



Greenview Industrial Gateway

# AREA STRUCTURE PLAN

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March 2021

MAXIMUM  
SPEED  
30





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# 1 INTRODUCTION

The Greenview Industrial Gateway (GIG) is created by the Municipal District of Greenview (Greenview), the County of Grande Prairie, and the City of Grande Prairie to develop a world-class, heavy eco-industrial district (the District). The District is entirely located within Greenview and will focus on attracting specific heavy industrial uses such as those associated with methane gas, urea fertilizer, amine gas, and other gas processing facilities.

This Area Structure Plan (the Plan) is a collaborative attempt by GIG and the Alberta Ministry of Environment and Parks (AEP) to coordinate the orderly development of industrial services in a manner that supports Provincial and Municipal economic, social, and environmental priorities.

- Support the creation of long-term employment growth and opportunities for residents, communities, First Nations, and Métis Settlements; and
- Create an ordered pattern of development that integrates industry, nature, and people.

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## 1.1 Purpose and Intent of the Plan

The Plan provides a land use, infrastructure, and policy framework to attract future industrial activities to the plan area and allow for more effective coordination of industrial activities and management of impacts.

The Plan presents a vision for the development of a world-class heavy eco-industrial district in Greenview. The Plan provides a framework and supporting policies that:

- Chart a course for the development of a world-class heavy eco-industrial district;
- Showcase the region's untapped potential, paving the way for services and infrastructure where heavy industry is interested in investing;

Figure 01: Regional Context

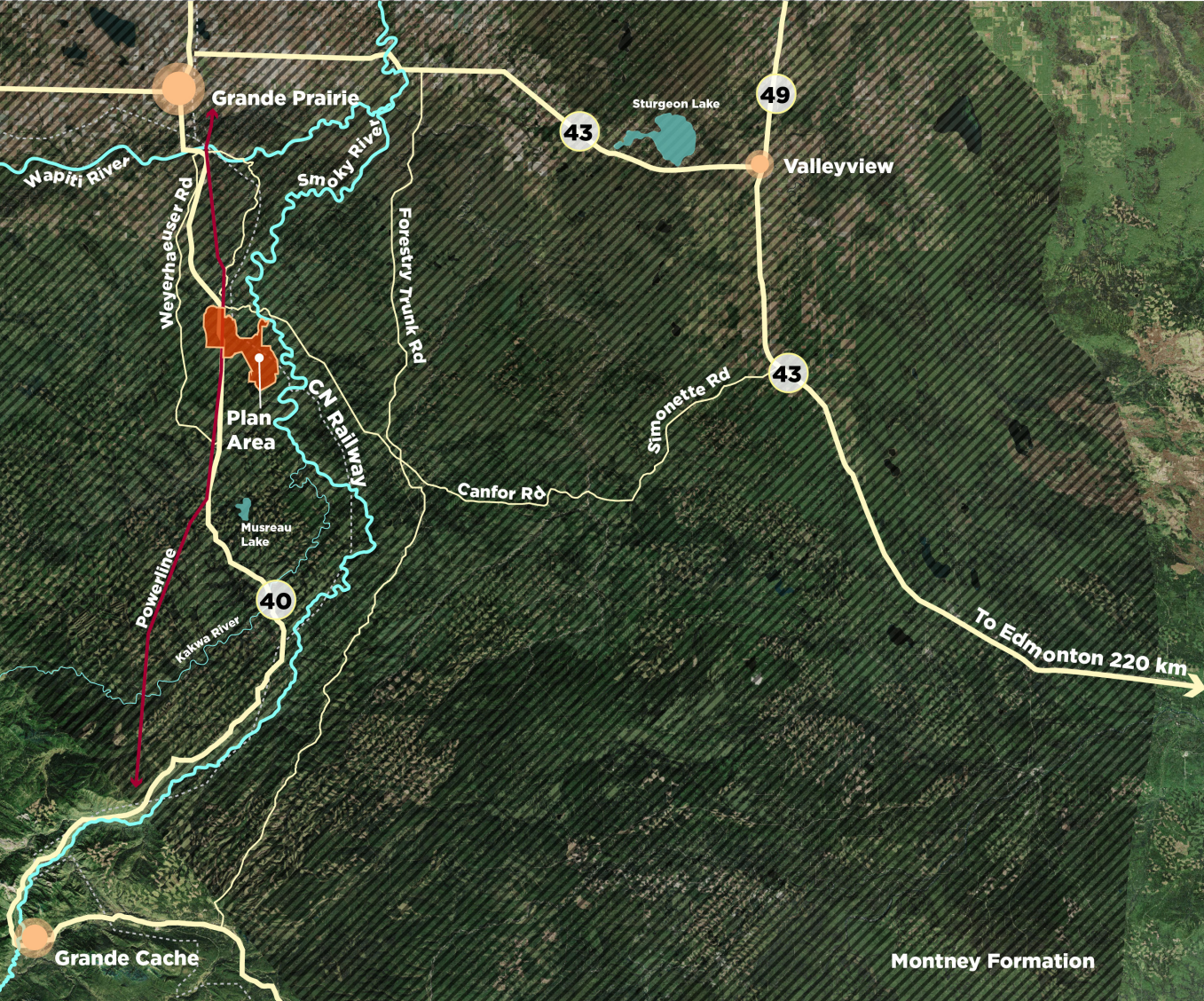


Figure 02: Plan Area Context



- Plan Area
- Powerline
- Pipeline
- Well
- Grazing Lease
- Aggregate Extraction
- Landfill

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## 1.2 Plan Area Context

The plan area is entirely situated on Crown land within Greenview, approximately 40km south of the City of Grande Prairie ([Figure 1 – Regional Context](#)). An area of 325 square kilometres was identified as the preliminary study area. Through an opportunities and constraints analysis and with feedback from the public and other stakeholders ([see Background Report](#)), the plan area was reduced to approximately 75 square kilometres ([Figure 2 – Plan Area Context](#)).

The plan area is well connected by road and rail to the region and beyond. Alberta Provincial Highway 40 passes through the plan area, connecting the City of Grande Prairie with the hamlet of Grande Cache, and CN owns and operates a rail line that passes through the plan area that connects the City of Grande Prairie to the CN Mainline. Additionally, Alberta Provincial Highway 43 connects the City of Grande Prairie to the City of Edmonton, accounting for part of the CANAMEX trade corridor, a transportation network that runs through Greenview and connects local businesses to international markets.

The Plan takes advantage of the Montney formation, one of the largest natural gas plays in North America. Furthermore, the area is served by pipeline infrastructure. The Smoky River is located to the east of the plan area and represents a future water source for industrial activities. A power transmission corridor partially bisects the plan area north-south, facilitating the provision of power. For a full description of plan area attributes, see the [Background Report](#).

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## 1.3 Community Consultation

Community consultation played a vital role in the development of the Plan from project start up to final adoption. Developing the Plan involved three phases of stakeholder engagement and two phases of public consultation.

The stakeholder engagement process involved two separate groups, each playing a pivotal role in shaping the Plan. The Stakeholder Working Group (SWG) comprised representatives from GIG industry, First Nations, Métis Settlements, financial institutions, and utility providers. At each meeting, the SWG was presented with updates on project progress and given the opportunity to provide feedback.

