Planning Rationale

Zoning By-law Amendment, Site Plan Control application, and Public Consultation Strategy for 2555 and 2625 Marchurst Road

Stantec

Prepared for:
Brookfield Renewables

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Executive Summary

Stantec Consulting has been retained by Brookfield Renewable Partners (also known as Evolugen) to prepare this Planning Rationale in support of concurrent Zoning By-law Amendment and Site Plan Control applications for the properties located at 2555 and 2625 Marchurst Road in the City of Ottawa. The applications are to facilitate the development of a Battery Energy Storage System (BESS) on the properties.

Battery Energy Storage Systems are utility installations that store electricity from transmission lines and redistribute it back into the grid. Ontario's Independent Electricity Systems Operator (IESO) has identified the need to increase energy supply starting in 2025 in response to increased demand through the development of new BESS facilities. In 2022, the IESO led an energy storage procurement request for proposals, and Brookfield Renewables was a successful proponent. As part of this procurement, projects are required to obtain a Municipal Support Resolution (MSR) from municipal Councils, which is the mechanism by which the IESO authorizes municipal governments to endorse energy projects. This site, known as "South March BESS," obtained an MSR on June 11, 2025, and was awarded an IESO contract.

Ontario's 2024 Provincial Planning Statement (PPS) identifies energy storage systems, such as battery energy storage, as a component of the infrastructure needed to ensure that current and projected energy needs are met and directs municipalities to provide opportunities for their development. The City's Official Plan (OP), which was adopted prior to the 2024 PPS, was recently amended to adopt policies specific to the development of large energy storage systems. The City has also recently amended the Zoning By-law (ZBL) to clarify performance standards related to energy storage systems as either a Principal or Accessory BESS. This Planning Rationale addresses the Zoning By-law for a Principal BESS use. As discussed in detail throughout this Planning Rationale, the proposed South March BESS facility is consistent with the direction of the PPS by providing an energy storage system, contributing to the effort of reducing greenhouse gases in an appropriate location. It is consistent with the intent of the OP by providing an energy storage source on an appropriately designated property, it is a facility that contributes to reducing greenhouse gases, and with this amendment, will be consistent with the ZBL by situating the facility in a suitable location and establishing the appropriate performance standards for the use.

The Zoning By-law Amendment and Site Plan Control applications have been prepared and initially submitted concurrently. However, in an effort to meet the IESO deadline for start of construction of the South March BESS, the Zoning By-law Amendment described in this Planning Rationale will move ahead with the Site Plan Control application to follow.

1 Introduction

1.1 Purpose of Planning Application

Stantec Consulting Ltd. has prepared this Planning Rationale on behalf of Brookfield Renewable Partners (also known as Evolugen, the “client”) in support of applications for municipal development approvals, including a site plan control application in order to facilitate the development of a Battery Energy Storage System (BESS) facility, containing 256 BESS containers and a substation at 2555 and 2625 Marchurst Road (the “site”).

1.2 Site Location and Context

The site is located within Ward 5 – West Carleton-March within the Carp neighbourhood. It is situated south of Thomas A Dolan Parkway, west of Marchurst Road, and north of John Aselford Driveway. The properties are municipally known as 2555 and 2625 Marchurst Road. The site is legally known as Part of the East ½ Lot of 25 and Part of the Southeast ½ Lot 26 Concession 1, Geographic Township of March, City of Ottawa.

The site has approximately 927 metres of frontage on Marchurst Road, and an area of approximately 84.46 hectares. The site is mostly vacant, with a residential building and associated structures on 2625 Marchurst Road (to be retained), and the remainder of the site is covered by tree and shrub vegetation. The residential dwelling is currently occupied as a residence, and it will continue to be used as a residential dwelling at this point in time. A Hydro One transmission corridor easement runs through the rear of the property. There is a watercourse running through the site, and evaluated wetlands situated near the rear lot line of 2625 Marchurst Road.

The site is located in a rural area, with surrounding areas being a mix of agriculture and naturalized areas, including meadows, woodlands, and wetlands. Other than having a residential dwelling on 2625 Marchurst, the site is partly used as an owner-operated recreational cattle pasture, meaning that there are livestock on the property but not for commercial use. 2555 Marchurst is a mixed pasture containing grasses and clover, being harvested recreationally to feed personal livestock on another property. The proposed BESS use will operate in tandem with these existing uses and will not hinder the personal livestock and pasture uses on site. The site is not located within an Agricultural Resource Area, and there are no current or continuing agricultural uses on or surrounding the site.

Originally, it was anticipated that the 2555 Marchurst Road property was to fully host the project. The lease for 2625 Marchurst Road was obtained after preliminary environmental studies were conducted to mitigate potential impacts to the natural and cultural heritage. Situating the facility between both properties allows the proposed South March BESS facility to be located on primarily mixed pasture, avoids conflicts with several Butternut trees, potential turtle habitat, potential eastern small-footed bat roosts, and unevaluated wetlands.

Figure 1. Location Plan from 2022 aerial imagery (geoOttawa, 2025)

The surrounding area is characterized by open and vegetated lands, environmental protection areas agricultural lands, low-density residential uses, and small-scale commercial and industrial uses.

North: Directly north of the site are lands zoned Rural Countryside containing single detached dwellings and vegetated lands.

East: East of the site, across Marchurst Road, are lands zoned Rural Countryside containing single detached dwellings. The lands are covered by vegetation, including shrubbery and trees. Further east are properties zoned Agriculture.

South: Directly south of the site is a property zoned Rural Countryside containing a single detached dwelling, and properties zoned for Environmental Protection containing mostly vegetation. A Hydro One transmission corridor runs along the south (rear), dividing the site. Southwest of the site, directly abutting the site are lands owned by the City of Ottawa.

West: West of the site are lands zoned Environmental Protection, with a sliver of City of Ottawa owned land connecting to Thomas A. Dolan Parkway that is used as a trail for nearby residents.

2 Development Proposal

2.1 Ontario and Ottawa Policy History

The government of Ontario has forecast an increase in the province's demand for energy by 75% by 2050. In response, the Independent Electricity Systems Operator (IESO) has identified the need to increase energy supply starting in 2025 and led an energy storage procurement for BESS facilities. This proposal for the BESS development at the site is in response to this procurement. The updated Provincial Planning Statement emphasizes reducing greenhouse gas emissions and the development of energy supply, including energy storage systems.

This section explains the Provincial and Municipal contexts related to energy storage and BESS facilities and provides details of the BESS proposal, referred to herein as the 'South March BESS.'

2.1.1 Provincial Context

The Independent Electricity Systems Operator (IESO) is a Crown Corporation responsible for managing the flow of electricity across Ontario and ensuring its reliability. It also oversees Ontario's electricity markets by driving competition to maintain affordability. In response to increased demand from expanding electrification and business investment in large energy consuming sectors including transportation, manufacturing, water and building envelope heating, combined with pressures on current supply, the Ontario government is forecasting the province's demand for electricity to increase by 75 per cent by 2050.

Battery storage has become an essential commodity for both personal and professional use and for a range of applications such as mobile phones, vehicles, backup power for sump pumps, storing energy from residential solar panels, and larger systems supporting businesses and hospitals. The IESO has identified the need to increase energy supply starting in 2025 in response to increased demand. BESS facilities provide another option to fulfill the reliability needs of the electricity system by helping to stabilize the power grid and scale peak services to reduce the cost of electricity for the end user. In 2022, the IESO led an energy storage procurement ("E-LT1" and "LT1" Requests for Proposals). As part of this, projects are required to obtain a Municipal Support Resolution (MSR) from municipal Councils, which is the mechanism by which the IESO authorizes municipal governments to endorse energy projects. This site, known as "South March BESS," was granted MSR on June 11, 2025, and was awarded an IESO contract under the LT1 procurement on May 9, 2024.

In 2024, the Provincial Planning Statement (PPS) was updated, including changes to emphasize reducing greenhouse gas emissions, prepare for impacts of climate change, and development of energy supply including renewable energy systems and energy storage systems. The PPS also considers BESS as infrastructure. In response, the City of Ottawa updated their Official Plan to further their climate change and resiliency policies and introduced a Zoning By-Law amendment to regulate BESS development. Sections 3.3 and 3.4 of this report address the Official Plan and Zoning By-law, respectively.

In addition to the approvals discussed, the project will require approvals for other applications including:

- Environmental Compliance Approval from the Ministry of Environment, Conservation and Parks
- Class Environmental Assessment for Transmission Facilities from the Ministry of Environment, Conservation and Parks

These approvals are being prepared and submitted concurrently with the Zoning By-law Amendment (ZBLA) and Site Plan Control (SPC) applications to ensure a thorough approval and review process, ideally where Brookfield can obtain all required approvals before the end of 2025 and construct the facility in 2026.

2.1.2 Municipal Context – Development of Utility Installations

The City's Official Plan contains policies related to climate change resiliency, as well as specific policies supporting and governing the development of renewable energy generation facilities, however, the City's planning documents did not contain express policies applicable to the development of large-scale energy storage facilities such as the South March BESS. The City has then adopted amendments to the Official Plan and Zoning By-law that introduce policies and performance standards for battery energy storage system facilities. However, it should be noted that given the Provincial context outlined above and the general nature of the project, BESS should be considered utility installations, and the applicable Official Plan policies and Zoning By-law provisions should be those applicable to or similar to those applicable to utility installations.

Common types of utility installation projects in Ottawa include the development of electricity substations, usually undertaken by Hydro Ottawa, and antenna systems which are reviewed by the City of Ottawa under a Municipal Concurrence process. Antenna systems are radiocommunication and broadcasting systems, regulated by the federal government, and reviewed in a simplified process by the City of Ottawa.

The development of a new substation is analogous to the development of a BESS in the following respects:

- The proponent of the substation will partner with the IESO;
- The elements of the proposal will be subject to the *Environmental Assessment Act* and will undergo a class Environmental Assessment for Minor Transmission Facilities
- A substation "*is an essential delivery checkpoint for electricity on the power grid while on its way to your home or business. The stations transformers serve to reduce the voltage of electricity supplied from the provincial grid*" (Hydro Ottawa). The subject BESS application will store any excess energy from substations and transformers in batteries, and output back into the grid when needed.
- The development of new substations requires public notification.

When a substation project in Ottawa is initiated, the only approval process the facility undertakes is a Class EA ; however, the City has determined that additional requirements and approvals are needed to support the development of new large scale non-public BESS facilities. A non-public BESS facility would require partnership with IESO, Class EA approval, and public consultation, serving the same purpose of storing and distributing energy into the grid, regardless of if a public or non-public entity develops the facility.

2.1.3 City Wide Official Plan and Zoning Amendments for Battery Energy Storage and Application History

In order to establish specific definitions, development approval requirements and performance standards for BESS which are proposed to be developed as a principal use, on February 13, 2025, Ottawa City Council approved, among other things, amendments to its Official Plan and its Zoning By-law (collectively the "**BESS Amendments**").

The BESS Amendments were subsequently appealed to the Ontario Land Tribunal, and the appeal has since been withdrawn.

During pre-consultations with City staff which occurred on March 19, 2025, the development of recommendations regarding the BESS Amendments by the City was under appeal. Since the appeal has been withdrawn, the amendments are in full force and effect. As such, the application for Site Plan Control approval for the South March BESS is supported by a site-specific Zoning By-law Amendment which will identify certain development approval requirements and performance standards applicable to the site. The details of the BESS Amendments are specified in Section 3.3 and 3.4 of this report.

Accordingly, this Planning Rationale is intended to support:

(1) A site-specific Zoning By-law Amendment establishing performance standards for the development of a BESS on the site; and

(2) An application for Site Plan Control approval for the development of a BESS project on the site.

The applications have been prepared in accordance with the Feedback Form and Study Identification and Plan List provided by the City following the March 19, 2025, pre-consultation meeting (City File No.: PC2025-0066). The results of the plans and studies are summarized under Section 4 of this report and submitted as part of the ZBLA and SPC applications.

