submitted MSDP identifies mitigation strategies to demonstrate that adverse impacts associated with the proposed aggregate operation on existing residents, adjacent land uses, and the environment can be minimized. The proposed MSDP includes an overland conveyor system to eliminate the need for truck hauling as an additional mitigation measure to address concerns raised through two previous applications. All relevant technical matters have been addressed, and the MSDP meets the requirements of the County Plan and Bearspaw ASP in this respect.

ADMINISTRATION RECOMMENDATION:

Administration recommends approval in accordance with Option #1.



DATE APPLICATION RECEIVED: July 28, 2020
DATE DEEMED COMPLETE: July 31, 2020

PROPOSAL: To adopt the Scott Property Master Site Development Plan to provide a policy framework to guide and evaluate the development of aggregate extraction on the site.

LEGAL DESCRIPTION: NW/SW/NE/SE 5-26-2-W5M

GENERAL LOCATION: Located at the northeast junction of Range Road 25 and Burma Road.

APPLICANT: B & A Planning Group (Ken Venner)

OWNERS: Lehigh Hanson Materials Limited

EXISTING LAND USE DESIGNATION: Agricultural, General District

PROPOSED LAND USE DESIGNATION: Direct Control District

GROSS AREA: ± 600.05 acres

SOILS (C.L.I. from A.R.C.): **3C3; 4S4; 5T90; 5W10; 6T,16** – Moderate limitations to cereal crop production due to climate, severe limitations due to high sodicity, very severe limitations due to adverse topography and excessive wetness/poor drainage, and production not feasible due to adverse topography and flooding.

HISTORY:

January 26, 2010 Council refused application 2009-RV-028 to redesignate the subject lands from Ranch and Farm District to Direct Control Bylaw to allow for a natural resource extraction operation.

April 15, 2008 Subdivision application 2007-RV-294 was approved but wasn't registered.

October 30, 2007 Council approved Bylaw C-6551-2007 to redesignate a portion of SW5-26-2-W5M from Ranch and Farm District to Residential Two District to create a ± 5.3 acre parcel with a ± 120.7 acre remainder.

1995: Council refused an application to redesignate the east ½ of section 5-26-02-W5M from Ranch and Farm District to a Direct Control District to facilitate the development of a gravel pit operation.

1993: A subdivision of one of the original seven acre lots occurred.

1978: The plan of subdivision for Crest View Estates was registered, which created seven 4 acre lots.

MASTER SITE DEVELOPMENT PLAN OVERVIEW:

The proposed Scott Property aggregate extraction and processing operation is located along Burma Road, northwest of the city of Calgary, within 5-26-2-W5M, and is approximately ± 600 acres in size. On-site operations would occupy approximately ± 395.00 acres of the subject lands. The operation would include stripping of topsoil and overburden, extraction of the underlying aggregates, and limited primary processing (crushing) of oversized material. The material would be transported via a ± 4.5 km overland conveyor system to Lehigh's Spy Hill facility, located within the city of Calgary, for final processing and export to customers. The operation would occur in six phases, with a maximum of 60.0 acres of open excavation at any given time, for an anticipated period of 25 to 30 years. Progressive reclamation of the



depleted phases would follow closely behind pit expansions, using overburden from future phases. The site would be returned to an agricultural state upon completion, with the potential for another end-use.

Location & Area Context

The subject lands are currently undeveloped. Adjacent and surrounding parcels to the south and west are residential, including an eight lot subdivision within SW-5-26-2-W5M (Crestview Estates). Parcels to the north are predominantly un-subdivided quarter sections. Existing active aggregate facilities are located to the east and southeast of the proposal. Within Rocky View County (the County), Burnco Aggregate Products Ltd. has an active extraction and processing operation immediately east of the proposal. Four existing operations are located to the southeast of the proposal, within the city of Calgary, and include the Government of Alberta's STAR Pit, Lafarge Canada's Spy Hill Pit, Volker Stevin Canada's Pit, and Lehigh's Spy Hill operation.

Development Plan

Aggregate extraction would be undertaken within ± 395.00 acres of the ± 600 acre site. The setback requirements on each of the property boundaries vary depending on the adjacent land use. The greatest setback of 150.0 m would be maintained along the southern property line and in the southwest corner of the site, adjacent to Crestview Estates. A 100 m setback would be maintained along the western property line. A setback of 69 m would be maintained along the northern portion of the property, and a 30 metre setback is proposed along the eastern property line.

Extraction would generally proceed west from the southeast corner before heading northeast, and then finally west towards the northwest corner. Berms would be constructed as the phasing progresses for screening purposes. A development permit would be required prior to the commencement of each phase. Dust control, sediment/erosion control, and weed management control practices would be implemented via the future development permit.

Private staff vehicles and visitors would access the site via Range Road 24, which is presently an undeveloped road allowance. At the development permit approval stage, access would be provided in accordance with the County's Servicing Standards.

A key component of this development would be the construction and use of the overland conveyor system. The ± 4.5 km overland conveyor would transport aggregate materials from the Scott Property to the Spy Hill facility within the city of Calgary. The conveyor would extend from the southeast corner of the plan area, extend south underneath Burma Road, traverse the north and east boundaries of the STAR Pit, and cross under 85th Street NW. From there, it would traverse the northern boundary of the Calgary Correctional Facility, enter Lehigh's Spy Hill processing facility, and proceed to the eastern boundary of that site. The conveyor would be screened from public roadways and adjacent properties by a landscaped berm, would be shrouded to mitigate dust and noise, and may be fenced in some locations to ensure public safety. A Traffic Analysis was prepared in support of the applications. The analysis suggests the use of the overland conveyor in place of truck hauling would result in no new haul traffic on the road network from the proposed development.