The Technical Advisory Committee (TAC) provided a forum for feedback, guidance, and advice to the project team at crucial points throughout the planning process. The TAC was comprised of members representing the Government of Alberta (the Province) and Municipal proponents of the GIG including:

- Alberta Environment and Parks
- Alberta Economic Development and Trade
- Alberta Aboriginal Consultation Office
- Alberta Agriculture and Forestry
- Alberta Energy
- Alberta Energy Regulator
- Alberta Culture and Tourism
- Municipal District of Greenview

Public engagement phases were scheduled around project milestones. The first phase, comprising one session in the hamlet of Grovedale and one in the County of Grande Prairie, provided attendees with an overview of the purpose and intent of the plan, the opportunities and constraints analysis, and the preliminary developable areas concept. The second phase occurred after completing the Plan. This afforded participants with an opportunity to offer feedback on the Plan and influence final revisions. For a complete engagement summary, refer to the [Engagement Summary](#).

A First Nations and Métis Settlements consultation process was initiated in accordance with Government of Alberta's Policy and Guidelines on Consultation with First Nations and Métis Settlements on Land and Natural Resource Management.



## 2 VISION + PRINCIPLES

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### 2.1 Vision Statement

Built on a framework of regional partnerships, further expanding the District's efficient use of the region's potential as a global energy hub and heavy eco-industrial district that attracts international investment and showcases innovation, value-added processing, and supporting infrastructure.

By incorporating the principles of industrial ecology, the District balances environmental, economic, and social considerations to become a world-class heavy eco-industrial district.

### 2.2 Planning and Development Principles

Seven principles were developed in response to feedback received from project partners, stakeholders, and the public. These principles guide the Plan towards the achievement of a world-class heavy eco-industrial vision.

**SUSTAINABILITY:** Provide an ordered pattern of development that is compact, well connected, and flexible to accommodate the needs of industry while managing environmental, economic, and social impacts in the region.

**EFFICIENCY:** Plan, design, and build with ease of business operations, inter-business cooperation, sharing of resources, and reduction of waste disposal in mind.

**CONNECTIVITY:** Strive for the efficient and safe movement of people, goods, and information between businesses, communities, the region, and beyond while mitigating potential traffic impacts.

**COMPATIBILITY:** Locate land uses and facilities to maximize opportunities for exchanging material wastes, energy, water, and information.

**INNOVATION:** Promote, attract, and retain industrial investors that are leaders in eco-industrial activities, gas processing, and product innovation.

**CONSERVATION:** Identify opportunities and implement innovative practices for managing impacts, including water and habitat conservation, energy generation and distribution, and stormwater management.

**COLLABORATION:** Collaborate with First Nations, Métis Settlements, the Province, surrounding communities, and industrial partners in the planning, development, and operation of the District.

# 3 LAND USE

The Plan ([Figure 3 – Land Use Plan](#)) is structured to take advantage of the area’s location within the Montney formation as well as existing road, rail, water, utilities, and pipeline infrastructure. Importantly, maximizing railway service is critical to enabling a world-class eco-industrial district. Accordingly, two primary land use designations are used: **Heavy Industrial – General**; and **Heavy Industrial – Rail-Oriented**. Additionally, the area designated as Utility Area will accommodate water infrastructure requiring direct access to the river, while areas designated as **Natural Features** strive to ensure that the District maintains an ecological network. [Appendix B](#) provides a summary of proposed land uses.

The Plan was developed with careful consideration of the plan area context, the opportunities and constraints identified for the plan area, and the Vision and Planning and Development Principles developed with input from Public consultation, the Technical Advisory Committee, and the Stakeholder Working Group ([see Background Report](#)).

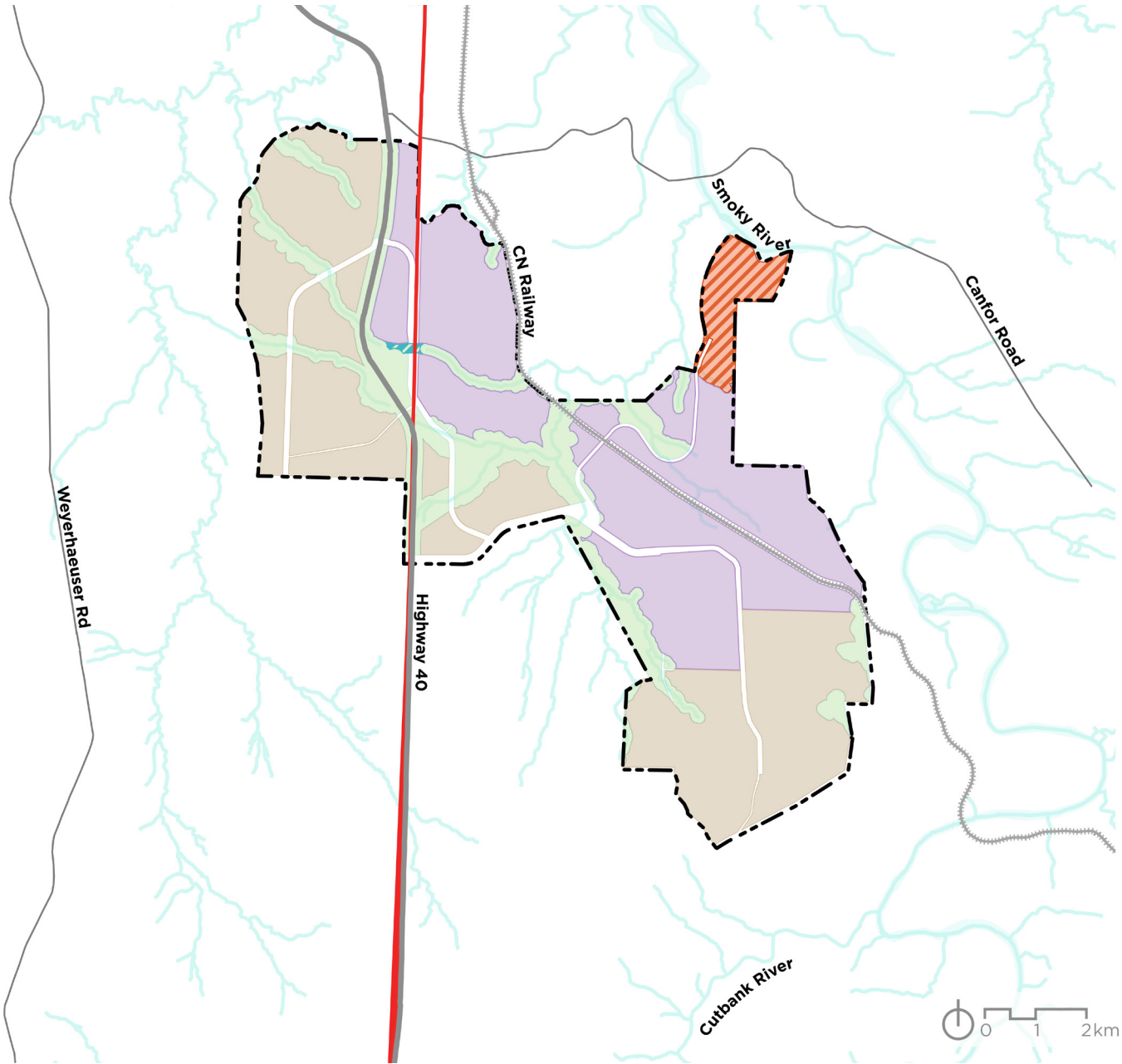
The objectives and policies on the following pages apply to the entire plan area.