2.2 Details of Proposal

The proposal is for a battery energy storage system (BESS) facility on the site, which consists of battery storage containers, a substation, a permanent pool, a transmission line connection, a noise wall, a site access off Marchurst Road, and landscaping. An approximately 162m-long sand and gravel access is proposed to extend from Marchurst Road to the BESS facility. The proposed BESS facility does not

require any parking spaces per the ZBL. Given the nature of the facility, there will be minimal site activity, and no staff are required on the site on a daily basis.

The BESS facility is proposed to consist of 256 Sungrow PowerTitan 2.0 BESS units, each providing approximately 5015 kWh per unit. The unit consists of lithium-ion phosphate battery cells. Each unit is equipped with a number of fire safety devices, including four smoke detectors, two heat detectors, and exhaust ventilation systems for removal of flammable gases from within the enclosure. An underground water tank with a 38,000 litre (10,000 gallon) capacity is also proposed on site. The BESS units are proposed to be situated in a central part of the site located on top of an insulating stone surface area, with sand and gravel access areas around the facilities.

In addition to the BESS units, the facility will include a proposed 230 kV substation fed by four battery collector circuits. The substation consists of concrete foundations, conduit and cable installation, steel work, overhead bus, and electrical equipment installation built on a proposed insulating stone surface area and is located within a fenced area. A 4.5-metre high noise wall and a 6-metre high berm are proposed to provide significant noise buffering of the BESS facility from surrounding sensitive uses.

The watercourse that runs through the site will be rerouted along the west edge of the site with a vegetated diversion ditch. It will lead to the same existing pond to where it currently drains. A new stormwater detention wet pond will be used to manage the quantity, quality, and erosion controls of stormwater runoff. The runoff will be managed through culverts and a network of ditches around the site. A control structure at the end of the wet pond will discharge the stormwater with a controlled rate to a proposed swale that connects to the existing ditch in the front of the lots. The Zoning By-law (Section 69) requirement of a 30-metre setback from watercourses to the proposed site alteration has been applied to the redirected surface water feature.

The properties are being leased from the existing owners who currently reside on the property. The existing residential dwellings are located over 150 metres away from the South March BESS facility.

Construction of the South March BESS facility is anticipated to start early 2026 and is expected to be energized by early 2027. Progressive commissioning the facility will commence leading up to the commercial operations date (COD), targeted for June 2027. The BESS facility is contracted with IESO to continue operations to May 2048.

Daily site operations are done entirely remotely, with an operations manager for the site working at a local office nearby. Weekly site operations include grass cutting and snow removal, as needed. Operations and maintenance visual inspections for the BESS site and substation occur monthly. On a semi-annual to annual basis BESS and substation maintenance occurs, which includes cleaning, detailed site inspections, fluid checks and replacements, assessing mechanical operations (start/stop generator, manual operation of equipment to verify functionality), as well as general maintenance and upgrades.

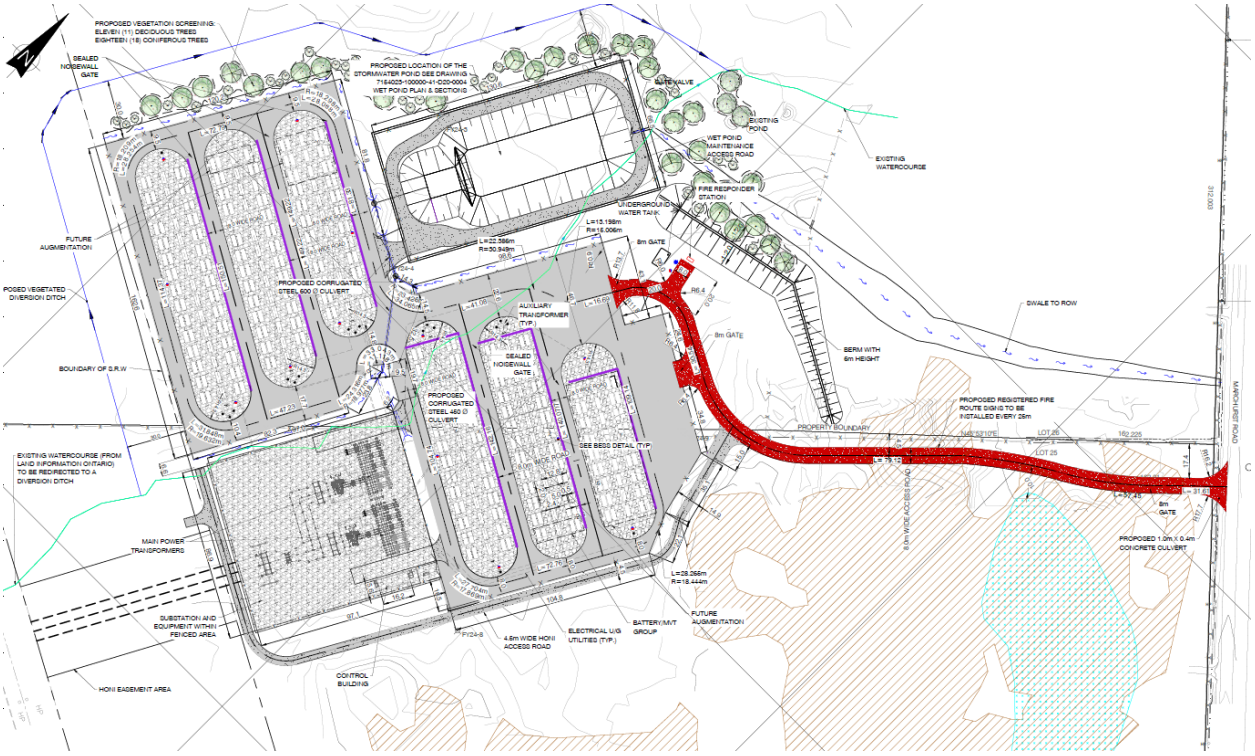

Figure 2. Site Plan Excerpt (BBA, dated 2025-10-07)

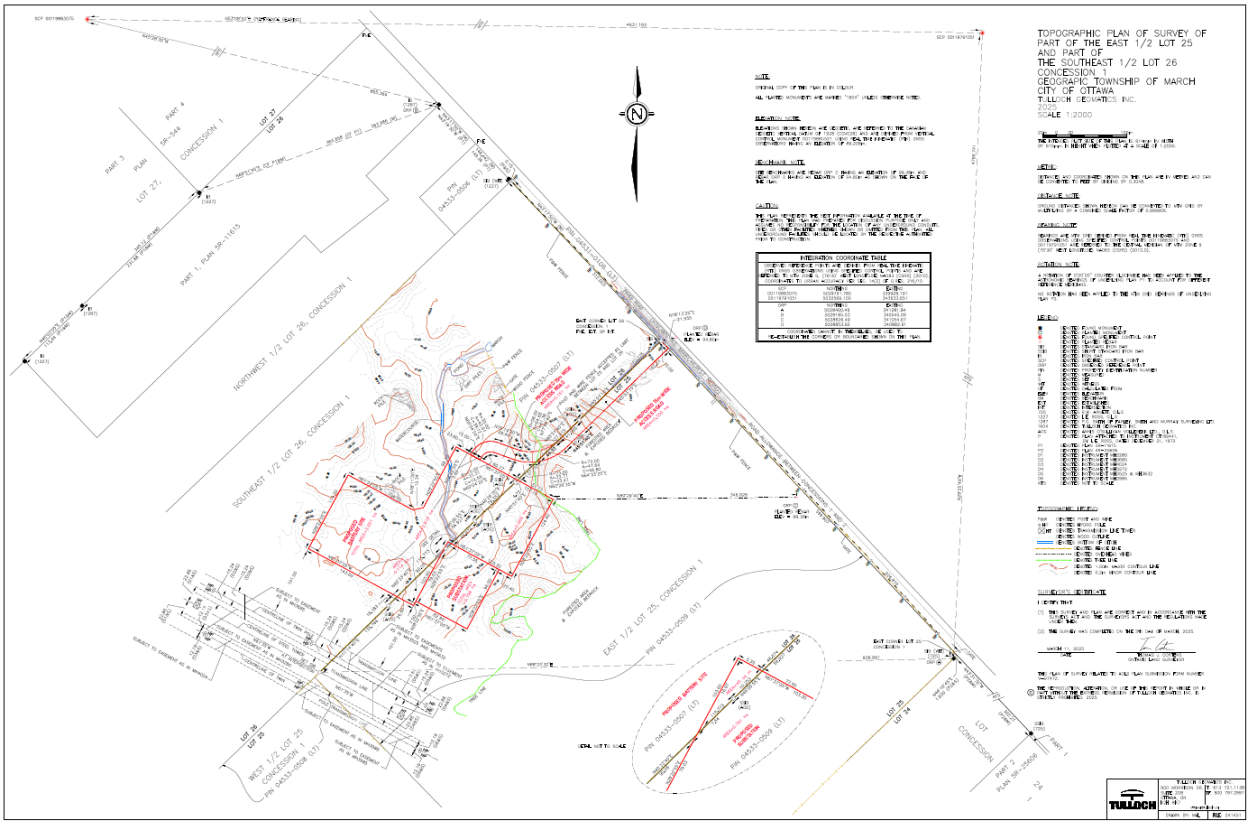

Figure 3. Topographic Survey showing proposed location of battery site, substation, and overhead transmission line (Tulloch, dated March 11, 2025)

3 Policy Justification

The following subsections provide reviews of the following Ontario land use planning policy context:

- Planning Act, R.S.O. 1990, c. P.13
- Provincial Planning Statement, 2024
- Official Plan, 2022, as amended
- Zoning By-law 2008-250, as amended

3.1 Planning Act, R.S.O. 1990, c. P.13

The *Planning Act* is Provincial legislation that sets out the regulatory framework for land use planning in Ontario. The *Act* has purposes including providing for a land use planning system led by Provincial policy,

and the integration of matters of Provincial interest into Provincial and Municipal planning decisions by requiring that all decisions be consistent with the Provincial Planning Statement.

> **Part I: PROVINCIAL ADMINSTRATION**
>
> ***Provincial interest***
>
> *2 The Minister, the council of a municipality, a local board, a planning board and the Tribunal, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest such as,*
>
> *(a) the protection of ecological systems, including natural areas, features and functions;*
>
> *(e) the supply, efficient use and conservation of energy and water;*
>
> *(s) the mitigation of greenhouse gas emissions and adaptation to a changing climate.*

The *Act* sets out matters of Provincial interest which a municipality should have regard to in carrying out their responsibilities. These include the supply of energy and mitigation of greenhouse gas emissions and adaptation to a changing climate. A BESS facility contributes to these matters of Provincial interest as it is a form of sustainable energy storage and supply that is able to support the energy grid and improve reliability.

As described in more detail below, the protection of ecological systems, features and functions is a focus of this application and will be achieved through the implementation of recommendations contained in the studies submitted in support of these applications, including the Environmental Impact Study.

This application is in accordance and in compliance with the identified matters of provincial interest and of Section 22(1) of the *Act*.

3.2 Provincial Planning Statement (2024)

The 2024 Provincial Planning Statement (PPS) was issued under section 3 of the *Planning Act* and came into effect October 20, 2024. The PPS provides policy direction on matters of Provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the PPS sets the policy foundation for regulating the development and use of land province-wide, helping achieve the provincial goal of meeting the needs of a fast-growing province while enhancing the quality of life for all Ontarians.

