

Planning & Development Report to  
Calgary Planning Commission  
2019 February 07

ISC: UNRESTRICTED  
CPC2019-0068

**Land Use Amendment in Shepard Industrial (Ward 12) at 11111 Barlow Trail SE,  
LOC2018-0175**

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**EXECUTIVE SUMMARY**

This application was submitted by Stantec Architecture on behalf of DP Energy (lessee) and Viterra Inc (landowner) on 2018 July 31 and proposes to add one additional use to the area to allow for a Power Generation Facility – Large on the site, in order to enable approval of a concurrent development permit that proposes the installation 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 farm in Western Canada.

The concurrent development permit is ready for a decision to be rendered pending Council's decision on this land use amendment application. 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 recommend that Council hold a Public Hearing; and

1. **ADOPT**, by bylaw, the proposed redesignation of 64.00 hectares  $\pm$  (156.10 acres  $\pm$ ) located at 11111 Barlow Trail SE (E1/2 section 16-23-29-4) from DC Direct Control District **to** DC Direct Control District to accommodate the additional discretionary use of Power Generation Facility – Large, with guidelines (Attachment 2); and
2. Give three readings to the proposed bylaw.

**PREVIOUS COUNCIL DIRECTION / POLICY**

None.

**BACKGROUND**

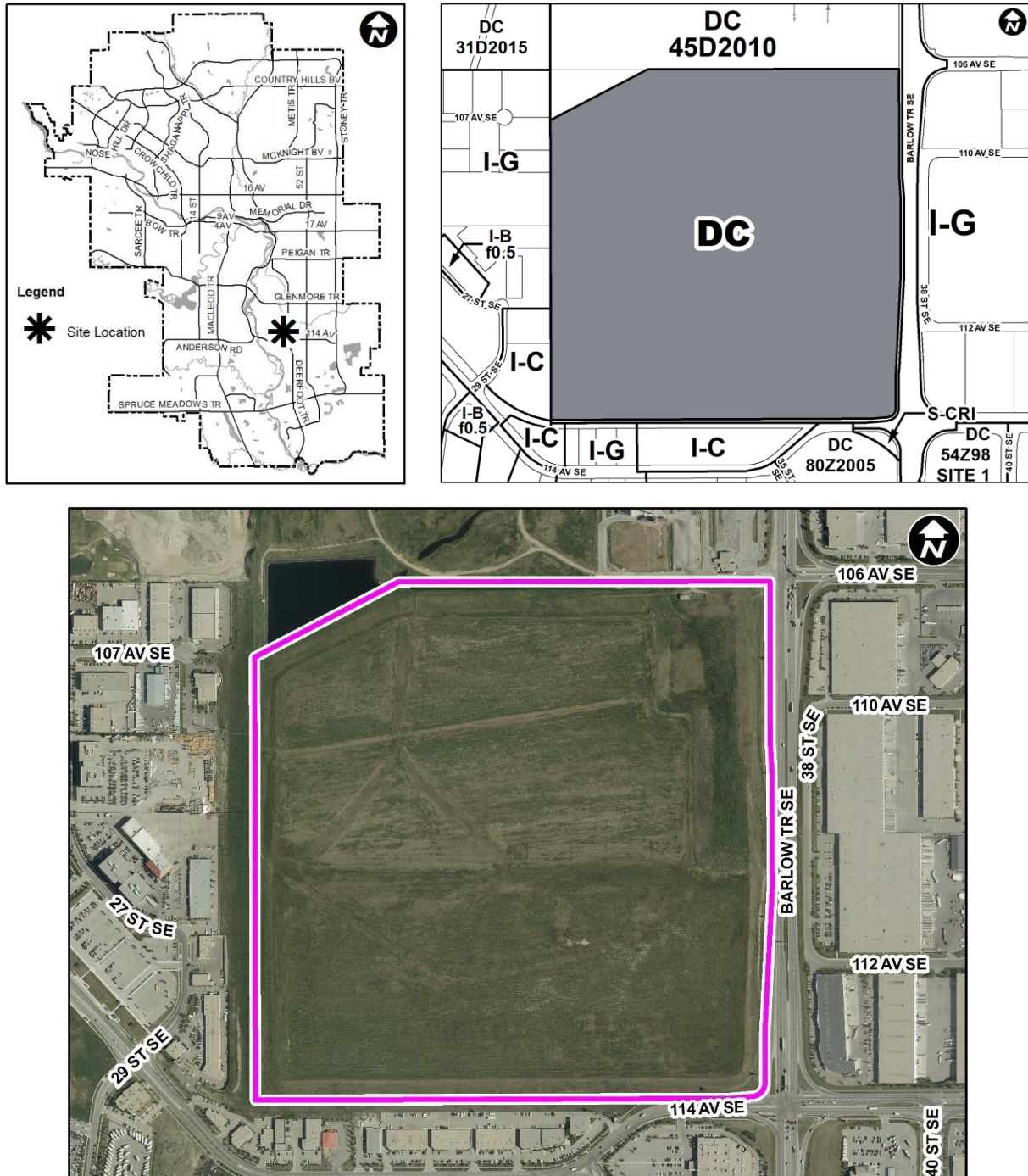
The subject site was previously used as a phosphogypsum production site and there are restrictions on the use of the land, which cannot be disturbed until the ground is remediated. A concurrent development permit for 1,576 ground-mounted solar photovoltaic panels was submitted by Stantec Consulting on 2018 July 31 and is included as part of the 2019 February 07 CPC agenda for review and conditional decision by CPC pending Council's approval of this application. See Attachment 3 for additional information.