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## 3.1 Objectives

- 3.1.1** To direct future heavy industrial development to the plan area.
- 3.1.2** To create an ordered pattern of development that integrates environmental sustainability, economic efficiency, and social well-being.
- 3.1.3** To provide clarity for industrial proponents and showcase the value of co-locating near the existing feedstock.
- 3.1.4** To attract heavy industrial activities that benefit from co-location and are interested in pursuing eco-industrial initiatives.

**Figure 03: Land Use Plan**



- |  |  |
|--|--|
|  Plan Area              |  Heavy Industrial - General       |
|  Powerline              |  Heavy Industrial - Rail Oriented |
|  Watercourse            |  Natural Features                 |
|  Watercourse Connection |  Utility Area                     |

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## 3.2 Compliance Policies

**3.2.1** The Plan is intended to align with Greenview's Municipal Development Plan (MDP).

**3.2.2** Where policies in the Plan conflict with those found in the Land Use Bylaw (LUB), the Plan shall be used as the basis for LUB updates.

**3.2.3** Requirements within the Plan shall apply to new development or development expansions only. The Plan is not intended to impede existing operations and takes into consideration development that existed before the adoption of this Bylaw. Properties to be developed shall be titled and rezoned.

**3.2.4** Future development must conform to the objectives and policies of the applicable land use area.

**3.2.5** Additional Minor Area Structure Plans may be required in accordance with Greenview policy 6001.

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## 3.3 General Policies

**3.3.1** Industry will ensure quality development through the siting and design of buildings, landscape treatment, location and screening of storage and parking areas, and the appropriate scale and design of signage that recognizes the surrounding natural and/or industrial setting of the area.

**3.3.2** Greenview will work in partnership with the Province, First Nations, Métis Settlements, and other key stakeholders towards the effective and efficient development of lands by following the policies of this Plan.

**3.3.3** Greenview will support the identification, compilation, and maintenance of information with respect to cultural and environmental values located within the District.

**3.3.4** Greenview will consider the impacts development applications may have on traditional resource uses, for instance, hunting, fishing, and trapping and will refer to Alberta Culture and Tourism and the Aboriginal Consultation Office as needed.

**3.3.5** Through the subdivision process, Greenview will collect cash-in-lieu of Municipal Reserve entitlement.

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## 3.4 Heavy Industrial – General

**The Heavy Industrial – General** lands refer to the areas not located adjacent to existing rail or proposed rail network extensions (**Figure 3 – Land Use Plan**). Anticipated uses within **Heavy Industrial – General** include petrochemical facilities; value-added processing facilities; and associated uses such as local power generation and water treatment facilities.

### 3.4.1 Objectives

**3.4.1.1** To accommodate heavy industry that does not require direct access to rail.

**3.4.1.2** To accommodate heavy industry in an environmentally sound, economically efficient, and socially responsible manner.

**3.4.1.3** To ensure the trustworthy stewardship of sensitive environmental and culturally significant features.

### 3.4.2 Policies

**3.4.2.1** Individual projects will require approvals, subject to the applicable regulatory processes and in compliance with Federal, Provincial, and Municipal requirements.

**3.4.2.2** Industrial activities will comply with all Alberta Environment and Parks, and Alberta Energy Regulator regulations, approval conditions, and codes of practice.

Standards and guidelines such as those pertaining to surface water quality guidelines, discharge to the Smoky River, and maintenance of airshed will also be followed.

**3.4.2.3** Industrial services that accompany heavy industrial activities, such as co-generation power units, must comply with Alberta Environment and Parks in a manner similar to policy 3.4.2.2.

**3.4.2.4** Land uses that conflict with heavy industrial operations are not permitted.

**3.4.2.5** Operations camps are strongly discouraged.

**3.4.2.6** Agricultural and forestry uses, including but not limited to harvesting, grazing, cropping, and feed lots are supported.

**3.4.2.7** Encourage agricultural and forestry operations to work with adjacent industrial developments to define mutually beneficial operating procedures.

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## 3.5 Heavy Industrial – Rail-Oriented

Maximizing rail access is vital to the marketability of industrial operators with shipping needs. Given the limited supply of land capable of accommodating rail, industrial development must prioritize the development of spurs from the existing CN rail line. Doing so ensures that the potential for rail access is maximized for as many future industrial proponents as possible.

The **Heavy Industrial – Rail-Oriented** lands are located on either side of the existing CN rail line. The opportunities and constraints analysis (see [Background Report](#)) revealed the lands that can accommodate potential rail spurs. The **Heavy Industrial Rail-Oriented** lands include these areas in addition to lands that are adjacent to proposed rail extensions. In doing so, the lands capable of accommodating rail are intended to prioritize industrial activities that require rail access.

### 3.5.1 Objective

**3.5.1.1** To accommodate heavy industry that requires direct access to rail.

### 3.5.2 Policies

**3.5.2.1** Policies established for **Heavy Industrial – General** shall apply to **Heavy Industrial – Rail Oriented**.

**3.5.2.2** Industry is required, through the approvals process, to demonstrate their requirements for rail access, to the satisfaction of the Development Authority.

**3.5.2.3** Greenview will work with CN rail to identify additional rail extensions, beyond those identified in the proposed rail network.

**3.5.2.4** The potential for rail spurs must be considered as part of the development of the area and the system of local roadways.

**3.5.2.5** Subdivision patterns and roadway designs that restrict the extension of rail service are prohibited.

**3.5.2.6** Greenview will encourage industry to collaborate in the development of a central storage and distribution facility, located adjacent to the existing CN rail line.

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## 3.6 Utility Area

For heavy industrial activities to be viable, access to the Smoky River is required. As such, the Plan includes a **Utility Area** in the east of the plan area to provide for river access ([Figure 3 – Land Use Plan](#)). The expectation is for this area to accommodate water storage and related infrastructure. A precise water intake location will be identified upon the completion of the necessary Provincial studies. Given its central location in the plan area, a preliminary assessment suggests this as the ideal location for water intake, pumphouse, and storage.

### 3.6.1 Objectives

**3.6.1.1** To allow access to the Smoky River to provide future industrial activities with water.

**3.6.1.2** To accommodate low impact accessory uses that require direct access to the river.

### 3.6.2 Policies

**3.6.2.1** Allow for activities licensed for direct access to the river (intakes, pump stations, outfalls, water storage, treatment, groundwater return pumps, and pipelines).

**3.6.2.2** Maintain a minimum 200 metre development setback from the top-of-bank of the Smoky River to maintain the integrity of the river's edge and to accommodate wildlife movement and public access.

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## 3.7 Natural Features

Achieving the eco-industrial vision for the plan area involves respecting sensitive natural features, maintaining an ecological network, and providing opportunities for wildlife movement. The Plan will accomplish this by minimizing potential impacts to the Smoky River and its tributaries, other water courses, wetlands, prospective wet areas, potential connections, and other natural assets.