CHAPTER 2: BUILDING HOMES, SUSTAINING STRONG AND COMPETITVE COMMUNITIES

Section 2.9 of the PPS addresses Energy Conservation, Air Quality and Climate Change:

1. *Planning authorities shall plan to reduce greenhouse gas emissions and prepare for the impacts of a changing climate through approaches that:*

a) *support the achievement of compact, transit-supportive, and complete communities;*

b) *incorporate climate change considerations in planning for and the development of infrastructure, including stormwater management systems, and public service facilities;*

c) *support energy conservation and efficiency;*

d) *promote green infrastructure, low impact development, and active transportation, protect the environment and improve air quality; and*

e) *take into consideration any additional approaches that help reduce greenhouse gas emissions and build community resilience to the impacts of a changing climate.*

The policies direct Planning authorities to plan for climate change by supporting energy conservation and efficiency and taking into consideration approaches to help reduce greenhouse gas emissions. A BESS facility is an example of this and is consistent with the goals of the policy, as it is a stationary rechargeable energy storage system consisting of batteries to store energy from the transmission or distribution grid and discharge the energy back into the system when required, which allows for increased energy efficiency and resilience to increasing demands on the grid due to climate change.

CHAPTER 3: INFRASTRUCTURE AND FACILITIES

Section 3.8 of the PPS addresses Energy Supply:

1. *Planning authorities should provide opportunities for the development of energy supply including electricity generation facilities and transmission and distribution systems, energy storage systems, district energy, renewable energy systems, and alternative energy systems, to accommodate current and projected needs.*

The PPS defines energy storage system as: "a *system or facility that captures energy produced at one time for use at a later time to reduce imbalances between energy demand and energy production, including for example, flywheels, pumped hydro storage, hydrogen storage, fuels storage, compressed air storage,* ***and battery storage***." The PPS also considers a BESS facility as infrastructure, as it is defined as "*physical structures (facilities and corridors) that form the foundation for development. Infrastructure includes: … electricity generation facilities,* ***electricity transmission and distribution systems****, … and associated facilities*." A BESS facility is an example of an energy storage system that can be incorporated into the City's energy grid to assist with current and projected needs, and to improve the reliability of the energy network. The BESS facility consists of the battery site and the substation on the site itself, as well as the transmission line connecting the facility to the City's electrical grid.

CHAPTER 4: WISE USE AND MANAGEMENT OF RESOURCES

Section 4.1 addresses Natural Heritage:

2. *The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible,*

improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

4. *Development and site alteration shall not be permitted in:*

    a. *significant wetlands in Ecoregions 5E, 6E and 7E1; and*

    b. *significant coastal wetlands.*

7. *Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.*

A portion of the site is located within the Natural Heritage System Core Area and the Natural Heritage Features Overlay and is partially within a Natural Environment Area. Some significant wetlands are located at the west end of the site (outside of the proposed development area). The proposed BESS facility and substation are proposed to be located outside of the identified natural heritage system core area or features overlay area.

The Environmental Impact Study (Stantec, dated June 11, 2025) states that a portion of the study area is within the Natural Heritage System and Natural Heritage Features Overlay but the proposed development is not expected to encroach within these designated areas. The proposed development covers approximately 9% of the total site area, the Natural Heritage System area is at the rear of the property and not anticipated to be impacted. It should be noted that a Hydro One transmission corridor separates the proposed development from the Natural Heritage System.

Section 4.3 addresses Agriculture. Section 4.3.5 addresses 4.3.5 Non-Agricultural Uses in Prime Agricultural Areas:

5. *2. Impacts from any new or expanding non-agricultural uses on the agricultural system are to be avoided, or where avoidance is not possible, minimized and mitigated as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance.*

The site is not located within an Agricultural Resource Area and is not directly surrounded by any properties within the Agricultural Resource Area or used for agricultural purposes. The property 2625 Marchurst is partly used for a recreational cattle pasture, and the property 2555 Marchurst is a mixed pasture containing grasses and clover, being harvested recreationally to feed personal livestock on another property. The BESS use will not stop these activities from continuing. There are no current or continuing agricultural uses on the site. As such, the proposed South March BESS facility will not impact any agricultural uses or the agricultural system. An EIS and other supporting plans and studies have been prepared in support of the proposed BESS facility to identify any environmental impacts it may have on the property or the surrounding area and recommend mitigation.

The proposed development is outside of evaluated wetlands where development and site alteration is permitted. It does impact a small portion of the significant woodland due to the location of the proposed site access. The proposed development will have impact on wildlife habitat. The EIS provides mitigation

and protective measures for construction and operation activities to address any wetlands and wildlife impacts.

CHAPTER 5: PROTECTING PUBLIC HEALTH AND SAFETY

Section 5.1 outlines that development shall generally be directed away from areas of natural or human-made hazards where there is an unacceptable risk to public health or safety or property damage and not create new or aggravate existing hazards.

Section 5.2 addresses Natural Hazards:

2. *Development shall generally be directed to areas outside of:*

    a. *hazardous lands adjacent to the shorelines of the Great Lakes -St. Lawrence River System and large inland lakes which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards;*

    b. *hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards; and*

    c. *hazardous sites.*

4. *Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards.*

8. *Further to policy 5.2.7, and except as prohibited in policies 5.2.3 and 5.2.6, development and site alteration may be permitted in those portions of hazardous lands and hazardous sites where the effects and risk to public safety are minor, could be mitigated in accordance with provincial standards, and where all of the following are demonstrated and achieved:*

    a. *development and site alteration is carried out in accordance with floodproofing standards, protection works standards, and access standards;*

    b. *vehicles and people have a way of safely entering and exiting the area during times of flooding, erosion and other emergencies;*

    c. *new hazards are not created and existing hazards are not aggravated; and*

    d. *no adverse environmental impacts will result.*

9. *Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards.*

The proposal includes a site access that conflicts with the edge of a significant woodlot. The proposed site access was planned in this location to be as far away from the existing residential use

on 2625 Marchurst and to minimize a larger disruption to the significant woodlot (Figure 4). The plans and studies forming part of the application package propose protection and mitigation measures to be implemented.

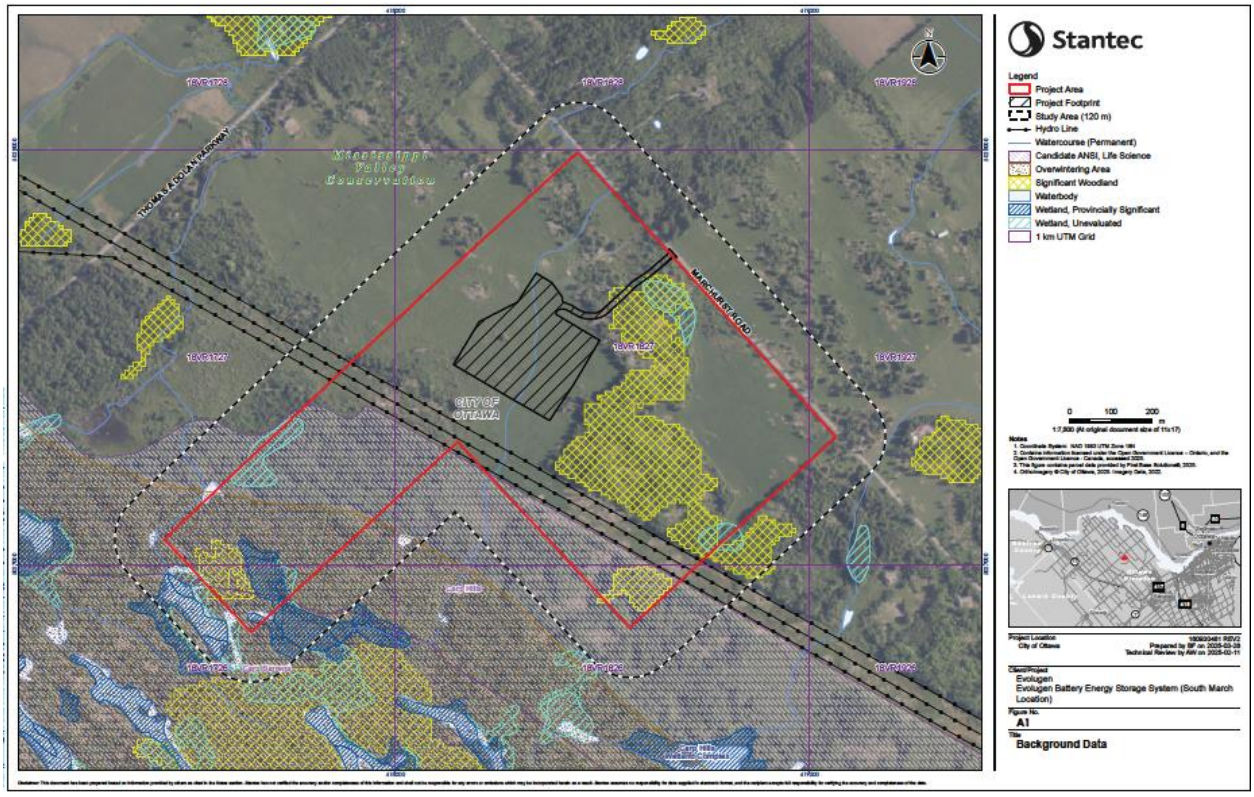

Figure 4. Background Data figure from Environmental Impact Statement (Stantec)

Section 5.3 addresses Human-Made Hazards

1. *Development on, abutting or adjacent to lands affected by mine hazards; oil, gas and salt hazards; or former mineral mining operations, mineral aggregate operations or petroleum resource operations may be permitted only if rehabilitation or other measures to address and mitigate known or suspected hazards are under way or have been completed.*

2. *Sites with contaminants in land or water shall be assessed and remediated as necessary prior to any activity on the site associated with the proposed use such that there will be no adverse effects.*

The site does not contain and is not abutting identified human-made hazards.

The review demonstrates the proposal is consistent with the PPS and supporting plans and studies provide mitigation measures for when in conflict with environmental constraints.

3.3 City of Ottawa Official Plan

The Official Plan for the City of Ottawa was approved in November 2022 and provides a framework for the way that the City will develop until 2046 when it is expected that the City's population will surpass 1.4 million people. The Official Plan (OP) directs how the City will accommodate this growth over time and sets out the policies to guide the development and growth of the City. The site is located within the Rural Transect and is designated as Rural Countryside and Greenspace. Discussions below address the Strategic Directions of the OP, specifically Energy and Climate Change and the Protection of Health and Safety.

SECTION 2: STRATEGIC DIRECTIONS

The new OP proposes five broad policy directions to guide the development of Ottawa. Big Policy Move 4 states:

> *Embed environmental, climate and health resiliency and energy into the framework of our planning policies.*
>
> *…*
>
> *It also includes policies to help the City achieve its target of 100 per cent greenhouse gas emissions reduction by 2050, its target of a 40 per cent urban forest canopy cover and to increase the City's resiliency to the effects of climate change, including much warmer temperatures, more rain and more extreme weather such as heat waves, floods and storms.*

Section 2.2.3 of the OP addresses Energy and Climate Change:

> *4) Enable the use of local renewable energy sources Locally generated energy reduces greenhouse gas emissions while building resilience to fluctuating energy availability and costs. In 2017, only 5 per cent of the city's total energy consumption was generated or supplied from local, renewable sources. Ottawa will need to transition quickly to the use of energy supplied from green, renewable and local sources over fossil fuels to reduce greenhouse gas emissions, support current and future housing and employment and protect Ottawa's long-term energy security and stimulating investments that will grow our local economy. Building local renewable energy sources will be achieved by:*
>
> *a) Facilitating small scale local energy generation and storage as well as identifying areas suitable for larger utility scale generation, including solar, wind and hydropower; and*
>
> *n) Diverting waste from landfill to promote material reuse, resource recovery and energy generation.*

A BESS facility would help address the policies outlined above by providing an option for an energy storage source that would contribute to the target of 100% greenhouse gas emissions reduction by 2050. The BESS facility would function as a large-scale utility that draws and stores energy from the grid during

off-peak hours and discharges it back to the grid when needed, providing energy on a regional scale. This facility would help address the increasing energy demands in a sustainable manner, and help stabilize the power grid, which will contribute to reducing the cost of electricity to end users and improve reliability. Permitting a site-specific BESS on the site is in conformity with the direction of the OP.