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Location Maps



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**Site Context**

The subject site is located in the Shepard Industrial area, adjacent to the west boundary of 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 area proposed for redesignation consists of approximately 63 hectares (156 acres) and represents roughly the southern half of the titled parcel. The northern portion of the parcel will retain the existing DC Direct Control District, which will differ only from the subject area by not allowing for the Power Generation Facility – Large use.

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 application proposes the addition of the Power Generation Facility – Large use to the site, which is currently governed by a DC District Control District based on Land Use Bylaw 1P2007's Industrial – Heavy (I-H) District, with the additional discretionary use of Fertilizer Plant. Both of these proposed uses are listed in Section 21 (3) and on Schedule A of the Land Use Bylaw as "Direct Control Uses", which must be approved as listed uses in Direct Control Districts.

The application initially proposed the addition of Power Generation Facility – Large as a permitted use, but the applicant agreed to Administration's recommendation that the use be listed as discretionary in order to enable Administration's review of any application for this use on the site, as the form of the power generation facility could have significant impact on the surrounding areas.

**Planning Considerations**

The following sections highlight the scope of technical planning analysis conducted by Administration.

***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. This DC District was adopted in 2010 to bring the site into alignment with the Land Use Bylaw following the implementation of Bylaw 1P2007. The site had formerly been designated a Special Purpose – Future Urban Development (S-FUD) District and required the implementation of a DC District to accommodate a Fertilizer Plant use.

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LOC2018-0175**

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In order to accommodate the proposed ~25 megawatt hour (mWh) solar farm, the Power Generation Facility – Large use must be added to the DC District, since any facility that produces more than 12.5 megawatts is considered “large” and is not a listed use in any district, and therefore must be added via a DC Bylaw. The addition of the Power Generation Facility – Large as a discretionary use is the only change to the current DC that is being proposed.

***Development and Site Design***

This site was previously used for fertilizer production, and the resultant phosphogypsum stack has limited the overall developability of the site, since the soil cap should not be disturbed until such time as the land has been remediated. The current proposal to install ground-mounted solar PV panels, as shown in Attachment 3 would convert this site from being effectively undevelopable to producing renewable energy for the region.

The concurrent development permit proposes the installation of 1,576 solar PV panels, each measuring approximately 4 metres long and 27 metres wide, installed at a fixed angle on a concrete base that rests on top of the ground so it does not impact the soil, as detailed in Attachment 4. The panels would be placed in rows approximately 6 metres apart and would span across the majority of the surface area of the site. Panels will not be located on portions of the site that have grade changes, as shown on the plans in Attachment 3.

By listing the Power Generation Facility – Large as a discretionary use in the proposed DC Bylaw, the Development Authority will have the discretion to ensure that any future development of the site is consistent with the policies in place for the area.

***Environmental***

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.

Since the proposed development would consist of only gravity-mounted installations, which would rest on top of the ground with no impact to the soil cap, there is no anticipated impact to the site from the development.

***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 land use amendment application.

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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 adjacent owners, 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, 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.

### **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. The current proposal for a DC district based on I-H is consistent with the policies for the area in the MDP.

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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.”

***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.*” The current proposal for a DC district based on I-H is consistent with the policies for the area in the ASP.

**Social, Environmental, Economic (External)**

The proposed land use amendment would enable the development of the largest solar energy production site in western Canada to date, and makes use of an otherwise sterilized site to produce renewable energy for the Calgary region. This proposal supports Calgary’s Climate Resilience Strategy Action 3.2, which directs Administration to “support the implementation of solar photovoltaics.”

**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 land use amendment does not trigger capital infrastructure investment, and therefore there are no growth management concerns at this time.

**Risk Assessment**

While this Direct Control District proposal for the additional discretionary use of Power Generation Facility – Large is accompanied by a concurrent development permit for the installation of a large number of solar PV panels, the approval of the development permit does not guarantee that the site will be developed exactly as anticipated, as there is the potential for the development permit to lapse or otherwise not be pursued. In order to ensure that the site does not develop with an unanticipated large power generation facility in the future, the Development Authority will be required to review and approve any future applications for the proposed use on this site, due to the fact that the use has been listed as discretionary. As such, any land use risks will be managed at the time of a future development permit.

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**REASON(S) FOR RECOMMENDATION(S):**

This proposal meets the policies in place for the area, including the *Municipal Development Plan* and the *Southeast Industrial Area Structure Plan*, and enables the production 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.

**ATTACHMENT(S)**

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