The **Natural Features** areas identified in **Figure 3 – Land Use Plan** constitute the majority of the plan area's watercourses with 100 metre development setbacks applied from top-of-bank. Additionally, 130 metre setbacks have been applied from the centre line of the existing Highway 40 right-of-way in accordance with policy 4.2.1. This is to accommodate future twinning of the highway and to provide a visual buffer for travelers on the highway.

Further, the opportunity and constraints analysis (see **Background Report**) revealed the potential for areas of historical and cultural significance within the plan area. As

these areas tend to follow major watercourses, maintaining a 100 metre development setback from the top-of-bank significantly reduces the potential for impact.

### 3.7.1 Objectives

**3.7.1.1** To ensure that sensitive environmental features are identified and preserved throughout the plan area.

**3.7.1.2** To identify opportunities for wildlife movement and maintain an ecological network.

**3.7.1.3** To identify and conserve environmental, traditional resource, and historic areas.

**3.7.1.4** To maintain opportunities for recreational and traditional uses such as hunting, fishing, and trapping.

### 3.7.2 Policies

**3.7.2.1 Natural Features** shall, to the greatest extent possible, remain undisturbed.

**3.7.2.2** The **Watercourse Connection**, indicated in **Figure 3 – Land Use Plan**, shall provide additional connectivity within the system of Natural Features for wildlife movement and permeability.

**3.7.2.3** Maintain a 100 metre development setback from the top-of-bank of all watercourses designated as **Natural Features**, to maintain the integrity of the river's edge and to accommodate wildlife movement and public access.

# 4 TRANSPORTATION

A long-term transportation network for the District is illustrated in **Figure 4 – Transportation and Infrastructure Plan**. The internal road network consists of arterial and collector roads with access to and from Highway 40. Alberta Provincial Highway 40 travels between Grande Prairie and Grande Cache, partially bisecting the study area from the north to the south. Highway 40 has current traffic volumes in the order of 5,000 vehicles per day. Currently, 37% of that traffic is trucking (for comparison, the provincial average is 15%). The District will increase traffic volumes and trigger the need for improvements. Because of this, prioritizing safety and efficiency on Highway 40 is vital to the success of the District. Additionally, a conceptual network of local roads represents one potential scenario for how access may be provided to individual industrial parcels.

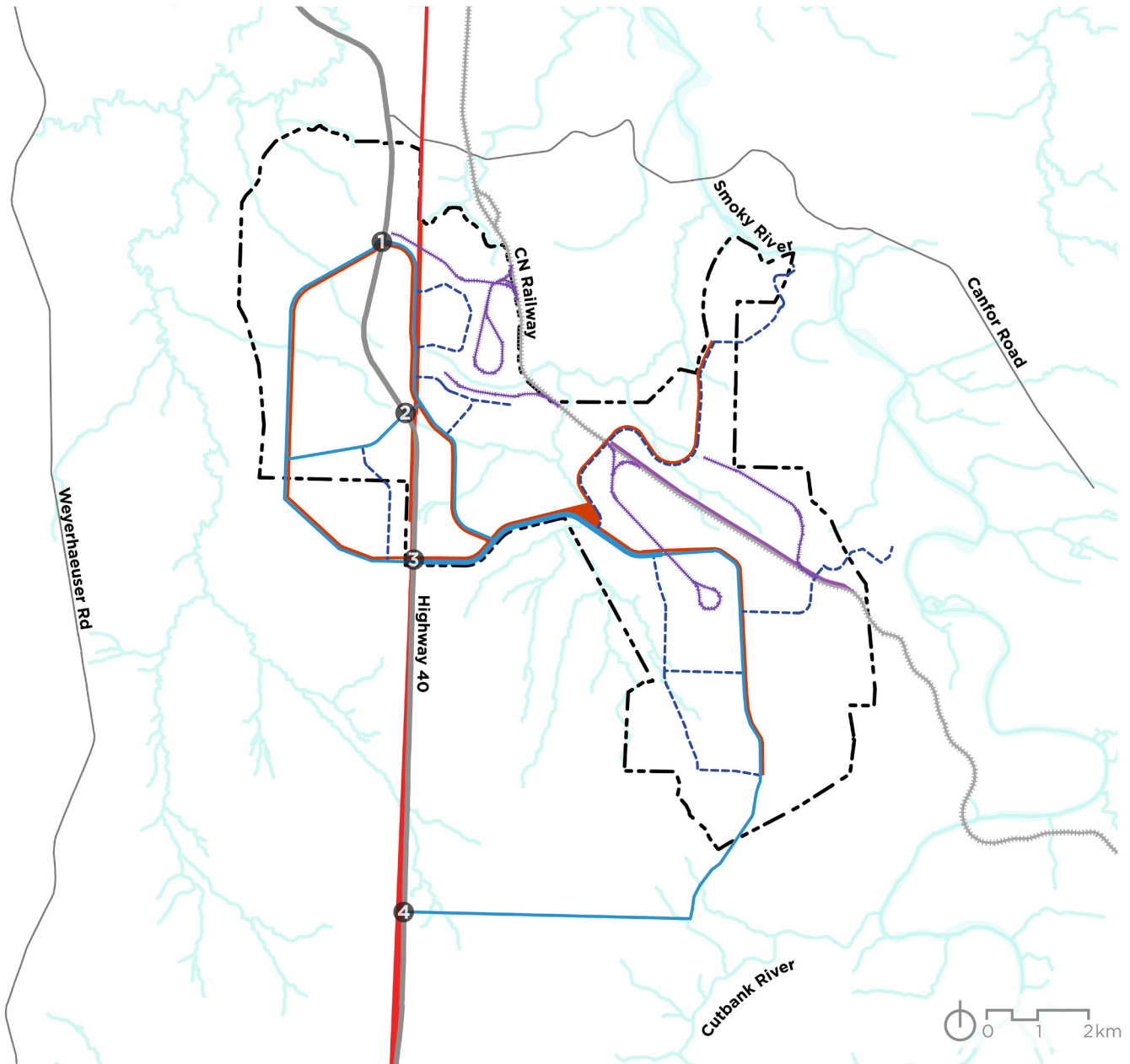
The transportation network includes rail with both the existing CN rail line and potential rail extensions providing access to the plan area. Approximately 27 hectares have been identified on the north side of the CN rail line for **CN Reserve**. As the District develops, there will be a need for CN to expand its services in the area. The **CN Reserve** land is intended to help CN meet this requirement by enabling CN to construct siding and associated infrastructure as needed. This may allow for trains to bypass the Grande Prairie rail yard altogether, opting instead to operate within the District before turning around and heading south to Edmonton and beyond.





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## 4.1 Objectives

- 4.1.1** To provide a safe and efficient transportation network to, from, and within the plan area.
- 4.1.2** To prioritize the safety of all travelers on Highway 40.
- 4.1.3** To mitigate traffic impacts to Highway 40.
- 4.1.4** To minimize creek crossings and other environmental impacts.
- 4.1.5** To maximize the potential for rail service to, from, and within the plan area, thereby reducing the effect on the highway.
- 4.1.6** To provide space for CN expansion.
- 4.1.7** To work with industry to identify opportunities for Transportation Demand Management. Shuttle services, car-sharing, and carpooling may be explored as options.
- 4.1.8** To manage public access to the plan area.