SECTION 4: CITY-WIDE POLICIES

Natural Heritage Systems

Schedule C11-A – Natural Heritage Systems (West) from the OP identifies environmentally significant areas within the City (Figure 6). The site has portions of the property within a Natural Heritage System Core Area and a Natural Heritage Features overlay, as well as a Natural Environment Area and some significant wetlands. As shown in Figure 5, these overlays and designations are located along the rear of the site and no proposed site works would be impacting these areas.

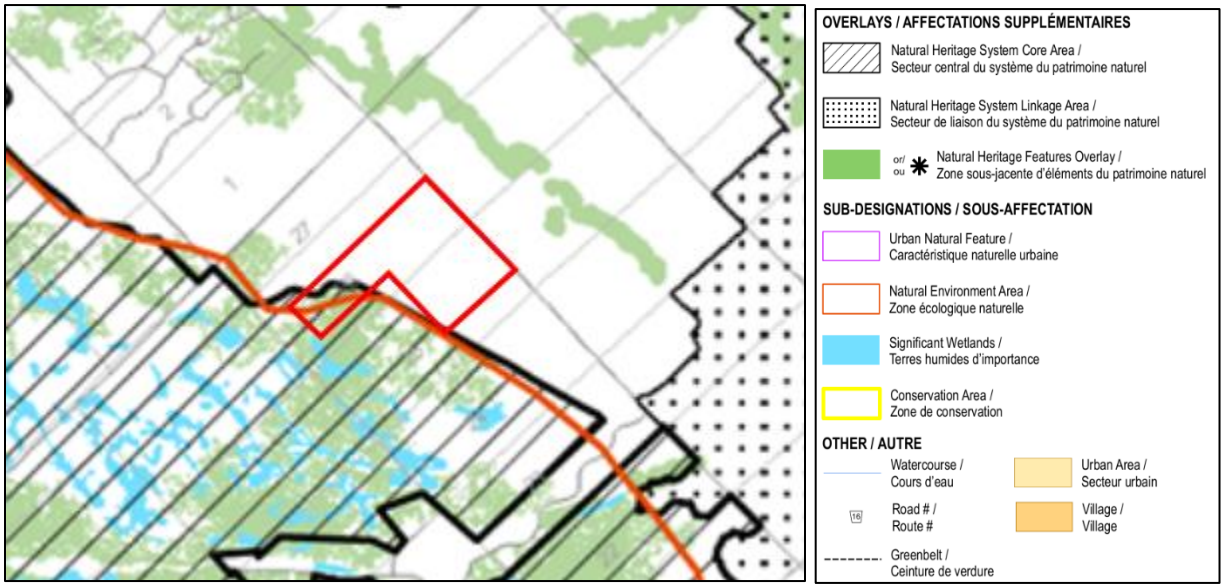

Figure 5. Schedule C11-A – Natural Heritage System (West) (City of Ottawa Official Plan)

Section 4.8 of the OP addresses Natural Heritage, Greenspace and the Urban Forest. Section 4.8.1 identifies policies to protect the City's natural environment through identification of a Natural Heritage System, Natural Heritage Features, and related policies:

> *2) The City shall seek to improve the long-term integrity and connectivity of the Natural Heritage System through land use planning, development processes, acquisition and conservation of land and support for voluntary, private land conservation and stewardship.*
>
> *5) Outside the urban area and designated villages, [Amendment 34, By-law 2024-506, Omnibus 2 item 13, November 13, 2024] the City shall take a no net loss approach with respect to evaluated wetlands deemed not provincially significant and forest cover outside the urban area and*

> *designated villages. Mechanisms for achieving no net loss include land use planning, development processes, acquisition and conservation of land and support for voluntary, private land conservation and stewardship. Development and site alteration is prohibited in provincially significant wetlands.*

The proposed development avoids conflicting with wetlands. While there are significant wetlands on the property at the rear of the property where no site works are proposed, they are not anticipated to be impacted. There are wetlands near the front of the property near the site access, but the site access is setback 9m away. No development is proposed within provincially significant wetlands. Because no development is planned within provincially significant wetlands, the proposed development is permissible under Section 4.8 of the OP.

Environmental Constraints

Section 4.9.3 of the OP addresses Restricting or limiting development and site alteration near surface water features.

> *6) No site alteration or development is permitted within the minimum setback, except as otherwise provided for in this section. Exceptions to this policy are:*
>
> *…*
>
> *b) Activities that create or maintain infrastructure within the requirements of the environmental assessment process, a master servicing study or works subject to the Drainage Act;*

The watercourse that runs through the site will be rerouted along the west edge of the site with a vegetated diversion ditch. It will lead to the same existing pond to where the watercourse currently drains. Plans and studies, including a Site Servicing Study and Environmental Impact Assessment, have been prepared in support of the proposed development that evaluate any impacts to the watercourse and propose mitigation measures. The proposed BESS facility maintains a 30m setback from the watercourse. The BESS facility is subject to a Class Environmental Assessment for Transmission Facilities from the Ministry of Environment, Conservation and Parks, so as infrastructure within the requirements of the environmental assessment process, it is exempted from the policy above prohibiting site alteration or development within the minimum setback. Section 4.9.5 of the OP addresses Implementing the policies of the Mississippi-Rideau Source Protection Plan and the Source Protection Plan for the Raisin-South Nation Source Protection Region.

> *1) Any activity or use within designated vulnerable areas shown on Schedule C15, that is considered a significant drinking water threat, shall conform with all applicable approved Source Protection Plan policies and may be prohibited, restricted or otherwise regulated. Related municipal decisions shall conform with the mapping and policies contained within the most recent version of the applicable Source Protection Plan.*

10) Development within Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas, as identified in local Source Protection Assessment Reports, will be encouraged to implement best management practices to help protect regional groundwater supplies.

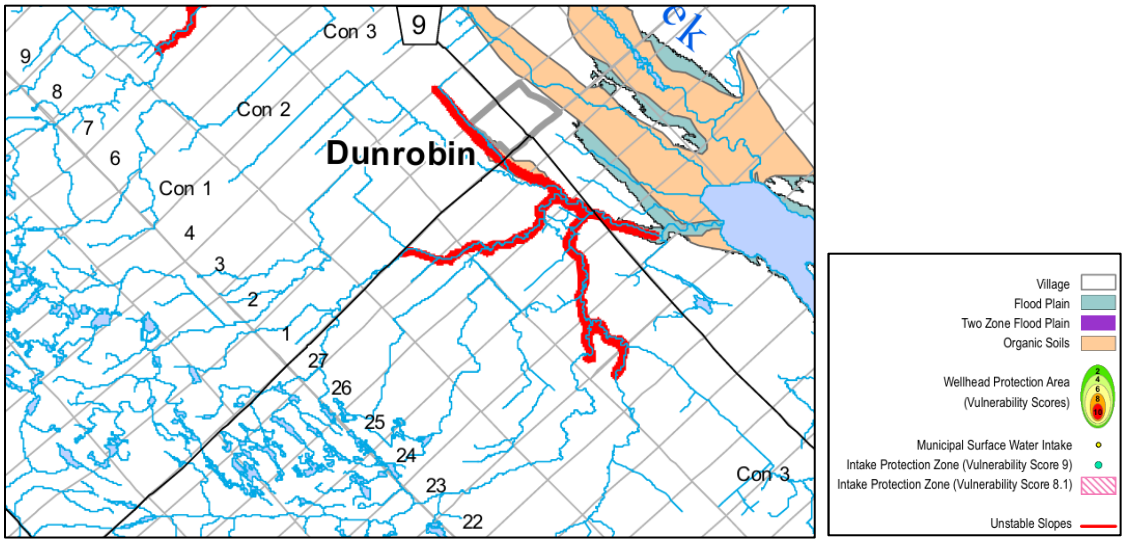

Figure 6. Schedule C15 – Environmental Constraints (City of Ottawa Official Plan)

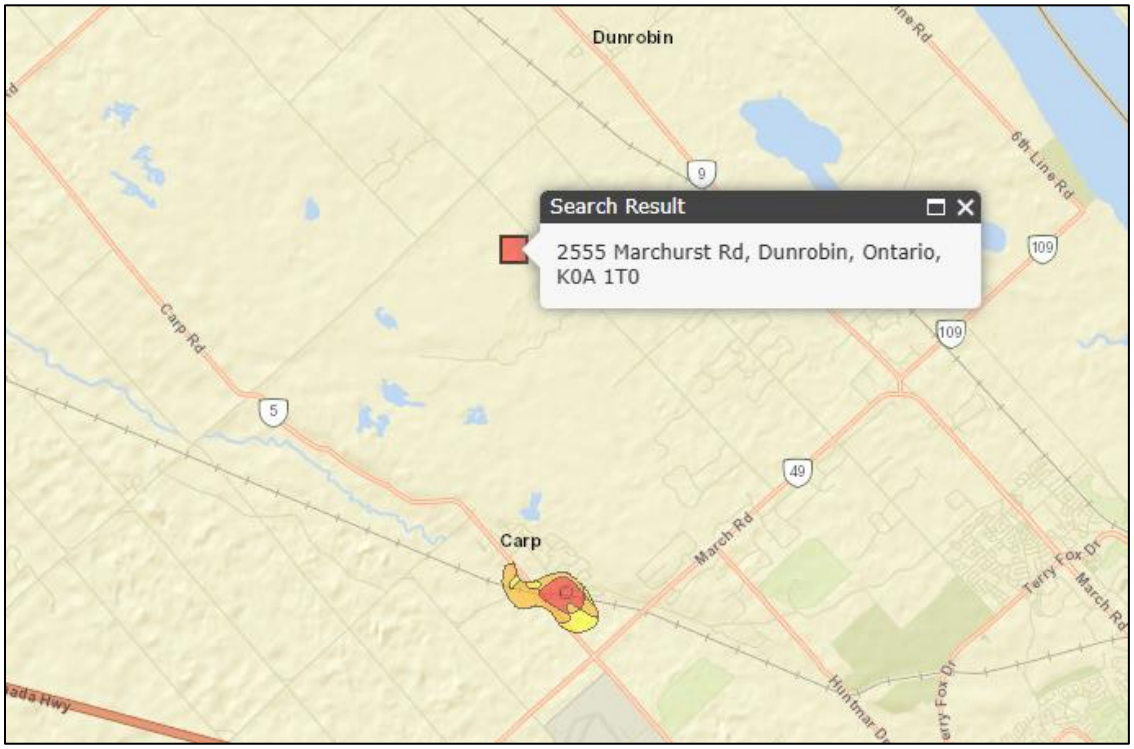

Figure 7. MVCA Drinking Water Protection Zones Mapping (Mississippi-Rideau Source Protection Region)

The site is not identified as a vulnerable area as shown on Schedule C15 of the OP (Figure 6). The site is also not identified as being within a drinking water protection zone or highly vulnerable aquifer per the Mississippi Rideau Drinking Water Protection Zones mapping (Figure 7). The Hydrogeological and Terrain Analysis Study, prepared by BBA dated May 3, 2025, assesses the risk to groundwater, stating that groundwater levels are expected to fluctuate seasonally, and that based on the borehole data, groundwater is not observed at the surface within the project site. It also identifies that there are no wetlands indicated or observed within the development area of the site. The Stormwater Management Study, prepared by BBA dated June 19, 2025 states that groundwater will be protected from any potential contamination from the batteries by installing an impervious geomembrane layer across the entire site (except the substation area).

