March 2023

CGC Wheatland Wallboard Manufacturing Plant Area Concept Plan

WHEATLAND COUNTY

Table of Contents

1 INTRODUCTION AND BACKGROUND 1

1.1 About CGC 1

1.2 Development Process Introduction 1

1.3 Purpose 1

1.4 Wheatland Wallboard Manufacturing Plant 2

1.5 Benefit to the Community 3

2 REGULATORY AND POLICY CONTEXT 5

2.1 Wheatland County Regional Growth Management Strategy 5

2.2 Intermunicipal Development Plans 5

2.3 Wheatland County Municipal Development Plan 7

2.4 Goldfinch Industrial Area Structure Plan 8

2.5 Wheatland County Landscape and Screening Guidelines 10

2.6 Land Use Bylaw 10

3 LOCATION AND CONTEXT 11

3.1 Plan Area 12

3.2 Existing and Surrounding Land Uses 12

4 3.3 Development Constraints 14

DEVELOPMENT PLAN 25

4.1 Land Use 25

4.2 Plant Site Plan 26

4.3 TIA and Transportation Concept 27

4.4 Rail 29

4.5 Water Servicing and Water Consumption Estimates 30

4.6 Sanitary Servicing and Sanitary Wastewater Generation Estimates 31

4.7 Storm Water Management 32

4.8 Solar Energy 33

4.9 Telecommunications, Power & Gas Servicing 33

4.10 Solid Waste and Recycling 34

4.11 Emergency Services 34

MITIGATION PLAN 35
OPEN SPACE AND MUNICIPAL RESERVE 37
6.1 Municipal Reserve 37
6.2 Open Space 37
IMPLEMENTATION 39
7.1 Development Phasing 39
7.2 Land Use Designations and Permitting 39
7.3 Construction Management 39
PUBLIC ENGAGEMENT 40
8.1 Public Engagement Process 40
8.2 Community Feedback 41
APPENDICES ERROR! BOOKMARK NOT DEFINED.
APPENDIX A: Goldfinch ASP Relevant Policies
APPENDIX B: Mitigation Plan
APPENDIX C: Environmental Impacts and Mitigation Measures

Figures

Figure 1 – Future Growth Areas as per the Wheatland County Growth Management Strategy 5
Figure 2 - Locations of Intermunicipal Development Plans near CGC site 6
Figure 3 – Goldfinch Area Structure Plan Development Concept (Amended) 9
Figure 4 – Current Land Use Designations within and adjacent to CGC site 11
Figure 5 – Context Map, Location of ACP 12
Figure 6 – Existing and Surrounding Land Uses 13
Figure 7 – Site Topography and Wetlands 16
Figure 8 – Location of Areas of Potential Concern 20
Figure 9 - Easements, Wells and Pipelines 22
Figure 10 - Geotechnical Investigation Borehole Locations 23
Figure 11 - ASP Land Use Designation of CGC site 25
Figure 12 - CGC Wallboard Plant Site Plan 26
Figure 13 – Transportation Concept 28
Figure 14 - Proposed Rail Loop Design Concept 30
Figure 15 - Stormwater Management Concept 32
Figure 16 - Mitigation Plan 36
Figure 17 - Community Newsletter Mail-Out 41
Figure 18 - Strathmore Times Advert 42

INTRODUCTION AND BACKGROUND

1.1 ABOUT CGC

1

CGC Inc. is a leading marketer, manufacturer, and distributer of gypsum wallboard products, interior finishing materials, and suspended acoustical ceilings in Canada. CGC Inc. began in Nova Scotia in 1907, primarily with mining and exportation of gypsum rock to the United States.

Through decades of product development and market expansion, CGC Inc. is recognized as a key player in Canada's building materials industry, supplying innovative wall and ceiling products to construction markets within residential, commercial, and institutional sectors. Currently, CGC Inc. operates three mines, five plants, and several distribution and customer service centres across the country.

USG is CGC Inc.'s parent company and is the leading drywall manufacturer in North America. USG has manufacturing, sales and distribution facilities in several international markets, and sells its products around the world.

CGC Inc.'s vision is to be a world leader in building products and innovation solutions to create sustainable, inviting spaces, which extends beyond manufacturing, to its employees, communities and the environment. CGC Inc. commitment to the environment includes a focus on reducing waste, using resources more efficiently, and transforming manufacturing by-products into valuable resources.