**Figure 04: Transportation and Infrastructure Plan**



- |   |                  |   |                                     |   |                         |
|---|------------------|---|-------------------------------------|---|-------------------------|
|  | Plan Area        |  | Arterial Road 4-lane Divided 65m    |  | Highway 40 right-of-way |
|  | Powerline        |  | Collector Road 4-lane Undivided 50m |  | CN Reserve              |
|  | Watercourse      |  | Local Road 40m                      |  | Access Point            |
|  | Utility Corridor |  | Potential Railway                   |   |                         |



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## 4.2 Policies

**4.2.1** Maintain a setback of 130 metres from the centre line of the existing Highway 40 right-of-way, as indicated in [Figure 4 – Transportation and Infrastructure Plan](#). This is to accommodate future twinning of Highway 40 and to provide a visual buffer.

**4.2.2** Access to the plan area will be provided by four **Access Points** from Highway 40, as indicated in [Figure 4 – Transportation and Infrastructure Plan](#).

- a)** Greenview will work with Alberta Transportation on any required improvements to **Access Points** from Highway 40.
- b)** Additional **Access Points** to and from Highway 40, beyond those indicated in [Figure 4 – Transportation and Infrastructure Plan](#) are not permitted.

**4.2.3** Regional emergency access will be facilitated by Highway 40, the Forestry Trunk Road, the Weyerhaeuser Road, and the Canfor Road ([Figure 1 – Regional Context](#)).

**4.2.4** Existing internal roads may be used on an interim basis until the pace of development triggers the need for upgrades.

- a)** Upgrades to internal roads will be phased in alignment with the requirements of new development.
- b)** Greenview will manage the phasing and funding of the road network on a cost-sharing basis. A transportation levy may be used to fund the road network.

**4.2.5** The road network, identified in [Figure 4 – Transportation and Infrastructure Plan](#) shall be designed to accommodate ultimate traffic loads in accordance with Greenview standards.

- a)** Construction of the road network shall be in accordance with the road classifications and standards established by Greenview's Development Guidelines and Municipal Servicing Standards, and Alberta Transportation.

**b)** The Subdivision and Development Permit process will determine future road alignment, in accordance with policy 4.2.3.

**c)** Wherever possible, roads shall be designed to respect the existing topography and landscape, thus minimizing the need for site alteration.

**d)** The design process shall ensure safe and easy access to individual industrial parcels.

**4.2.6** Lands identified as **CN Reserve** in [Figure 4 – Transportation and Infrastructure Plan](#) shall be reserved for the future expansion of CN rail infrastructure.

**4.2.7** Greenview will require industry to incorporate Transportation Demand Management measures into development applications.

**4.2.8** Greenview will work with the City of Grande Prairie and the County of Grande Prairie to identify locations for park and ride facilities.

# 5 UTILITIES AND SERVICING

Given the nature of anticipated uses, there will be a need for reliable utilities, including power, water, telecommunications, feedstock, and gas. Additionally, to achieve the eco-industrial objectives of the Plan, these utilities must be provided in a highly efficient, cost-effective, and sustainable manner. To this end, select lands have been dedicated for the purpose of utility corridors, the intention of which is to co-locate utility infrastructure within rights-of-way that are shared with roads ([Figure 4 – Transportation and Infrastructure Plan](#)). Doing so maximizes the plan area’s developable area, protects the most sensitive areas, and ensures efficient delivery.

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## 5.1 Water Quality and Distribution

Future heavy industrial proponents will require water for operations. Process water requirements are likely to vary significantly among users and therefore emphasis is to be placed on treating water on-site and re-using water to the greatest extent possible. Doing so will limit the amount of water drawn from the Smoky River and reduce the overall environmental impact of the District.

### 5.1.1 Objectives

**5.1.1.1** To limit the amount of water drawn from the Smoky River.

**5.1.1.2** To ensure efficient distribution of water throughout the plan area.

### 5.1.2 Policies

**5.1.2.1** Source all water supply from the Smoky River.

**5.1.2.2** Greenview will manage all water infrastructure.

**5.1.2.3** Protect utility corridors for the provision of water distribution pipelines.

**5.1.2.4** Ensure that applications for subdivision and development include measures that minimize or mitigate any negative impacts on water quality, flow, supply deterioration, soil erosion, and groundwater quality and availability.

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## 5.2 Wastewater Management

In the Plan area's proposed industrial setting wastewater can be either domestic sewage or process waste. In both cases, the responsibility for treating wastewater will rest with individual industrial proponents. Whenever possible, wastewater will be treated to a quality that is sufficient for use either by the original proponent or for other activities within the District. In circumstances where this is not possible, wastewater will be treated to meet all of Alberta Environment and Parks quality parameters prior to being discharged into the natural drainage system.

### 5.2.1 Objectives

**5.2.1.1** To promote efficient treatment and re-use of water.

### 5.2.2 Policies

**5.2.2.1** Industry is required to manage and treat their own wastewater.

**5.2.2.2** Industry is encouraged to treat and to the greatest extent possible, re-use wastewater.

**5.2.2.3** Greenview may maintain a central return and discharge point for any industrial process wastewater returned to the natural drainage system.

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## 5.3 Stormwater Management

The collection and management of stormwater will be the responsibility of individual industrial developments and will be required to achieve the highest standards.

### 5.3.1 Objectives

**5.3.1.1** To ensure best practices in stormwater management in support of the eco-industrial vision.

### 5.3.2 Policies

**5.3.2.1** Industry is required to prepare individual stormwater management plans.

**5.3.2.2** Stormwater will be collected in ponds providing the storage necessary to attenuate run off leaving the water system to the 100-year predevelopment flow rate.

**5.3.2.3** Industry will be encouraged to integrate stormwater management facilities with natural wetlands to aid in protecting the long-term health of wetlands.

**5.3.2.4** Low impact development and other innovative means to manage stormwater runoff and ultimate discharge into the Smoky River and other water bodies are encouraged.

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## 5.4 Power Transmission

There is an existing power transmission line that runs north-south through the plan area yet, this line is not capable of meeting all the needs of future heavy industrial activities. Supplying power to the plan area therefore requires upgrades to the existing system as well as local sub-stations. Utility corridors will facilitate the distribution of power infrastructure to industrial parcel boundaries.

### 5.4.1 Objectives

**5.4.1.1** To ensure efficient distribution of power throughout the plan area.

### 5.4.2 Policies

**5.4.2.1** Industry is strongly encouraged to develop co-generation power facilities to reduce the load on the existing system, with excess power being sold back to the grid.

**5.4.2.2** Utility corridors shall be prioritized for the distribution of power.

---

## 5.5 Pipelines and Wells

A complex network of pipelines and wells is already located within the plan area. As heavy industrial activity concentrates within the plan area new pipelines and well infrastructure will need to be built. Additionally, the abandoned wells in the plan area are subject to Provincial regulations.

### 5.5.1 Objectives

**5.5.1.1** To ensure future development enables pipeline and well infrastructure expansion.

### 5.5.2 Policies

**5.5.2.1** Future developments within the plan area may be required to dedicate rights-of-way for future key pipeline routes through mechanisms such as easements or rights-of-way.

**5.5.2.2** Future developments within the plan area must conform to AER's Directive 079 – Surface Development in Proximity to Abandoned Wells.

