

Planning & Development Report to
Calgary Planning Commission
2019 February 07

ISC: UNRESTRICTED
CPC2019-0069

**Development Permit in Shepard Industrial (Ward 12) at 11111 Barlow Trail SE,
DP2018-3647**

EXECUTIVE SUMMARY

This application was submitted by Stantec Consulting on behalf of DP Energy (lessee) and Viterro Inc. (landowner) on 2018 July 31 and proposes the construction of 1,576 solar photovoltaic (PV) panels, for the production of an anticipated 25 megawatt hours (mWh) of renewable energy. Once approved, this facility will become the largest solar energy production facility in Western Canada.

A land use amendment to enable this development was submitted and processed concurrently with this application, and must be adopted by Council before this application can be approved. This application meets the intent of the *Municipal Development Plan* (MDP) and the *Southeast Industrial Area Structure Plan* (ASP), and supports the direction of Calgary's Climate Resilience Strategy.

ADMINISTRATION RECOMMENDATION:

That Calgary Planning Commission:

- 1 **RECEIVE AND ACCEPT** this report and attachments for information; and
2. Recommend the Development Authority, without having to return to Calgary Planning Commission, **APPROVE** Development Permit DP2018-3647 of a Power Generation Facility - Large at 11111 Barlow Trail SE (E1/2 section 16-23-29-4), with conditions (Attachment 5), subject to the approval of the bylaw amendment associated with LOC2018-0175 by Council.

PREVIOUS COUNCIL DIRECTION / POLICY

None.

BACKGROUND

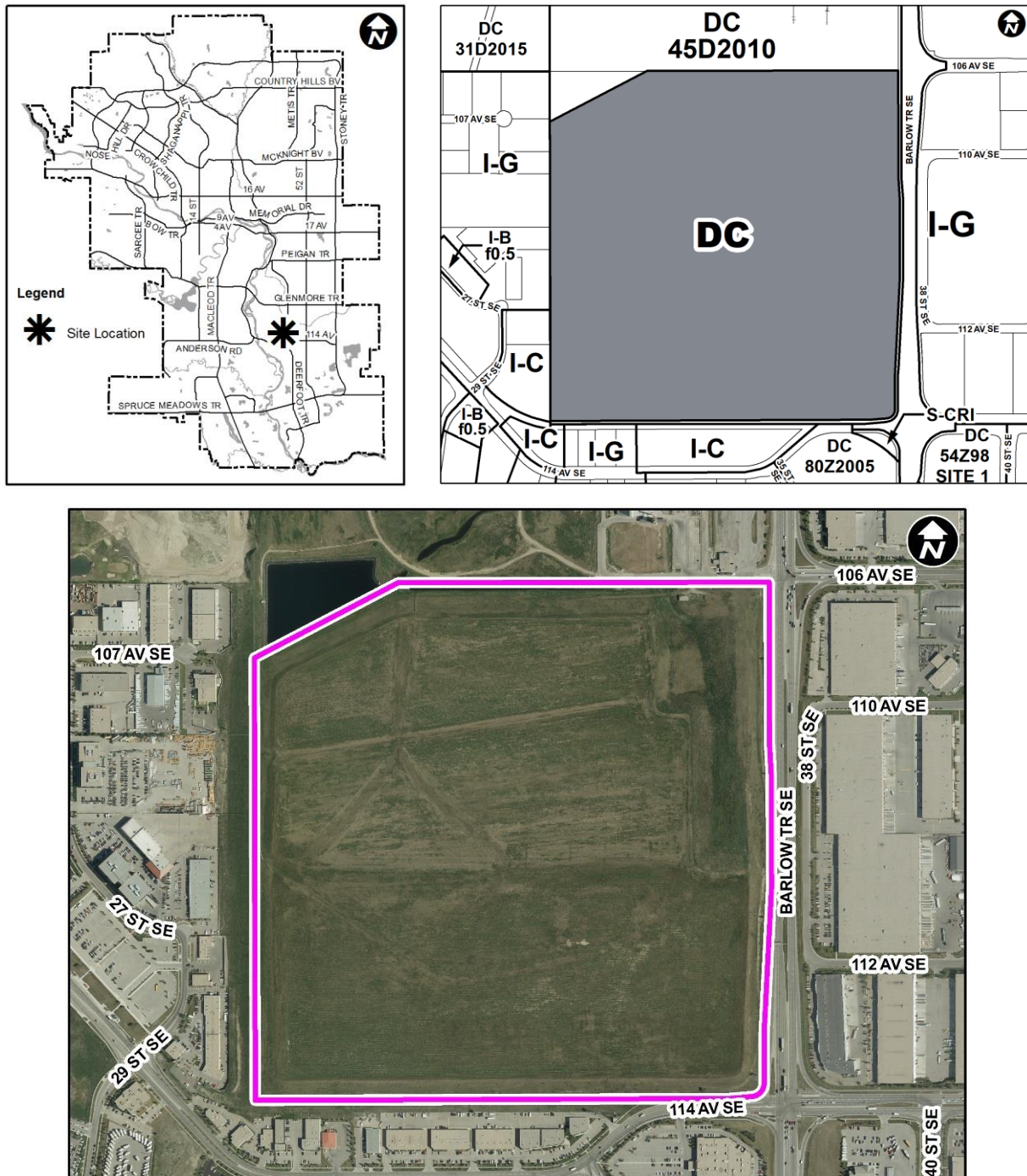
The subject site was previously used as a phosphogypsum production site and therefore there are restrictions on the use of the land, which cannot be disturbed until the ground is remediated. A concurrent land use amendment application was submitted by Stantec Consulting on 2018 July 31 and is included as part of the 2019 February 07 CPC agenda for review and recommendation. This development permit application cannot be approved until Council has approved the associated land use amendment application. The Direct Control Guidelines proposed in the concurrent land use amendment are included in Attachment 4 of this report.