CGC Inc. has selected a strategic location in Wheatland County to develop a Wallboard Manufacturing Plant. This Area Concept Plan (ACP) includes details of the plan area and the proposed development in alignment with Wheatland County policy and regulations.

1.2 DEVELOPMENT PROCESS INTRODUCTION

The development of an ACP is required by Wheatland County in order to present a planning policy framework and a future land use concept to guide the preparation of future Area Structure Plans within the ACP area, promote orderly development within the area encompassed by the plan boundaries, and provide guidance to the County for future zoning, subdivision, and development proposals.

This ACP, the CGC Wheatland Wallboard Manufacturing Plan Area Concept Plan (the 'ACP'), has been submitted to support the Goldfinch Industrial Area Structure Plan Amendment Application, as well as a land-use redesignation application.

As detailed in the following sections, the proposed Wallboard Plant will be considered a 'heavy industrial' development by the County. In order to obtain the required approvals for development, the Goldfinch ASP must be amended, as the CGC site is designated currently as 'light industrial' per **Figure 7** – Development Concept. Pertaining to the County's Land Use Bylaw No. 2016-01, presently the CGC site is designated AG- Agricultural General District. In order to provide consistency with the proposed Wallboard Plant land-use concept as per this ACP, and comply with the ASP amendment, the subject CGC site must be redesignated to II – Intensive Industrial District.

1.3 PURPOSE

The purpose of this ACP is to provide a comprehensive planning framework that will guide the development of the CGC Wheatland Wallboard Manufacturing Plant in a form that is consistent with Wheatland County's strategic

objective of accommodating larger format business development opportunities to support the County's economic growth.

This ACP provides a detailed description of how the Wallboard Plant will be constructed and serviced and also provides detailed information regarding the proposed site's existing conditions (biophysical, environmental, historical, etc.) and future serving strategies (shallow utilities, transportation rail, servicing, etc.). measures to mitigate the impact of the Wallboard Plant on the physical and human environments are described within this ACP, as well as the benefits this development will bring to the local and regional community.

While efforts have been made for this ACP to provide as much accurate information as possible, this ACP reflects the intention of CGC in constructing the Wallboard Plant as of the date hereof. As planning progresses, the final specifications of the Wallboard Plant may be subject to alteration. Further, the final construction of the Wallboard Plant will be subject to CGC receiving all of the required Municipal, Provincial, and Federal approvals to proceed.

1.4 WHEATLAND WALLBOARD MANUFACTURING PLANT

Plant Operations

CGC is proposing to develop a wallboard manufacturing plant within Wheatland County, in the Goldfinch Area Structure Plan Area, as illustrated in **Figures 1** and **2**. The Wallboard Plant will be constructed adjacent to Township Road 222 which borders the site's northern side and will receive the majority of its raw product (natural gypsum rock) via rail from the CP line that runs parallel to the southern boundary of the site. A new rail switch will allow rail cars to enter the site and maneuver around an onsite rail loop and associated spurs that are able to occupy up to 120 cars and associated engines.

The Wallboard Plant will consist of a 200,000 square foot manufacturing facility, an associated raw product processing mill, and an enclosed raw product storage facility. The manufactured wallboard product will be stored in a warehouse on-site before being loaded onto trucks for delivery throughout Alberta and Western Canada. The plant will operate 24 hours a day and create over 100 permanent jobs within Wheatland County.

CGC is committed to environmental sustainability and is proposing to locate a solar array within the site to supply power to the plant that has the potential to feed surplus power into the local electricity grid. Elsewhere on the site, provisions for truck parking, employee car parking and visitor parking has been accommodated. External lighting for the site is being designed to minimise light spill into the surrounding rural lands.

CGC has developed a comprehensive visual and noise mitigation plan that adheres to the provisions of the Goldfinch Area Structure Plan and focuses on a meaningful transition between industrial and rural uses. A significant feature of the mitigation plan is the development of earth bunding and evergreen screening that will avoid significant effects on neighbouring properties.

It is anticipated that the Wallboard Plant will be connected to the proposed Wheatland County Goldfinch Reticulated Raw Water Line. Water to be used for the facilities' processes will be filtered and supplied directly to the facility. Raw water for office and staff use will be treated to potable standards via an onsite treatment facility. No industrial process wastewater will be discharged from the plant; sanitary wastewater will be treated and disposed of on site via a purpose designed and constructed treatment system and mounded infiltration system located in the site's southwestern corner. Stormwater from on-site buildings and hardstand will be collected and directed to a purpose designed and built detention and treatment pond, before being used to irrigate the southern half of the site. In addition, modern environmental control systems will be an integral part of the plant design to minimize air emissions, noise and dust.