# 6 SUSTAINABILITY

The plan area will become home to a heavy eco-industrial district that achieves sustainable development by encouraging cooperation between industrial operators. Shared information, materials, water, energy, infrastructure, and resources will increase economic gains and improve the environment. This co-operation will reduce both waste and pollution.

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## 6.1 Objectives

**6.1.1** To create a heavy eco-industrial district, where heavy industrial operators are encouraged to share resources, materials, infrastructure, information, and waste.

**6.1.2** To attract environmentally conscious heavy industrial development.

**6.1.3** To limit the District's impact on the environment.

**6.1.4** To build and maintain positive relationships with the local communities.

---

## 6.2 Policies

**6.2.1** Industrial proponents will explore shared utilities and infrastructures such as pipelines, transmission lines, substations, telecommunication, and waste management initiatives.

**6.2.2** At the development permit stage, industrial projects will ensure sufficient setbacks and open space to provide for wildlife movement and to accommodate on-site stormwater management facilities, in accordance with 5.3.2.2 and 5.3.2.3.

**6.2.3** Industry is encouraged to incentivize their employees to choose alternatives to single-occupancy vehicles. This may include parking rebates for car-pooling or car-sharing. The Plan also encourages paid shuttle commutes.

**6.2.4** Industry is encouraged to conserve, treat, and re-use process water.

- a) Industry should work with other industrial proponents in the area when developing their stormwater management plans, with a view towards operating shared stormwater management systems.
- b) Industry is required to retain as much stormwater on-site as possible to use as process or general operations water. This will reduce the amount of water drawn from the Smoky River.
- c) Industry should work with other industrial proponents in the area when developing wastewater management plans, with a view towards operating shared wastewater management systems.

**6.2.5** Industry is encouraged to build relationships with communities in the region through, but not limited to, consultation and engagement efforts, impact and benefit agreements, and community-based monitoring.

# 7 ENVIRONMENTAL PROTECTION

The plan area is rich with natural assets and forms an important part of the Upper Peace Region’s ecological network. The Plan strives to maintain and enhance sensitive environmental features wherever possible. The preliminary study area boundary (see [Background Report](#)) captured 32,500 hectares of land, including wildlife sensitivity areas such as a Secondary Grizzly Bear Zone, a potential Trumpeter Swan Waterbody and a Key Wildlife and Biodiversity Zone. In addition, a complex network of watercourses and wetlands exists in the area, including the Smoky River and its tributaries. A robust constraints analysis (see [Background Report](#)) took the environmental considerations and refined the plan area to capture only those lands best suited for development.

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## 7.1 Objective

**7.1.1** To maintain the plan area’s sensitive environmental features such as wetlands, watercourses, the Smoky River Valley, steep slopes, and key wildlife and biodiversity areas, to the greatest extent possible.

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## 7.2 Policies

**7.2.1** Greenview may require a range of studies to help identify and where feasible maintain the plan area’s many and varied natural assets. These studies may include Environmental Site Assessments and Biophysical Impact Assessments. The development application process will identify these studies.

- a)** Ensure, to the greatest extent possible, that impacts to sensitive natural assets (vegetation and wetlands) are minimized or, if possible, avoided altogether. If negative impacts cannot be avoided or minimized, then off-sets or compensation for the natural asset shall be provided.
- b)** At the discretion of the Development Authority, a Wetland Assessment shall be prepared by a qualified professional for any development or subdivision proposal that is deemed to affect and/or potentially affect a wetland in accordance with the Alberta Wetland Policy.

**7.2.2** Maintain a minimum 200 metre development setback from the top-of-bank of the Smoky River and a 100 metre development setback from the top-of-bank of all other watercourses, to maintain the integrity of the river's/watercourses' edge and to accommodate wildlife movement and public access.

**7.2.3** Ensure that applications for subdivision and development include measures that minimize and/or mitigate any negative impacts on water quality, flow, supply deteriorations, soil erosion, and groundwater quality and availability.

- a) Mimic pre-development hydrologic conditions so far as possible in terms of ground infiltration and stormwater discharges.

**7.2.4** Reduce the spread of invasive species in accordance with the Alberta Invasive Species Management Framework.



# 8 HISTORICAL RESOURCE PROTECTION

There are areas of potential historical significance within the plan area, concentrated near the Smoky River valley and nearby watercourses. The application of development setbacks from top-of-bank will reduce interference with these areas. Given the intensity of use anticipated in the plan area, the Provincial government is in charge of issuing Historical Resource Act approval for Heavy Industrial development applications. This approval will be required whether or not historical resources have been previously identified.

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## 8.1 Objectives

**8.1.1** To ensure that any resources of historical significance are identified, evaluated, properly preserved, and potentially protected by qualified individuals.

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## 8.2 Policies

**8.2.1** Applications for development shall be referred to Alberta Culture and Tourism to assess potential impacts on historic resources.

**8.2.2** A Historic Resources Impact Assessment (HRIA) may be required by the Province prior to permit approval.

**8.2.3** Where required, the applicant shall, to the satisfaction of Alberta Culture and Tourism, undertake protective or mitigative measures identified in an HRIA report.

# 9 IMPLEMENTATION

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## 9.1 Authority of the ASP

The Plan is in conformance with Section 633 of the Municipal Government Act (MGA). The Plan guides and directs the specific land use, subdivision and development decisions that collectively determine the form that the District will take. Additionally, the Plan charts the initial course for an orderly, sustainable and compatible pattern of eco-industrial development.

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## 9.2 Plan Interpretation

Unless otherwise specified within the Plan, the boundaries or locations of any symbols or areas shown on a figure or map are approximate only, not absolute, and will be interpreted as such. They are not intended to define exact locations except where they coincide with clearly recognizable physical features or fixed boundaries, for example property lines or road and utility rights-of-way.

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## 9.3 Policy Interpretation

Where “shall” or “will” is used in a policy, the policy is considered mandatory. Where “should” or “may” is used in a policy, the intent is that the policy is to be complied with. However, the policy may be deviated from in a specific situation where the deviation is necessary to address unique circumstances that will otherwise render compliance impractical or impossible, or to allow an acceptable alternate means to achieve the general intent of the policy to be introduced.