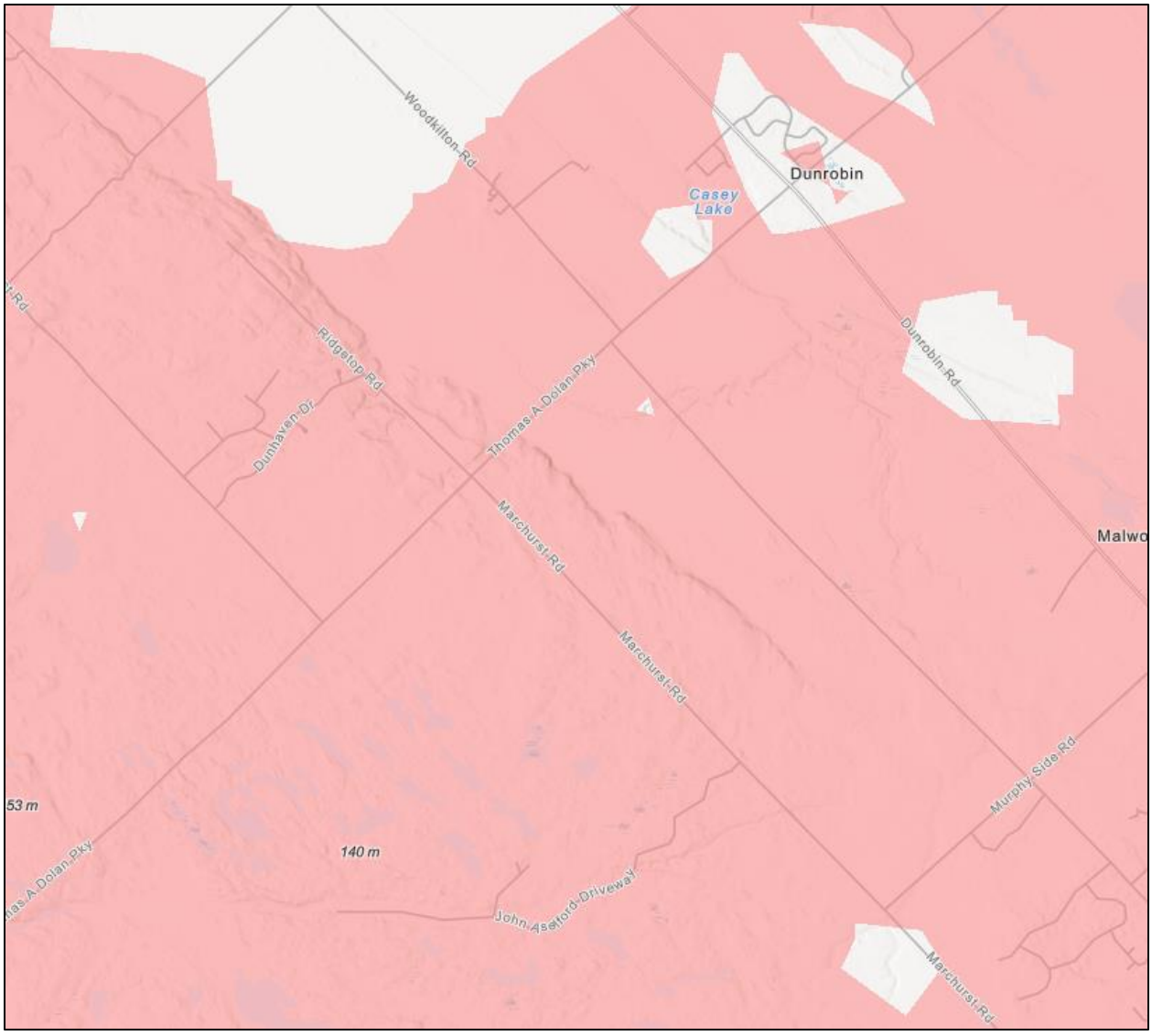

Figure 8. Highly Vulnerable Aquifers Mapping (MVCA)

The property is within a Highly Vulnerable Aquifer in the Mississippi Rideau Source Protection Area (Figure 8). Any development within this area must implement best management practices and demonstrate that regional groundwater supplies are protected. The reports and studies submitted as part of the application package provide further detail as to how the proposed South March BESS development will implement best management practices and demonstrate protection of regional groundwater supplies.

BESS Official Plan Amendments

As discussed in Section 2.1.2 of this Planning Rationale, on February 12, 2025 (File Number: ACS2025-PDB-PS-0016), Ottawa City Council adopted the BESS Amendments. These included the removal of policies relating to Renewable Energy Generation from Section 4.11 of the Official Plan and the creation of a new Section 4.12 which includes the existing policies relating to Renewable Energy Generation and new policies governing Energy Storage Systems which differentiate between "*battery energy storage systems that are part of a public utility facility*" which may still be permitted as public utilities under Section 4.11 and "non public utility battery energy storage systems." The amendments to the OP form By-law No. 2025-71. The in-force policies governing energy storage systems and how the proposal addresses are discussed within this section.

The amendments introduce a new definition for Energy Storage System as follows:

> *means a system or facility that captures energy produced at one time for use at a later time to reduce imbalances between energy demand and energy production, including for example, flywheels, pumped hydro storage, hydrogen storage, fuels storage, compressed air storage, and battery storage.*

The proposed South March BESS facility is a battery energy storage system that captures energy produced from the grid for redistribution at a later time to help with energy demand and regulation.

The amendments add a new Section 4.12 to the OP to address Renewable Energy Generation and Storage, as follows:

> *Renewable energy generation and storage are important to ensure energy reliability, reduce greenhouse gas emissions and provide energy resiliency during extreme weather events. They play an increasingly important role in protecting the city's long-term energy security while advancing its climate goals.*
>
> *Energy Storage*
>
> *...*
>
> *7) Non public utility battery energy storage systems (BESS) are permitted as a principal use in the following land use designations:*
>
> > *a) Rural Countryside designation and Rural Industrial and Logistics designation, as identified on Schedule B9 and the Natural Environment Area sub-designation, as*

identified on the C11-series Schedules, subject to the policies of Sections 4.8.1 and 5.6.4.1, that are outside of:

i) Villages, the Natural Heritage Features overlay and Sand and Gravel and Bedrock Resource Area overlays, as identified on Schedule B9 and C11;

ii) Flood Plain, Two Zone Flood Plain, or near Unstable Slopes as identified on Schedule C15.

8) Non-public utility battery energy storage systems as a principal use shall require an amendment to the Zoning By-law, and a Municipal Support Resolution from Council, where applicable, to establish provisions based upon the review of the following:

a) Provision of a minimum setback of 10 metres from the dripline of any forested area, or as determined by a Wildland Fire Hazard Assessment.

b) Provision of a minimum setback of 150 metres from residential use buildings, residential use lots, day care, place of worship, school, library, community centre, community health and resource centre, park or institutional use, and as determined by all of the following;

i) Noise Control Study;

ii) Environmental Impact Study and Wildland Fire Hazard Assessment, where applicable;

iii) Provision of fire protection and emergency response plans to the satisfaction of Ottawa Fire Services;

iv) Provision of a Commissioning and Decommissioning Plan.

The amendments allow “non-public” BESS facilities, provided they receive ZBLA approval and a Municipal Support Resolution.

The proposed South March BESS will meet the requirements of the above policies:

- It is proposed to be located on a site within the Rural Countryside Designation;
- It will be situated outside of the areas specified under Policy 7(a)(i) and (ii);
- It has received a Municipal Support Resolution from Council;
- It is situated 10 metres outside the dripline of a forested area and supported by a Hazard Mitigation Analysis and Emergency Response Plan; and,
- It will be subject to a Zoning By-law Amendment to, among other things, establish appropriate setbacks determined in accordance with the recommendations of a Noise Control Study,

Environmental Impact Study and Wildland Fire Hazard Assessment, fire protection and emergency response plans and a Commissioning and Decommissioning plan.

The proposed South March BESS is therefore in conformity with the policies of the Official Plan, as amended.

SECTION 5: TRANSECTS

The property is located within the Rural Transect as identified on Schedule B9 – Rural Transect of the OP.

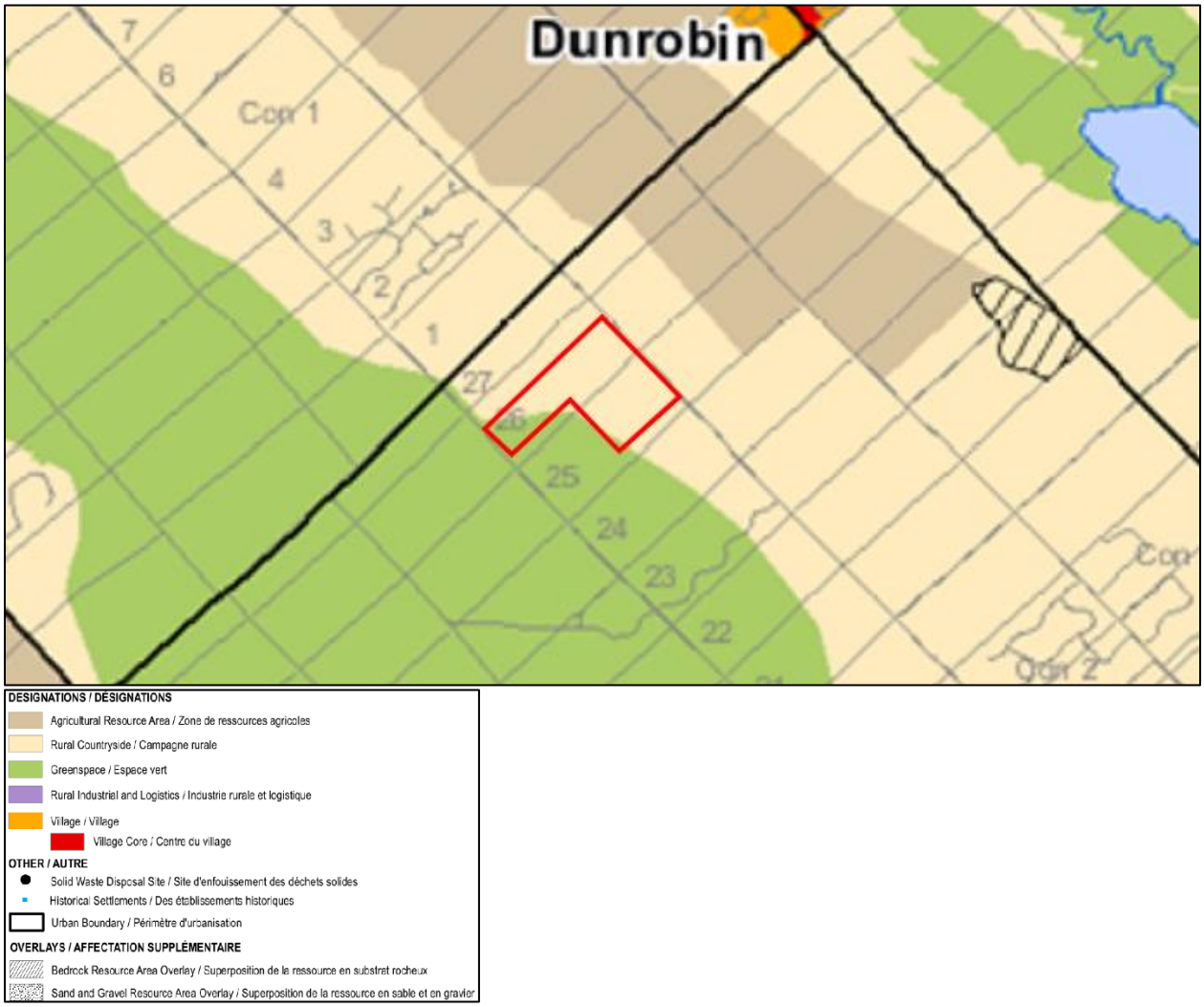

Figure 9. Schedule B9 – Rural Transect (City of Ottawa Official Plan)

Section 5.5 addresses the Greenbelt and Rural Transect areas:

1) Built form in the Greenbelt and Rural Transect areas, where development is permitted shall be low-rise. Mid-Rise buildings may be permitted with the Greenbelt Transect area identified by the Zoning By-law and within Villages as identified in a secondary plan.