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Location Maps



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Site Context

The subject site is located in the Shepard Industrial area, adjacent to Barlow Trail SE between 114 Avenue SE and the alignment of 106 Avenue SE. The future Greenline Light Rail Transit (LRT) alignment runs along the southern boundary of the site. The development area consists of approximately 63 hectares (156 acres) and represents roughly the southern half of the titled parcel area.

Industrial uses surround the site, with Industrial – Commercial (I-C) designated parcels containing retail, office and warehouse developments to the south and west, Industrial – General (I-G) designated parcels containing industrial warehouse developments to the east and south, and a DC Direct Control designated site directly south of the subject site containing the Deerfoot Inn and Casino. The balance of the parcel to the north contains a fertilizer plant, which will remain.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

This development permit application proposes the installation of 1,576 fixed-angle, solar photovoltaic (PV) panels arranged in 78 rows, as shown in the proposed development permit plan in Attachment 2 to this report.

Application Review

Administration conducted a thorough review of the proposal, including requesting and reviewing a glare analysis to ensure that there would be limited or no negative impact from glare on the surrounding roadways. The glare analysis evaluated glint and glare potential at 30 observation points along three airport flight pathways, Deerfoot Trail SE, Barlow Trail SE and 114 Avenue SE. The analysis concluded that there is no potential for glare at any of the observation points when existing buildings are considered, and only two short-duration, moderate potential glare impact points if all existing buildings between the subject site and Deerfoot Trail S were removed.

Land Use

The subject site is currently designated as a DC District Control District based on the Industrial – Heavy (I-H) District, with the additional discretionary use of Fertilizer Plant. In order to accommodate this proposed development, the Power Generation Facility – Large use must be added to the DC District, thus necessitating approval of the associated, concurrent land use amendment application prior to approval of this development permit application. The proposed DC guidelines are attached to this report in Attachment 4.

Site Design

The proposed development would enable the installation of 1,576 solar PV panels in 78 east-west rows spanning the majority of the site but excepting areas where there are grade changes. The panels are approximately 4 metres long and 27 metres wide, and would be tilted at a fixed

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angle facing south to maximize exposure to the sun, as shown in the layout detail in Attachment 3 to this report. The panels would be installed on a concrete base that would rest on top of the land, so as to not disturb the soil cap below. As a result of this installation method and the fixed angle of the panels, the maximum height from grade would be 3.6 metres.

The site would be fenced along the perimeter for security purposes, with a 6.0 metre wide access road running around the site just inside the fence. Two 10.0 metre wide access gates for emergency and maintenance access are located on the east side of the site adjacent to Barlow Trail SE, one at the northern end, and one near the centre of the development area.

Landscaping

The development of this site is governed by the rules in the Industrial – Heavy (I-H) District, which requires irrigated, soft-surfaced landscaping in setback areas, with provisions for the number of trees and shrubs. Given the contaminated nature of the site, in addition to the future site remediation activities, no plantings would be considered appropriate at this time. Approval of this development permit would result in the relaxation of the requirement for:

- 134 trees and 267 shrubs in the east setback area;
- 136 trees and 271 shrubs in the south setback area;
- 138 trees and 275 shrubs in the west setback area;
- The requirement for 102 of the required trees to be coniferous; and
- An irrigation system.