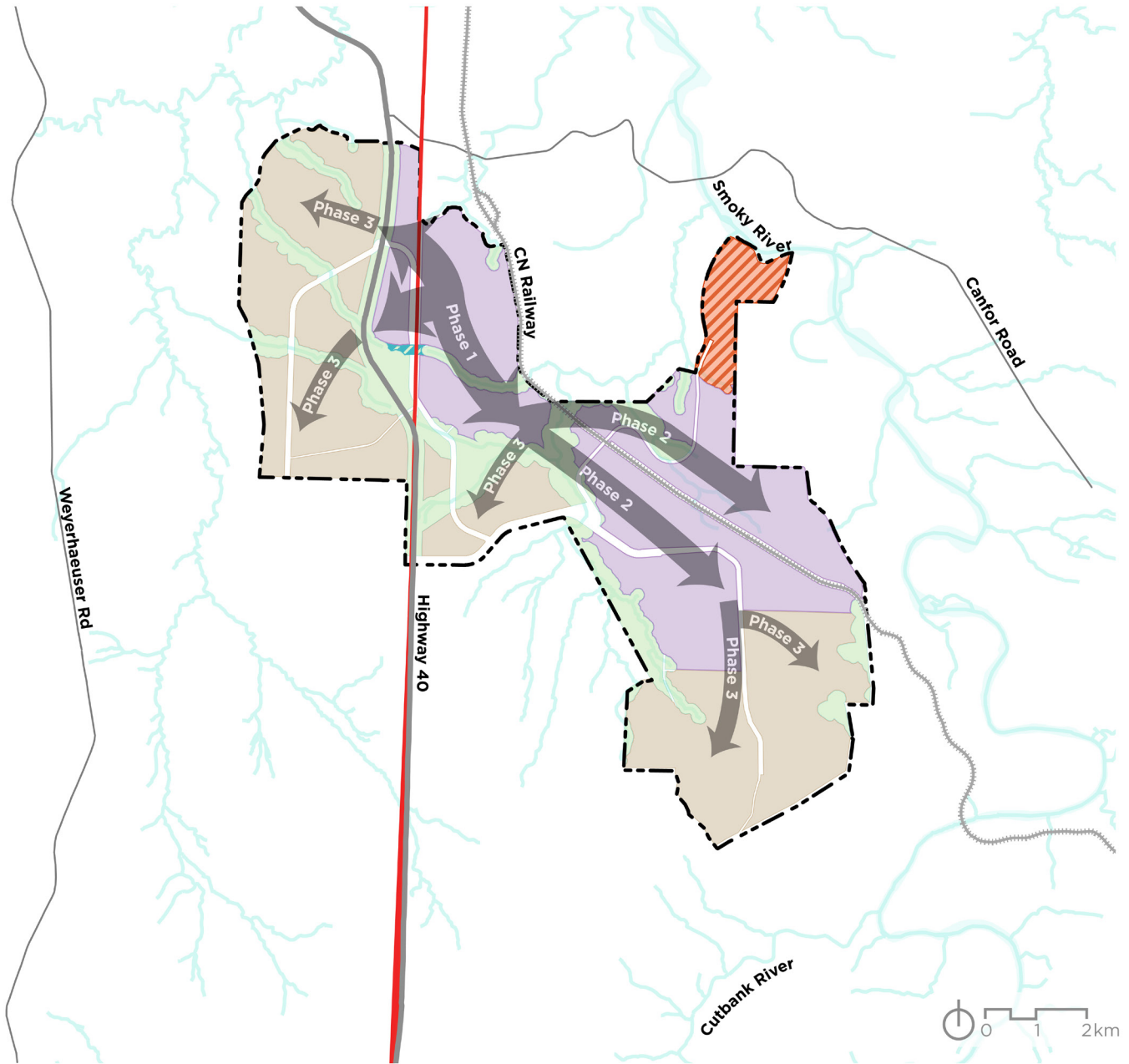
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## 9.4 Plan Limitations

An ASP is a high-level planning document that promotes a vision for an area and puts in place policies and guidelines that work towards achieving that vision. The policies and guidelines in the Plan are not to be interpreted as an approval for a use on a specific site. This Plan makes no representation that any particular site is suitable for a particular purpose as detailed site conditions or constraints must be assessed on a case-by-case basis as part of an application for Subdivision or Development Permit.

Additionally, while the Plan charts a course for the development of an eco-industrial district, the responsibility of achieving the principles of industrial ecology ultimately rests on industrial proponents.

**Figure 05: Development Staging**



- |  |  |
|--|--|
|  Plan Area              |  Heavy Industrial - General       |
|  Powerline              |  Heavy Industrial - Rail Oriented |
|  Watercourse            |  Natural Features                 |
|  Watercourse Connection |  Utility Area                     |

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## 9.5 Development Staging

Anticipated development patterns should be based on market conditions and the locational and infrastructure requirements of industry. Development is expected to start in the **Heavy Industrial – Rail-Oriented** area located in the north of the plan area between Highway 40 and the CN rail line. Road and rail serve this area well and it represents a logical first phase for the provision of power. Then development is expected to trend to the southeast following the existing CN rail line (**Figure 5 – Development Staging**).

**Stage 1:** Development of the **Heavy Industrial – Rail-Oriented** area located in the north of the plan area between Highway 40 and the CN rail line.

**Stage 2:** Development of the **Heavy-Industrial – Rail-Oriented** lands that straddle the CN rail line in the south of the plan area.

**Stage 3:** Development of all remaining areas.

### 9.5.1 Policies

**9.5.1.1** Greenview will work with industry and Alberta Environment and Parks (AEP) to establish a Development Staging Plan.

**9.5.1.2** Greenview will align service levels with the Development Staging Plan.

**9.5.1.3** Greenview will consult with forestry disposition holders and Registered Fur Management Area licensees when establishing a Development Staging Plan.

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## 9.6 Provincial Approval Processes and Review of Applications

The primary authority for approval of new industrial development in the plan area rests with Alberta Environment and Parks (AEP) and Alberta Energy Regulator (AER). The Alberta Aboriginal Consultation

Office (ACO) assesses the adequacy of First Nations and Métis Settlements consultation efforts and therefore also contributes to the approvals process.

All industrial development applications are reviewed subject to provincial processes and applicable legislation and policy. Applications must provide reliable information on the potential cumulative environmental effects within the activity's proposed area, as well as proposed environmental risk avoidance and mitigation strategies.

### 9.6.1 Policies

**9.6.1.1** At its discretion, Greenview may work with industry to meet Provincial requirements.

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## 9.7 Allocation of Public Land

The *Public Lands Act* and *Public Lands Administration Regulation* regulate the disposition of Crown land. This is administered by Alberta Environment and Parks (AEP) and the Alberta Energy Regulator (AER).

### 9.7.1 Policies

**9.7.1.1** Greenview will work with provincial authorities to ensure that if a public land sale occurs, the process adheres to the *Public Lands Act*, *Public Lands Administration Regulation*, and associated land sale policies.

**9.7.1.2** The Plan will inform public land sale considerations.

**9.7.1.3** Greenview will engage with existing disposition holders including, but not limited to, forestry disposition holders, Registered Fur Management Area (RFMA) licensees, Mineral Exploration licensees, and Aggregate Extraction licensees. Engagement will address issues including, but not limited to, developing an Easement Management Plan, a Staging Plan, and a Disposition strategy.

- a) Greenview recognizes existing forestry disposition holders and will work with existing holders to remove timber according to future development staging.
- b) Greenview will engage with existing forestry disposition holders towards the sequencing of removal and liquidation of timber affected by the Plan area.
- c) Greenview will allow continued access to RFMA license holders.

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## 9.8 Consultation

Before development approval, industrial proponents have to meet consultation requirements in accordance with the Municipal Government Act and Greenview. Additionally, First Nations and Métis Settlements whose treaty rights, traditional uses, or harvesting may be impacted must be consulted in accordance with the Government of Alberta's Policy and Guidelines on Consultation with First Nations and Métis Settlements on Land and Natural Resource Management.

### 9.8.1 Policies

**9.8.1.1** Greenview will meet Duty to Consult requirements for any Plan amendments, approvals, or land dispositions from the Crown, in accordance with the Municipal Government Act.