...

b) Outside Villages, where development is permitted, built form and site design shall be premised on maintaining the rural character, image and identity; and

c) Outside of Villages, sites shall be designed to locate surface parking, storage and paved areas far from the road frontage, and access to such areas shall be designed to maintain rural character. The frontage along the road shall be landscaped and treed in a way that respects the rural landscape and enhances the green edge of rural roads. Elements such as low fences, hedges or landscape-based ornaments may be used to enhance the site frontage.

2) Development in the Greenbelt and Rural Transect areas shall:

a) Be of low density throughout, with the majority of residential uses and commercial and institutional uses concentrated within Villages;

b) Allow for higher densities within serviced Villages;

c) Allow for uses that integrate well with the natural environment and rural area;

d) Direct high-intensity rural industrial uses to locations near highway interchanges;

e) Be adequately serviced and not create any risk that cannot be adequately mitigated, to the quality and quantity of groundwater for the surrounding area; and

f) Within the Greenbelt, allow for higher institutional or employment uses where the use can be supported by the available transportation network, including consideration for the availability of public transit service.

The proposed facility is low-rise in nature. The facility does not require surface parking, and a singular site access is proposed since it is not staffed – it is expected that staff would only require access to the site a couple of times a month or on an as-needed basis. Studies including a Site Servicing Study, Environmental Impact Statement, and Hazard Mitigation Analysis have been prepared to identify and provide mitigation measures for any impacts to the site. The studies are outlined in more detail under Section 4 of this report.

Section 7.1 addresses the Greenspace designations:

1) Urban and Rural Greenspaces are shown on the B-series of schedules. These Greenspace designations consist of sub-designations which appear on Schedule C11 for the rural area and Schedule C12 for the urban area. They include:

a) Park;

b) Open Space;

c) Urban Natural Features;

d) Significant Wetlands;

e) Natural Environment Areas; and

f) Conservation Areas.

The proposed BESS facility is situated within the area of the property designated Rural Countryside and is not located within the Greenspace designation. An EIS has been prepared by Stantec, dated June 11, 2025, as part of the proposed applications to evaluate any impacts of the development on the natural area. The EIS proposes mitigation measures for both the construction and operational periods. The mitigation and protective measures proposed by the EIS during construction are sorted into the following categories noted below. Each point contains approximately 10 or more directives.

- Vegetation and vegetation communities.
- Erosion and sediment.
- Earth and excess material, waste, refuelling, spills.
- Wildlife and wildlife habitat
    - Migratory birds, wildlife encounters, safe handling and relocation, habitat of SAR
- Environmental training and monitoring.
- Fish and aquatic habitat.

The EIS also provides a series of mitigation measures during operation intended to lessen potential impacts due to fire and off-site contamination. Please refer to the EIS to view the full extensive list for mitigation and protective measures during construction and during operation, and Section 3.8 of this Planning Rationale to view the Integrated Environmental Review.

Section 5.6.4 identifies policies regarding Natural Heritage Overlays

2) The Natural Heritage Features Overlay consists of those natural heritage features identified in Subsection 4.8.1, Policy 3) which can reasonably be mapped and displayed at the resolution of the Official Plan schedules.

3) The City shall protect natural heritage features for their natural character and ecosystem services.

4) Development or site alteration proposed in or adjacent to natural heritage features shall be supported by an environmental impact study prepared in accordance with the City's guidelines.

5) Development and site alteration shall have no negative impact on the Natural Heritage System and Natural Heritage Features. Development and site alteration shall be consistent with the conclusions and recommendations of an approved environmental impact study.

While the property does contain portions of land within the Natural Heritage Features Overlay, proposed site works will not be within these areas and the proposed development area is separated from the Natural Heritage Features Overlay area by a Hydro One transmission line.

As identified on Schedule C11-A of the OP, the property is partially within the overlays of the Natural Heritage System Core Area and the Natural Heritage Features Overlay.

Section 5.6.4.1 sets out policies to Protect the Natural Heritage System and Natural Heritage Features:

1) The Natural Heritage System Overlay consists of Natural Heritage System Core Area and Natural Heritage System Linkage Area, as follows:

a) In Natural Heritage System Core Areas, development or site alteration shall maintain or enhance the integrity, biodiversity and ecosystem services of the area; and, not compromise the potential for long term enhancement and restoration of the ecological integrity, biodiversity and ecosystem services of the area; and

b) In Natural Heritage System Linkage Areas, development or site alteration shall maintain or improve the ecological and recreational connectivity of the area; and, not compromise the potential for long term enhancement and restoration of ecological and recreational connectivity of the area.

4) Development or site alteration proposed in or adjacent to natural heritage features shall be supported by an environmental impact study prepared in accordance with the City's guidelines.

5) Development and site alteration shall have no negative impact on the Natural Heritage System and Natural Heritage Features. Development and site alteration shall be consistent with the conclusions and recommendations of an approved environmental impact study.

As stated in Section 3.3.4, the portions of the property within the Natural Heritage System Core Area and Natural Heritage Features Overlay are at the rear of the property where site works are not proposed. The EIS prepared for this application is in support of the proposed development and provides mitigation measures to reduce impacts to the surrounding environment.

SECTION 7: GREENSPACE DESIGNATIONS

7.3 Protect the ecosystem services of natural features and recognize their role in building resilience to future climate conditions

3) The Natural Environment Areas designation protects larger natural areas with multiple, overlapping natural heritage features and functions. The following shall apply:

a) Development lot line adjustments and site alteration are prohibited in Natural Environment Areas;

b) Permitted uses in Natural Environment Areas are: passive open spaces; scientific, educational, or conservation uses associated with the natural features; agricultural operations established prior to May 2003; forestry as defined in the Forestry Act; and renewable energy generation as outlined in Subsection 4.11, subject to demonstration that the use will not compromise the character, form and ecological functions of the area;

e) Development and site alteration within 120 metres of the boundary of a Natural Environment Area must demonstrate no negative impacts on the natural features or their ecosystem services within the area;

f) Where Natural Environment Areas are privately owned, public use and access to these lands for any purpose requires the consent of the owner;

g) Where land designated Natural Environment Area is privately owned, the City shall acquire the land at the request of the landowner, in keeping with the City's acquisition policies;

j) Natural Environment Areas do not form part of parkland dedication.

As shown in Figure 9, a very small portion of the site is within the Natural Environment Area. The proposed site works are located far outside this area, approximately 500m away. In addition, the Hydo One transmission corridor separates the Natural Environment Areas from the site works.

SECTION 9: RURAL DESIGNATIONS

The site is designated Rural Countryside and Greenspace on Schedule B9 – Rural Transect of the OP (Figure 9).

Section 9.2 outlines policies for the Rural Countryside designation:

9.2.2 Strengthen the rural economy by permitting a diversity of uses that support the local rural community:

1) The following uses may be permitted:

a) Forestry, conservation and natural resource management activities;

b) Agriculture, agriculture-related and on-farm diversified uses;

c) Residential uses according to the policies of this plan;

d) Animal services boarding, breeding and training and equestrian establishments;

e) Bed and breakfasts;

f) Utility Installations;

g) Cemeteries; and

h) Sand and gravel pits.

The proposed BESS facility can be considered a utility installation as it provides essential energy infrastructure to serve the residents of the area. A utility installation is a permitted use within the Rural Countryside designation.

SECTION 10: PROTECTION OF HEALTH AND SAFETY

Section 10.1.5 identifies policies related to Natural Hazards: Wildland fire hazard:

1) Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted within hazardous forest types for wildland fire, if it is demonstrated that the proposed development conforms to provincial wildland fire assessment and mitigation standards.

As part of the application package, a Site Servicing Study and Hazard Mitigation Analysis have been prepared to address fire hazards and mitigation standards. The Hazard Mitigation Analysis has been performed in accordance with 2023 NFPA 855 Standard for the Installation of Stationary Energy Systems, and explains that the facility is equipped with a number of protection systems including heat, smoke, and gas detection, that the facility poses minimal risk to public or life safety, and that the site is equipped with five municipal fire hydrants for easy access for firefighting operations if necessary. It should also be noted that on GeoOttawa mapping, the 'Potential Hazardous Forest Types for Wildland Fire' does not layer over the development area.

Marchurst Road is identified as a Collector on Schedule C9 – Rural Road Network of the OP. Per Table 1 – Road Right-of-Way Protection of Schedule C16, Collectors in the Rural area have a ROW to be protected of 26 metres. The current ROW of Marchurst is about 21 metres. The City is to confirm the ROW to be taken.

It is concluded that the proposed BESS facility is in conformity with the general direction of the City of Ottawa Official Plan.

3.4 Zoning By-law

The site is currently partially zoned Rural Countryside – RU towards the front of the site, and Environmental Protection, Subzone 3 - EP3 towards the back of the site. It should be noted that the EP3 zone follows the alignment of the Hydro One transmission line, meaning that no portions of the BESS use are within the EP3 zone. The intent of the RU zone is to:

1) *accommodate agricultural, forestry, country residential lots created by severance and other land uses characteristic of Ottawa's countryside, in areas designated as General Rural Area, Rural Natural Features and Greenbelt Rural in the Official Plan;*

2) *recognize and permit this range of rural-based land uses which often have large lot or distance separation requirements; and*

3) *regulate various types of development in manners that ensure compatibility with adjacent land uses and respect the rural context*

The RU zone permits a range of uses including agricultural uses, residential uses, animal care establishment and hospital, equestrian operations, and forestry operations. Utility installations are permitted in the RU zone per Section 91 of the ZBL which states that a "*utility installation is permitted in all zones other than EP, ME, or MR*" subject to the provisions of the Section.

Utilities are defined as:

> *Utility means an entity operating within a regulated industry that has been given the express right or subsequent legal duty to supply the general public with a product, commodity, or service such as natural gas, electricity, water, waste water, sewer, rail service, or communication service.*

The City approved Official Plan and Zoning By-law Amendments for BESS on February 12, 2025 (File Number: ACS2025-PDB-PS-0016. The amendments were appealed, and the appeal has since been withdrawn. The amendments are currently in full force and effect and the amendments to the ZBL form By-law No. 2025-72. The amendments introduce a new definition for BESS as follows:

> *BESS means a stationary rechargeable energy storage system consisting of batteries, battery chargers, controls, power conditioning systems and associated electrical equipment, and includes:*
>
> - *Principal BESS that stores electricity from the transmission or distribution grid during periods where supply exceeds demand, and solely discharges back to the transmission or distribution grid;*
>
> - *Accessory BESS that stores electricity from the distribution grid and may discharge to one or more uses on the same lot and may also discharge back to the distribution grid during periods of high electricity demand. Accessory BESS may also be associated with a renewable energy generation facility.*

The proposed Zoning By-law application applies specifically to the BESS facility on the subject property. The proposed BESS facility is considered a 'Principal BESS'.

The amendments include an amendment to the definition of Utility Installation as follows:

> *Utility installation means the equipment used to make or deliver a utility product, commodity or service and includes the actual building, plant, works, utility line, tower, relay, pedestal, and may*

> *also include battery energy storage systems and a storm water management facility but excludes antenna systems and renewable energy generation facility.*

The City-initiated amendments establish BESS as a principal use, so they are no longer considered utility installations under the ZBL. However, the proposed BESS facility is functionally a utility installation as it will contribute to the supply of electricity as part of Ontario's electricity sector regulated by the Ontario Energy Board and, through the contract with the IESO, will participate in the provision of electricity to the general public with electricity.

The MOE D-6 Guideline defines Industry, Industrial Land Use or Industrial Facility as:

> *A facility or activity relating to: the assemblage and/or storage of substances/goods/raw materials; their processing and/or manufacturing; and/or the packaging and shipping of finished products. Industrial facilities are further refined through categorization into 3 Classes in this guideline (see Appendix A of this guideline).*

The BESS facility does not process, manufacture, assemble, or store a product per the above definitions as energy is not a substance, good, or raw material. Further to this, the BESS facility is not considered an industrial use by the MOE D-6 Guideline since there is no processing, manufacturing, or storage of substances, goods, or raw materials. Energy exists in every single land use, so it is infrastructure, and structures that store and redistribute the energy are a utility.