Operations & Management Plan:

Primary processing hours of operation would occur Monday through Friday from 7:00 a.m. to 8:00 p.m., with no crushing activity on weekends or statutory holidays. Loading and conveying operations would be Monday through Friday from 7:00 a.m. to 8:00 p.m. and Saturdays from 7:00 a.m. to 6:00 p.m., with no activity on Sundays or statutory holidays. It is anticipated that the typical operation would include one crusher and screening spreader, one loader, one dozer, and one excavator. Stripping and reclamation activities are anticipated to include three scrapers and one dozer. Potable water and sanitary servicing would be supplied by portable facilities.



Stormwater Management:

A Conceptual Stormwater Management Report was submitted to provide a strategy for mitigating rainfall and runoff events. The report establishes conceptual locations for detention ponds at each development phase, and the expected final design grades, post-operation. Surface drainage would be managed to maintain release rates and volume retention targets in accordance with the Bears paw Master Drainage Plan and the Nose Creek Watershed Management Plan. The implementation of site retention ponds would reduce downstream erosion and local flooding issues during high storm events, and increase infiltration and recharge of the underlying aquifer. Erosion and sediment control techniques would be implemented during operations and reclamation activities.

Groundwater

Ground water in Alberta is regulated through the *Water Act*. The Hydrogeological Technical Assessment determined three of the ten monitoring wells have a consistent presence of groundwater. However, it was determined the water within these wells exceeds the total dissolved solids guidelines, and in some places, is undergoing a salinization process from unknown sources. It was determined the local groundwater within the Tertiary Sand and Gravel Aquifer is not considered suitable for drinking.

Surrounding residential development sources water from a deeper aquifer within the Paskapoo Formation, which underlies the Tertiary Sand and Gravel proposed for extraction. As the Tertiary Sand & Gravel Aquifer and underlying Paskapoo Aquifer are limited in hydraulic connectivity, the effects to groundwater quantity are anticipated to be negligible.

Air Quality

Air quality in Alberta is regulated through the *Environmental Protection and Enhancement Act*. The applicant provided an Air Dispersion Modelling Assessment to assess projected emissions generated by the proposed aggregate extraction operation as well as emissions from on-site equipment. The assessment concludes that the proposed aggregate operation would result in negligible to low adverse effects due to limited emissions from combustion sources and fugitive dust emissions in both summer and winter conditions. At the development permit stage, the Applicant would be required to implement an air quality monitoring program. Operations would be required to maintain air quality levels, measured at the property lines, at or below the levels required by the Alberta Ambient Air Quality Objectives (AAAQO).

Noise

An Acoustic Assessment was prepared to assess the potential sound egress from the proposed aggregate operation. The assessment indicated that sound levels anticipated from the operation would not exceed 55 dB at the property line. The County's Noise Bylaw does not prescribe quantitative noise limits. Other aggregate extraction operations in the area are limited to 65 dBa of continuous sound, over a one hour period in the daytime. Health Canada indicates that background outdoor continuous noise levels should be kept below 55 dBa to sustain good outdoor speech comprehension. At the Development Permit stage, the applicant would be required to implement noise mitigation measures.

Visual Impact Management

A Landscape and Visual Impact Assessment was prepared to evaluate the potential impact on surrounding properties and to establish appropriate mitigation measures. The assessment indicated that the impacts on visual amenity are unlikely due to the ability of the undulating wider landscape to absorb minor topographic changes and the presence of screening vegetation. The landscaped berm around the perimeter of the extraction area and preserved vegetation within the setback areas would mitigate impacts. Equipment associated with the operation is expected to be hidden from adjacent public roadways and surrounding properties as extraction would occur several meters below existing



grade. However, the Assessment identified four residential properties where viewpoints may still occur despite mitigations. Lehigh has agreed to offer additional mitigation measures to these landowners with direct views into the project area post-mitigation.

Reclamation

Reclamation is a requirement under the Alberta Environment and Parks approval. Reclamation would be ongoing and continuous throughout the life of the project. The reclamation would consist of the replacement of salvaged overburden and topsoil with minimum 3:1 side-slopes around the extraction area. Lehigh is committed to working with Rocky View County, the Bearspaw community, and other stakeholders to discuss a future community amenity for the site post-reclamation.

Cumulative Effects

A Cumulative Effects Assessment was prepared to evaluate potential cumulative effects of the project in the current and foreseeable future. Valued components relating to wetland and ephemeral water bodies, air quality, visual aesthetics, and property values were identified as having potential residual project impacts and warranted analysis within the Cumulative Effects Assessment. The Assessment concludes that no residual cumulative effects are anticipated to affect air quality, visual aesthetics, or property value. The proposal was determined to have potential residual adverse impacts on wetlands and ephemeral water bodies, but did not warrant further development of specific follow-up or monitoring programs.

OPTIONS:

OPTION #1: THAT the Scott Property Master Site Development Plan be adopted as per Attachment 'B'.

OPTION #2: THAT application PL20200094 be refused.

Respectfully submitted,

Concurrence,

"Theresa Cochran"

"Al Hoggan"

Executive Director
Community Development Services

Chief Administrative Officer

AB/ltt

ATTACHMENTS:

ATTACHMENT 'A': Application Referrals

ATTACHMENT 'B': Scott Property Master Site Development Plan

ATTACHMENT 'C': Map Set