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## 9.9 Water Diversion License

A water license is required to divert and use water from the Smoky River, as per legislation established in the Water Act. The plan area will be serviced by one water intake, with Greenview being the applicant and eventual licensee. Prior to obtaining a water diversion license, Greenview must provide information, to the satisfaction of AEP, related to:

- Proposed intake location;
- Proposed storage location;
- Proposed end use location;
- Anticipated volume; and
- Purpose of use.

Applications for licenses and approvals under the Water Act may be coordinated with the Environmental Protection and Enhancement Act application but should be submitted separately.

# 10 RECOMMENDED FUTURE PLANS AND STUDIES

Implementation of the Plan will be supported by future reports and studies. These will provide scope and context for the servicing strategies for the plan area.

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## 10.1 Capital Plan

On-site and off-site costs of servicing and access improvements will be linked to the Development Staging Plan. Improvements will be financed through development and servicing agreements.

### 10.1.1 Policies

**10.1.1.1** Greenview will develop a Capital Plan that identifies service levels and creates a strategy for cost-sharing and/or cost recovery for shared utilities and transportation infrastructure improvements related to the Plan.

**10.1.1.2** Greenview will align service levels in the Capital Plan with the Staging Plan.

**10.1.1.3** The cost of all infrastructure upgrades identified in the Capital Plan will be considered during the development application process.

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## 10.2 Economic Impact Study

An Economic Impact Study will determine the effect of the District on the region and to what extent the region is market ready.

### 10.2.1 Policies

**10.2.1.1** Greenview shall endeavor to work with the County of Grande Prairie, the City of Grande Prairie, and the Province of Alberta to develop an Economic Impact Study with consideration to the Staging Plan and the Capital Plan.

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## 10.3 Monitoring and Communications Strategy

The Plan is a living document that guides development in the plan area with the best interests of the public and key stakeholders in mind. To this end, Greenview will establish a monitoring and communications strategy to ensure that the Plan remains relevant and effective.

### 10.3.1 Policies

**10.3.1.1** Greenview shall monitor the implementation and effectiveness of the Plan annually. This monitoring could include the application of eco-industrial principles and any emerging environmental issues and cumulative effects of industrial development.

**10.3.1.2** The Plan will be responsive to any information that results from existing provincial monitoring provisions.

**10.3.1.3** Greenview will support the coordination of both community-based baseline monitoring and community-based ongoing monitoring.

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**10.3.1.4** Greenview will distribute and encourage feedback on the findings of the monitoring process. Monitoring documents should be distributed to the public and all key stakeholders.

**10.3.1.5** A review of the Plan will occur every five years to determine its relevance and effectiveness. If the Plan is no longer relevant or effective, a new plan must be implemented.

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## 10.4 Transportation Master Plan

Greenview will prepare a Transportation Master Plan (TMP) in support of the Plan. The TMP will estimate phased traffic volumes on the internal road network and intersections with Highway 40.

### 10.4.1 Policies

**10.4.1.1** The TMP will address road requirements based on development staging and service levels.

**10.4.1.2** The TMP will provide the basis for estimating the cost of transportation related infrastructure for the Capital Plan.

**10.4.1.3** The TMP will identify required adjustments to intersection improvements.

**10.4.1.4** Industry is required to prepare Traffic Impact Assessments.

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## 10.5 Easement Management Plan

Greenview will prepare an Easement Management Plan in support of this Plan.

### 10.5.1 Policies

**10.5.1.1** The Easement Management Plan will address existing and anticipated future easement and right-of-way requirements.

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## 10.6 Emergency Services

### 10.6.1 Policies

**10.6.1.1** As a condition of a development permit, Greenview shall require proponents of heavy industrial applications to provide a Risk Assessment undertaken by a qualified professional.

**10.6.1.2** Greenview shall require Emergency Response Plans of each industrial proponent as a condition of the development permit, as per the Land Use Bylaw.

**10.6.1.3** Greenview will develop and maintain an Emergency Response Plan for the District once site-specific industry plans have been reviewed. The plan will identify and explore synergies in delivery of required emergency services.

**10.6.1.4** Greenview will develop an Emergency Services Building whose primary function is to support emergency incidents expected from increased industrial growth. Through the development of the Emergency Services Plan timing and location of the Emergency Service will be examined.

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## 10.7 Upper Peace Regional Plan (UPRP)

### 10.7.1 Policies

**10.7.1.1** Greenview will encourage the Province to develop the Upper Peace Regional Plan to support appropriate analysis and policy regarding regional transportation and regional extension of utility infrastructure in support of this Plan.

**10.7.1.2** The Plan will inform the development of the Upper Peace Regional Plan.

# **APPENDIX A**

## DEFINED TERMS



# DEFINED TERMS

**Access Points:** Locations for providing access to and from the plan area.

**Baseline Monitoring:** Establishing a base against which ongoing monitoring will be evaluated.

**Co-generation:** The use of a heat engine or power station to generate electricity and useful heat at the same time.

**Community-based Monitoring:** A framework for members of the community to track environmental changes and local impacts associated with the District and to generate demands, suggestions, critiques, and data to be provided to Greenview.

**The District:** The proposed heavy eco-industrial district.

**Low Impact Accessory Uses:** Uses that are supplementary to heavy industrial activity and have comparatively low environmental impacts. These include water storage, treatment facilities, pumphouses, and water intakes.

**Low Impact Development:** An approach to stormwater management that emphasizes conservation and use of on-site natural features to protect water quality.

**Market Ready:** The degree to which the region is ready to accommodate industrial activity of the scale envisioned for the District.

**Natural Features:** A municipal land use designation that captures environmentally sensitive areas, visual buffers, and other areas that are to remain undisturbed.

**Petrochemical Facilities:** Convert natural resources such as crude oil, natural gas, and minerals into products for a wide range of applications.

**The Plan:** The Greenview Industrial Gateway Industrial Area Structure Plan.

**Plan Area:** The Greenview Industrial Gateway Industrial Area Structure Plan boundary.

**Stormwater Management Plan:** A plan that indicates the pre- and post-development drainage systems including any required stormwater management features.

**Transportation Demand Management (TDM):** The application of strategies and policies to reduce travel demand.

**Traditional Resource Use:** Refers to places, animals and vegetation on the landscape that are of cultural importance to First Nations and Métis Settlements. This includes, but is not limited to:

- Hunting
- Trapping
- Fishing
- Harvesting plant materials for food, medicines, and cultural and traditional crafts
- Areas of cultural importance

The traditional use of resources has a cultural, spiritual, and economic value to the users, including First Nations and Métis Settlements.

**Value-added Processing:** Increases the profit derived from natural resources, creates more permanent jobs than straight extraction, and provides some cushioning for the fluctuations in world prices.

# **APPENDIX B**

## **LAND USE SUMMARY**

# LAND USE SUMMARY

<b>Land Use Area</b>	<b>Area in hectares</b>
<b>Total Plan Area</b>	<b>7,551.7</b>
<b>Heavy Industrial – General</b>	<b>2,895.5</b>
<b>Heavy Industrial – Rail-Oriented</b>	<b>2,625.8</b>
<b>Natural Features</b>	<b>1,307.9</b>
<b>Utility Area</b>	<b>258.9</b>
<b>Utility Corridors</b>	<b>234.5</b>
<b>Transportation rights-of-way</b>	<b>199.8</b>
<b>CN Reserve</b>	<b>27.4</b>