As such, while a principal BESS facility was recently defined under the current Zoning By-law, it is nonetheless a utility installation, as opposed to an industrial land use, providing a sustainable energy supply to the general public.

Table 1. Zoning Review

Section	Provision	Required	Provided
Section 69	Setback from Watercourses and Waterbodies	30m to the normal highwater mark of any watercourse or waterbody, or 15m to the top of bank of any watercourse or waterbody, whichever is greater.	30 metres
Section 227 (1)	Permitted Uses	BESS is not listed as a permitted use	Establish BESS as a permitted principal use
Table 227 (a)	Minimum lot width	50m	927.2m

Table 227 (b)	Minimum lot area	0.8ha	84.42ha
Table 227 (c)	Minimum front yard setback	Other uses: 10m	253.8m
Table 227 (e)	Minimum rear yard setback	Other uses: 10m	797.8m
Table 227 (f)	Minimum interior side yard setback	Other uses: 5m	135m
Table 227 (g)	Maximum height – principal building	Other uses: 12m	4.5m
Table 227 (h)	Maximum lot coverage	Other uses: 20%	14%

3.4.1 Proposed Zoning By-law Amendment

As discussed above, a Zoning By-law Amendment application is required to establish a primary BESS as a permitted use on the site, and to establish express policies for the South March BESS development.

The proposed amendments to the Zoning By-law are as follows:

- Expressly identify a principal use BESS as a permitted use on a portion of the site; and,
- Establish appropriate setbacks.

The area on the site to be rezoned is limited to the area of the BESS facility itself, as per the figure below. This allows development of the BESS facility while maintaining the surrounding RU and EP areas.

Figure 10. Area proposed to be rezoned to permit the BESS use.

The South March BESS will have a low-rise and low impact built form that is compatible with the surrounding area and is mitigated from view through its placement in the centre of the site and screened through additional site landscaping, as well as a 4.5m high wall for noise mitigation for any residential areas in the vicinity. The facility is not expected to cause nuisance and is supported by plans and studies outlining how the facility is to function, and how any impacts are to be mitigated. The site is appropriate for the BESS facility.

3.5 Conservation Authority

The property is located within the boundaries of the Mississippi Valley Conservation Authority (MVCA). The MVCA was in attendance of the March 19, 2025 pre-consultation meeting to discuss the proposal and receive their feedback.

It was determined that MVCA's mapping identified a watercourse on the site. Written permission is required from the MVCA before beginning any work that affects the watercourse. All development must be located outside of the 1:100-year flood plain. Hydraulic and fluvial geomorphology studies will be required for the proposed realignment of the watercourse demonstrating no change in flooding or erosion along the property and to the neighbouring upstream and downstream properties. It was also noted that since there are wetlands on the site, all development must be located outside of the wetlands and the associated 30m regulation limit based on the wetland boundary evaluations through the EIS. As indicated above, all development will be located outside of the wetlands area and 30m regulation limit.

3.6 Parks

The City has a Parkland Dedication By-law (By-law No. 2022-280), which is the Provincially mandated method that the City uses to implement the *Planning Act* permissions to acquire parkland or cash-in-lieu of parkland as a condition of development or redevelopment of land.

While the BESS facility is a utility installation and not an industrial use, the City has categorized it as an industrial use for the purposes of the Parkland Dedication By-law. Per the By-law, industrial developments have a maximum conveyance of parkland of 2% of the gross land area, cash-in-lieu of parkland of 2% of the gross land area, or a combination thereof. Discussions with the City through the development approval process will be required to confirm how the Parkland Dedication By-law should apply to the facility.

The amount, method and/or the applicability of parkland dedication will be determined through the development application process.

3.7 Climate Change Master Plan

The Climate Change Master Plan (2020) (CCMP) is the framework for how Ottawa will mitigate and adapt to climate change over the next three decades, focusing on transitioning the City to become a clean, renewable, and resilient city by 2050.

The CCMP aims to mitigate climate change by:

1) Making a sustained transition away from a dependence on fossil fuels

2) Reducing energy use through conservation and efficiency

3) Increasing the supply of renewable energy through local and regional production

4) Reducing greenhouse gas emissions from non-fossil fuel sources

5) Improving carbon capture storage and sequestration

The CCMP sets out targets to reduce annual Green House Gas (GHG) emissions by 30% by 2025, 50% by 2030, and 100% by 2050. To achieve these targets, eight priorities are set out, the third priority is

applying a climate lens to the new Official Plan and its supporting documents. As outlined through the OP review under Section 3.2 of this report, facilities for renewable energy sources and infrastructures are generally permitted throughout the City to help shift away from fossil fuels. The proposed BESS facility introduces a new source of energy storage and sustainable energy that helps make the energy grid more efficient, resilient, and reliable for the end users by storing energy during off-peak hours and releasing it back into the grid during high-peak hours.

The proposed BESS facility is consistent with the goals of the CCMP as it provides a renewable energy source that helps reduce GHG emissions.

3.8 Integrated Environmental Review

Environmental policies have been reviewed throughout this report, with the Official Plan policies reviewed under Section 3.2 of this report, and the findings and conclusions of environmental studies and reports under Section 4 of this report.

An Environmental Impact Study has been prepared by Stantec, dated June 11, 2025, in support of the applications. The EIS identifies natural heritage features and significant natural features within the Study Area, as well as potential environmental effects and mitigation measures to lessen potential impacts of the proposed development on environmental resources. The EIS was prepared in accordance with the policies of the City of Ottawa *Environmental Impact Study Guidelines* (2023) and Official Plan. The EIS was also prepared in accordance with the following Provincial studies and regulations: Provincial Policy Statement, Endangered Species Act, Fish and Wildlife Conservation Act, and Conservation Authorities Act. The following Federal plans and policies were also addressed in preparing the EIS: Species at Risk Act, Migratory Birds Convention Act, and Fisheries Act.

The EIS completed a background review for records of natural heritage features on the site, including Mississippi Valley Conservation Authority records, geospatial Ontario environmental datasets, and Ontario atlases for breeding birds, mammals, butterflies, and reptiles and amphibians. Field studies were then completed between October 2024 to June 2025 to document existing conditions and verify data collected during the background review, including assessments of candidate significant wildlife habitat (SWH), potential for species at risk (SAR), and other natural heritage features. The field screenings and studies were conducted to assess:

- Aquatic resources
- Ecological land classification
- Amphibians
- Turtle surveys
- Incidental wildlife observations and habitat features
- Vegetation

Details of each field screening and study including methodology and findings can be found in the EIS.

The EIS also reviewed significant Natural Heritage Features, including:

- Significant wetlands
- Significant woodlands
- Significant wildlife habitat

Details of the assessments can be found in the EIS.

The EIS also reviewed species at risk. One Eastern Meadowlark was observed during the survey, however since it was conducted outside of the active season for most species, this incidental bird observation could have been a migrating individual. Six mature Butternut were also visually located within the project area. Suitable reproductive and foraging habitat for Eastern Meadowlark and Bobolink may be present within the Project Area. Field surveys to date have not detected Blanding turtles or Black Ash, but the site may contain potentially suitable habitat in the form of moist to wet soils with adequate sunlight. Targeted surveys will be completed to assess bats and Eastern Whip-poor-will.

The EIS assessed fish habitat. Fish habitat is provided within the unnamed SWF and online agricultural pond. Upstream of the pond the unnamed SWF provides seasonal indirect fish habitat. The pond provides direct fish habitat, and the downstream reach provides seasonal direct fish habitat. As such the provisions with the Fisheries Act may apply pending the proposed works.

Table 3 of the EIS provides a summary of Natural Heritage Features, excerpt below:

Table 3 Summary of Natural Heritage Features

Natural Heritage Feature	Project Footprint	Study Area
Natural Heritage System, including cores and linkages	No	Yes (Core Area; Figure 1)
Natural Environment Areas	No	Yes (Figure 1)
Significant Wetlands	No	Yes (Figure A1, Appendix A)
Areas of Natural and Scientific Interest (Earth or Life Science)	No	Yes (regional candidate life science ANSI; Figure A1, Appendix A)

Habitat of SAR	Potential (Bobolink / Eastern Meadowlark)	Potential (Bobolink/Eastern Meadowlark, bats, Blanding's turtle)
Significant Woodlands	Yes (assumed)	Yes (assumed)
Significant Valleylands	No	No
Significant Wildlife Habitat	Yes (access road through woodland)	Potential (woodlands and wetland habitats)
Surface and Groundwater Features	Yes (watercourses)	Yes (watercourses)
Fish habitat	Yes (indirect and direct)	Yes

Following the background review and field studies, the following potential environmental effects were identified (details of each effect can be found in the EIS):

- Permanent and temporary habitat loss
- Habitat alteration, disruption, and avoidance
- Injury and incidental take
- Potential indirect impacts to fish and aquatic habitat
- Potential impacts from operation

To protect against and mitigate the effects, the EIS proposes mitigation and protective measures during construction and during operation. Details of the mitigation and protective measures can be found in the EIS.

During construction:

- Mitigation measures to address potential impacts to vegetation and vegetation communities during construction, including implementation of dust control measures, replacing or restoring affected vegetation, and installing tree protection fencing along the dripline to protect the root zone of trees adjacent to the work zone and project limits.
- Mitigation measures to address erosion and sediment control, including developing and implementing an erosion and sediment control plan prior to construction to protect sensitive natural heritage features, minimizing the extent and duration of exposed soil and cover areas to suppress dust and prevent sedimentation due to wind and rainfall erosion, and removing non-biodegradable ESC materials, where approved, once site is stabilized.
- Mitigation measures to address earth and excess material, waste, re-fueling, and spills, including always having accessible spill kits on site, storing any hazardous materials and having vehicle maintenance and refueling activities be located at least 30m away from wetlands and other sensitive natural features, and developing and implementing a Spill Prevention and Response Contingency Plan.

- Mitigation measures to protect wildlife and wildlife habitat, including timing removal of vegetation outside of active periods for bats or as authorized by the MECP, inspecting equipment and brush piles for wildlife prior to movement of equipment, and completing nest searches within 24-48 hours or immediately prior to the proposed works.
- Providing environmental training and monitoring, including developing wildlife protocols and training to educate works of potential wildlife occurrences, and monitoring to ensure that mitigation and contingency measures are implemented.
- Mitigation measures and opportunities to minimize potential indirect impacts to aquatic habitats, including designing and implementing restoration plans, developing and implementing a salt management plan, and scheduling the work to allow time for restoration measures to become established during the growing season.

During operation, mitigation measures are proposed including:

- Develop and implement a Fire Protection and Explosion Mitigation and Management Plan.
- Develop and implement a Spill Prevention and Response Contingency Plan for operation of the Project.
- Comply with key safety standards, including Underwriters Laboratories (UL) 9540, UL 9540A, and National Fire Protection Association (NFPA) 855.

The Hydrogeological and Terrain Analysis Study, prepared by BBA, dated May 3, 2025, assesses the risk to groundwater, stating that groundwater levels are expected to fluctuate seasonally, and that based on the borehole data groundwater is not observed at the surface within the project site. It also identifies that there are no wetlands indicated or observed within the development area of the site. The Stormwater Management Study, prepared by BBA dated June 19, 2025 states that groundwater will be protected from any potential contamination from the batteries by installing an impervious geomembrane layer across the entire site (except the substation area).