Infrastructure

Transportation

Vehicular access to the subject site continues from the existing access at the intersection of Barlow Trail SE and 106 Avenue SE. A Traffic Impact Study is not required for this development permit application. A solar glint and glare analysis conducted by Stantec Consulting Ltd. was submitted for this application. The study concludes that there is no glare potential along Barlow Trail SE and 114 Avenue SE, and glare impact on Deerfoot Trail SE is limited.

Utilities and Servicing

Water, sanitary, and storm sewer mains are not required to service this parcel, and as a result, there is no need for off-site improvements at this time.

Stakeholder Engagement, Research and Communication

In keeping with Administration's practices, this application was circulated to utilities and relevant stakeholders. Notification letters were sent to adjacent landowners and the application was advertised online at the Planning and Development Map site (PDMap). Additionally, large,

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conspicuous public notices have been posted at the intersections of Barlow Trail SE and 114 Avenue SE, and Barlow Trail SE and 106 Avenue SE since August 2018.

There is no community association in Shepard Industrial.

No comments were received by the file manager as of the writing of this report, and one media inquiry was received as a result of the online publication.

The area Councillor was circulated the application and submitted a comment in support of the proposal.

Strategic Alignment

This land use amendment proposal was evaluated based on its conformance to the applicable policy documents, summarized in the following sections.

South Saskatchewan Regional Plan (2014)

The recommendation by Administration in this report has considered and is aligned with the policy direction of the *South Saskatchewan Regional Plan* (SSRP) which directs population growth in the region to Cities and Towns and promotes the compatible and efficient use of land.

Interim Growth Plan (2018)

The recommendation aligns with the policy direction of the *Interim Growth Plan*. The proposed land use amendment builds on the principles of the *Interim Growth Plan* by means of promoting efficient use of land, regional infrastructure, and establishing strong, sustainable communities.

Municipal Development Plan (Statutory – 2009)

The *Municipal Development Plan* (MDP) identifies this area as part of a Standard Industrial area and calls for a mix of industrial uses at varying intensities, with the industrial character of the area maintained even as the area redevelops. This proposal for a Power Generation Facility – Large is an appropriate, complementary use in this industrial setting, and is considered to be consistent with the policies of the MDP.

This proposal is directly in line with the policies in Section 2.6.5 of the MDP, regarding reducing demand for non-renewable energy sources, particularly Policy (j) to “Encourage the incorporation of micro energy systems, solar panels or similar.”

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Southeast Industrial Area Structure Plan (Statutory – 1996)

The *Southeast Industrial Area Structure Plan* (ASP) identifies this area as an “Existing I-3 Heavy Industrial District,” characterized by “*manufacturing, fabricating, processing and assembling activities, including large scale operations whose external effects are likely to be felt to some extent by surrounding development.*” This proposal is consistent with all relevant policies in the ASP.

Social, Environmental, Economic (External)

This proposed development would become the largest solar energy production site in western Canada to date, and makes use of an otherwise sterilized site. It would enable the production of a high volume of renewable energy for the Calgary region, directly in line with Calgary’s Climate Resilience Program Action 3.2, which directs Administration to “support the implementation of solar photovoltaics.”

The site contains a phosphogypsum stack developed as part of a historic fertilizer production operation. A Risk Management Plan was approved by Alberta Environment and Parks and required the construction of an engineered soil cap over the phosphogypsum in order to mitigate airborne dust particulates and prevent water infiltration into the phosphogypsum, in order to reduce vertical mobility of dissolved phase contaminants into the underlying aquifer. These requirements were completed in 2014.

Financial Capacity

Current and Future Operating Budget:

There are no known impacts to the current and future operating budgets at this time.

Current and Future Capital Budget:

The proposed development does not trigger capital infrastructure investment, and therefore there are no growth management concerns at this time.

Risk Assessment

The risk of potential glare was identified through Administration’s review of the file, and the subsequent glare analysis has concluded that there is very little risk associated with this project.

REASON(S) FOR RECOMMENDATION(S):

This proposal meets all applicable policies in place for the area and enables the development of a significant amount of renewable energy on a large, otherwise sterilized parcel of land in an urban setting. The proposal supports Calgary’s goal of improving energy management and reducing greenhouse gas emissions, in order to reduce human causes of climate change.

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ATTACHMENT(S)

1. Applicant's Submission
2. Development Permit Plans
3. PV Installation Detail
4. Proposed DC Direct Control District
5. Conditions of Approval