The Tree Conservation Report was prepared by Hatch, dated June 10, 2025, and identifies two trees for removal. Compensation trees are to be planted on the same properties where the removals occur, and the compensation trees are recommended to be of the same plant species that complement the existing treed communities to maximize likelihood of survival and avoid changing the function of the existing habitat. This is most easily achieved by selecting the same native species that are present on site. In the event these species are not readily available at the time of planting, or that some species that are present on site can be described as undesirable (i.e. Green Ash); complement species to be planted should have a similar shade tolerance and similar wetness coefficient to the existing communities to be considered suitable for compensation

3.9 Public Consultation Strategy

As part of the due diligence for the project, technical consultation was undertaken to explore and evaluate design options and early feedback regarding the proposal, as well as discussions with the Ward Councillor. These engagement processes included the following:

- Discussions with Councillor Clarke Kelly started in April 2024 to discuss the contract awards, engagement, location, and proposal.
- Summer 2024 – due diligence and door knocking to assess potential sites for the BESS facility.
- July 2024 - IESO releases deliverability test results; Fitzroy site identified; Evolugen team & Councillor Kelly staff discuss possibility of an alternative site.
- Booking one-on-one meetings with community leaders and residents in West Carleton started in August 2024.
    - August 29 – meeting with Councillor Kelly.
    - November 21 – Engagement with local ward 5 contractors to discuss opportunities for construction
    - November 26 – Discussion with Rural Woodlands Ottawa on projects and offsetting measures
    - January 10, 2025 – Evolugen & residents meet with Councillor Kelly on the project and potential site change
- September 25 – BESS Fire Prevention & Emergency Response Q&A was held virtually hosted by Evolugen and ESRG.
- October 10 – BESS Fire Safety Workshop was held in person.
- January 20, 2025 – South March door knocking campaign – Round 1.
    - Launched GetChargedOttawa.ca as an online resource for BESS knowledge, project details, and inviting feedback and questions
    - Released podcast series for informative conversations around BESS with industry experts
    - Launched a Facebook page as additional point of access for residents
    - Distributed postcards in nearby residents' mailboxes
- January 23, 2025 – Presented at Agriculture and Rural Affairs Committee.

- January 30, 2025 – Participated in BESS informative session hosted by a local environmental advocacy group (CAFES).
- February 2025 – Billboard advertisements to spread awareness.
- February 2025 – Presented at Planning and Housing Committee.
- February 2025 – Additional mailouts to residents to make them aware of the upcoming open house.
- February 2025 – Resident FAQ's – answered hundreds of questions from community groups, residents, and others.
- Feb 2025 – South March BESS Open House – over 200 community members with over a dozen subject matter experts to address concerns.
- Formal pre-application consultation meeting with the City on March 19, 2025.
- Follow-up consultation discussions with the City.
- March 2025 – South March door knocking – Round 2.
- March 2025 – Class presentation to Electrical Engineering students at University of Ottawa.
- March 2025 – Notice of Commencement letters for Class EA for Transmission Facilities sent out to required stakeholders inviting them to provide comments.
- April 2025 – South March door knocking – Round 3.
- April 2025 – Duty to Consult (EA) letters sent out to Indigenous groups for project feedback.
- May 2025 – Class presentation to Electrical Engineering Technician students at Algonquin College.
- June 2025 – Ottawa Board of Trade Energy Symposium panel discussion.

The above noted technical consultation processes resulted in the evolution of the proposal, ensuring that the proposed South March BESS facility meets all the requirements for a BESS facility, and that any comments on the wetlands, natural environment, and fire safety are addressed.

Technical agencies and the public will have opportunity to provide comments through the formal development review process which includes City-led notification and circulation of the proposal and submission materials. There will be opportunity for public review and comment once the applications are submitted, deemed complete, and posted online on the City's DevApps website, and at the time the ZBLA application is considered by ARAC and City Council. Any additional public consultation will be considered once the site plan control application has been deemed complete and placed on circulation.

4 Summary of Applicable Studies

The pre-consultation meeting held on March 19, 2025, confirmed the required plans and studies in support of the proposed development applications. Studies and plans required with the application submission are noted below, followed by extracts of the conclusions and recommendations from select studies (see submitted studies and plans for further detail).

4.1 Servicing Study

A Site Servicing Study was prepared by BBA, dated June 19, 2025. No domestic water connection is needed as the proposed development does not include buildings. An underground tank with a capacity of approximately 10,000 gallons is proposed and connected to a series of fire hydrants throughout the site for fire protection. The size of the water tank has been recommended by the fire service department of the City of Ottawa through on-going discussions with Evolugen.

4.2 Stormwater Management Plan

A Stormwater Management Plan was prepared by BBA, dated June 19, 2025. The report finds that the BESS site surface runoff is planned to drain north into a stormwater pond. The watercourse that runs through the site will be redirected through a series of ditches and a culvert to exit the developed area and realign itself with its original route. To protect the groundwater from any potential contamination from the batteries, an impervious geomembrane layer will be installed across the entire site (except the substation area).

4.3 Geotechnical Report

A Preliminary Geotechnical Investigation was prepared by Hatch, dated April 14, 2025. The investigation finds that the subsurface conditions encountered at the site generally consist of topsoil underlain by clayey soils of the Champlain Sea Basin deposit which varies in moisture content, consistency, and plasticity across the site and with depth. The report recommends different foundation options that are compatible with the subsurface conditions of the site, as well as additional design and construction recommendations.

4.4 Environmental Impact Study

An Environmental Impact Study (EIS) was prepared by Stantec, dated June 11, 2025. The EIS concludes that the proposed development will have direct impacts on wildlife habitat within the development area. There site is also partially within the Natural Heritage Overlay with the associated woodlands assumed to be significant. The EIS proposes recommendations to mitigate potential effects, including wildlife monitoring, vegetation management, erosion and sediment control, operational safety, reducing habitat disturbance during and after construction, and consultation with appropriate agencies such as MECP and

the City to determine permit requirements and tree compensation and replanting. The South March BESS will implement and comply with the recommendations set forth in the EIS.

4.5 Tree Conservation Report

A Tree Conservation Report (TCR) was prepared by Hatch, dated June 10, 2025. The TCR includes a tree inventory assessing a total of 3 individual trees; two trees on Municipally owned lands, one on private owned lands. It is recommended for the trees on municipal lands to be removed, and for the tree on privately owned lands to be retained. Compensation trees are to be plated on the same properties where the removals occur. Tree preservation and impact mitigation measures have been prescribed to protect trees from potential effects from the construction and operations/maintenance of the proposed development.

4.6 Hazard Mitigation Analysis and Emergency Response Plan

In addition to the plans and studies requested by the City in support of the development applications, Evolugen retained ESRG to prepare a Hazard Mitigation Analysis (HMA) and Emergency Response Plan (ERP) to provide further clarification and detail on the proposed BESS units, their safety measures and standards, and the response plan in case of an emergency,

The HMA was prepared by ESRG, dated June 2025. The HMA finds that the proposed battery (Sungrow PowerTitan 2,0) is equipped with a number of protection systems including heat, smoke, and gas detection to mitigate fault conditions required per NFPA 855. The units have two layers of explosion mitigation in the form of exhaust ventilation system designed in accordance with the NFPA 69 as well as deflagration vent panels designed in accordance with NFPA 68.

The proposed BESS facility and location poses minimal risk to public or life safety and property by way of being on a secured site away from public spaces or roadways with no public access to the site. It is recommended that training be provided to the First Responders to familiarize themselves with the site and hazards associated with lithium ion BESS and that the First Responders be instructed to stay at a safe distance in the unlikely event of a system failure.

The ERP was prepared by ESRG, dated October 2, 2025. It outlines the emergency response plan including the fire department and staging area, first responders' station, water supply, and the fire alarm control panel. The ERP explains the overall fire protection systems of the energy storage units, fire detection, alarming, and notification, and emergency response considerations and procedures.

The client has also evaluated additional risks and how they will be mitigated, based on feedback from Ottawa Fire Services. These comments include developing a written procedure outlining the shut-off process to ensure effective containment during an incident, providing air monitoring resources on site, and the protocol for notifying OFS. In response to OFS comments, an Emission Summary and Dispersion Modeling Report was prepared by Hatch (dated July 17, 2025), which demonstrates that in the event of a

thermal runaway event it is not anticipated the BESS facility will pose adverse effects to local air quality. This resubmission (dated October, 2025) includes the comments from OFS and the latest designs, as well as the response to comments outlining how the comments from OFS have been addressed.

Site Plan Control approval is required for the South March BESS facility. Details of the HMA and ERP, as well as any other comments from OFS, will be detailed finalized through the SPC process.

4.7 South March Initial Noise Control Options Assessment

An Initial Noise Control Options Assessment was prepared by Aercoustics, dated July 10, 2025. The assessment explores the noise impact of the proposed South March BESS, and provides four noise control options for the site. The proposed South March BESS facility implements Option 3: Combination of Barriers and Berms on the site as combining the effects of a berm and barrier will permit the site to meet at R01 Compliance.

Site Plan Control approval is required for the South March BESS facility. Details of the Noise Control Options will be detailed and finalized through the SPC process.

4.8 Stage 1 Archaeological Assessment

A Stage 1 Archaeological Assessment was prepared by Stantec, dated February 11, 2025. The Stage 1 archaeological assessment of the study area for the Project, involving background research and a property inspection, determined that portions of the study area retain potential for the identification and documentation of archaeological resources. The Stage 1 archaeological assessment also determined that portions of the study area retain low to no archaeological potential due to extensive areas of exposed or shallowly buried bedrock and areas of low and permanently wet ground. These portions of the study area retain low to no potential for the identification or recovery of archaeological resources. A Stage 2 Archaeological Assessment will be produced.

4.9 Fluvial Geomorphology Assessment

A Fluvial Geomorphology Assessment was prepared by Hatch, dated June 24, 2025, to identify erosion hazard limits. The report finds that the current development footprint overlaps with a portion of the erosion hazard limit associated with a portion of both the unconfined and confined system reaches of the existing creek. The proposed diversion ditch for the realignment of the watercourse should be lined with erosion-resistant materials such as turf reinforcement mats or coir matting to ensure stability during operation. Saturated soils were observed in the southeast portion of the site, consistent with borehole data. These conditions may limit the viability of infiltration-based stormwater management (SWM) practices within the developed area. The Fluvial Geomorphology Assessment recommends a sediment transport assessment for the proposed realigned reach of the watercourse to evaluate erosion and deposition risks and confirm channel stability.

4.10 Hydrogeological and Terrain Analysis Study

A Hydrogeological and Terrain Analysis Study was prepared by Hatch, dated March 13, 2025. The report finds that the site consists of two primary terrain units: Till in the northwest and southeast strips and Offshore Marine Deposits in the middle portion. The Till units are calcareous where derived from sedimentary rocks and not leached. This calcareous composition indicates moderate drainage capacity, making this area suitable for surface-level construction activities without significant concerns for water retention or drainage issues. The Offshore Marine Deposits primarily consist of clay, silty clay, and silt. These materials are commonly calcareous, fossiliferous, and poorly permeable due to their fine-grained nature and compactness. The medium to low permeability of this unit may lead to limited drainage capacity, potentially causing surface water runoff and ponding during periods of high precipitation. Stormwater management planning takes into consideration the characteristics of the soil to mitigate any impacts on the development.

5 Conclusions

The Planning Rationale has been prepared in support of concurrent Zoning By-law Amendment and Site Plan Control applications for the properties located at 2555 and 2625 Marchurst Road to facilitate the development of a Battery Energy Storage System (BESS) on the property.

The proposed development represents an addition to the City's electricity grid, improving energy supply and reliability. The subject BESS is a successful proponent of the IESO's energy storage procurement request for proposals and has obtained MSR from Council. The proposed BESS facility also meets the intent and requirements of the City's recent OPA introducing policies on battery storage facilities. In an effort to meet the IESO deadline for the start of construction of the subject BESS, site-specific amendments for a Zoning By-law Amendment and a Site Plan Control application have also been prepared and are described in this Planning Rationale.

As demonstrated through this report and in the technical material required within the application, the proposed BESS development represents an appropriate use of the site that aligns with the intent of the applicable planning policy and regulations for an energy storage facility. The proposed facility has been designed to efficiently use the site while mitigating impacts on the surrounding environment and is evaluated and supported by various technical reports and plans forming part of the submission. Accordingly, we recommend the applications for approval.

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