Natural gypsum rock arrives at the site and is stockpiled within an enclosed building. The raw product will move through a series of treatments and processes before entering the wallboard manufacturing line. The storage and movement of raw gypsum product throughout the site is undertaken in fully enclosed conveyor systems, air

conveyance systems, and storage buildings. Great care will be taken to avoid any onsite dust created from the conveyance of raw product.

Within the facility, gypsum powder will be combined with water to form a pliable mud before entering an automated wallboard manufacturing line, that will create, dry, and cut the wallboard. As the board is dried, water vapor is emitted from the process. Some of this water vapour will be condensed and recycled, however, the majority of the vapour will exit the plant via an exhaust stack. Any waste product or edgings are fed back into the facility as raw material.

The final product, wallboard, is used globally in the building industry and is in high demand in Western Canada. The product will be stored on-site before being loaded on trucks and rail cars and shipped to sites throughout Western Canada.

CGC Inc. has applied to *Alberta Environment and Sustainable Resource Development* (AESRD) for approval to construct and operate the plant under the *Environmental Protection and Enhancement Act* (EPEA) and the *Water Act*. A high level of environmental stewardship will be documented by monitoring, reporting and inspection.

Rail Operations

The Wallboard Plant will receive regular deliveries of raw product to the site via CP rail line that is located to the south of the site. A rail loop system will be developed on site and will enable all rail cars to be parked onsite and rotate ted to the offloading conveyor system. Raw product will move through processing via conveyor and air conveyance.

Specifically, the site's rail operations will consist of the following elements:

- Bulk train or unit trains of raw naturally occurring gypsum rock (up to 120 cars) will arrive every 10 to 14 days;
- A relatively small portion (typically less than 5% of the total train volume) of other products, such as paper, will arrive via train car;
- Once rail cars arrive on site, they will be emptied into an unloading hopper;
- Empty rail car trains will be stored onsite in the rail loop and sidings until they are collected by CP rail; and
- A small number of rail cars will be periodically loaded with finished product to be shipped across Western Canada.

Solar Array

The Wallboard Plant will be powered in part via a solar array to be situated centrally within the site. This array will supply the plant with an environmentally friendly electricity source.

1.5 BENEFIT TO THE COMMUNITY

The facilitation of the project's development will require a large capital investment along with hundreds of thousands of hours of employment to construct the plant and rail yard. Over 100 permanent full time positions and as many, or more indirect jobs will be required to operate and maintain the facility. The types of jobs created will consist of the following positions:

- Plant Manager;
- Department Managers;
- Project Engineers;
- Production Supervisors / Foremen;

- Production Operators / Technicians (requires a Grade 12 education with a manufacturing background);
- Maintenance staff: Journeymen and Apprentice Millwrights;
- Electricians;
- Commercial / Logistics staff; and
- Administration and Environment staff, Health and Safety experts and laboratory staff.

Third party employment generated by the Wallboard Plant will be required for:

- Truck Drivers;
- Uniform / clothing / PPE manufacturers (for employees);
- Trash removal; and
- Landscaping / weed control.

The development of the Wallboard Plant is expected to result in an increase in demand for home ownership within the County. CGC and their contractors will utilize local suppliers where practical during the construction phases of the work to further support the local / regional economy.

The Wallboard Plant will also benefit construction projects within Wheatland County and Western Canada by generating an extra supply of certain construction materials into the market.

REGULATORY AND POLICY CONTEXT

2.1 WHEATLAND COUNTY REGIONAL GROWTH MANAGEMENT STRATEGY

2 The *Wheatland County Growth Management Strategy* (RGMS) was developed in 2011 to guide future development within the County over the next 40 years. The RGMS reflects the vision and aspirations of residents, landowners, and other stakeholders, while promoting and maintaining the unique natural and physical qualities of the area. The RGMS accomplishes the goal of sustainable, nodal development through a regional future growth concept that connects and integrates population and employment with land use, infrastructure and transportation, economic development, and community services.

The RGMS outlines growth under four main categories: *Growth Nodes*, *Rural Community Nodes*, *Potential Intermunicipal Areas*, and *Potential Business Industrial / Commercial Corridor*.

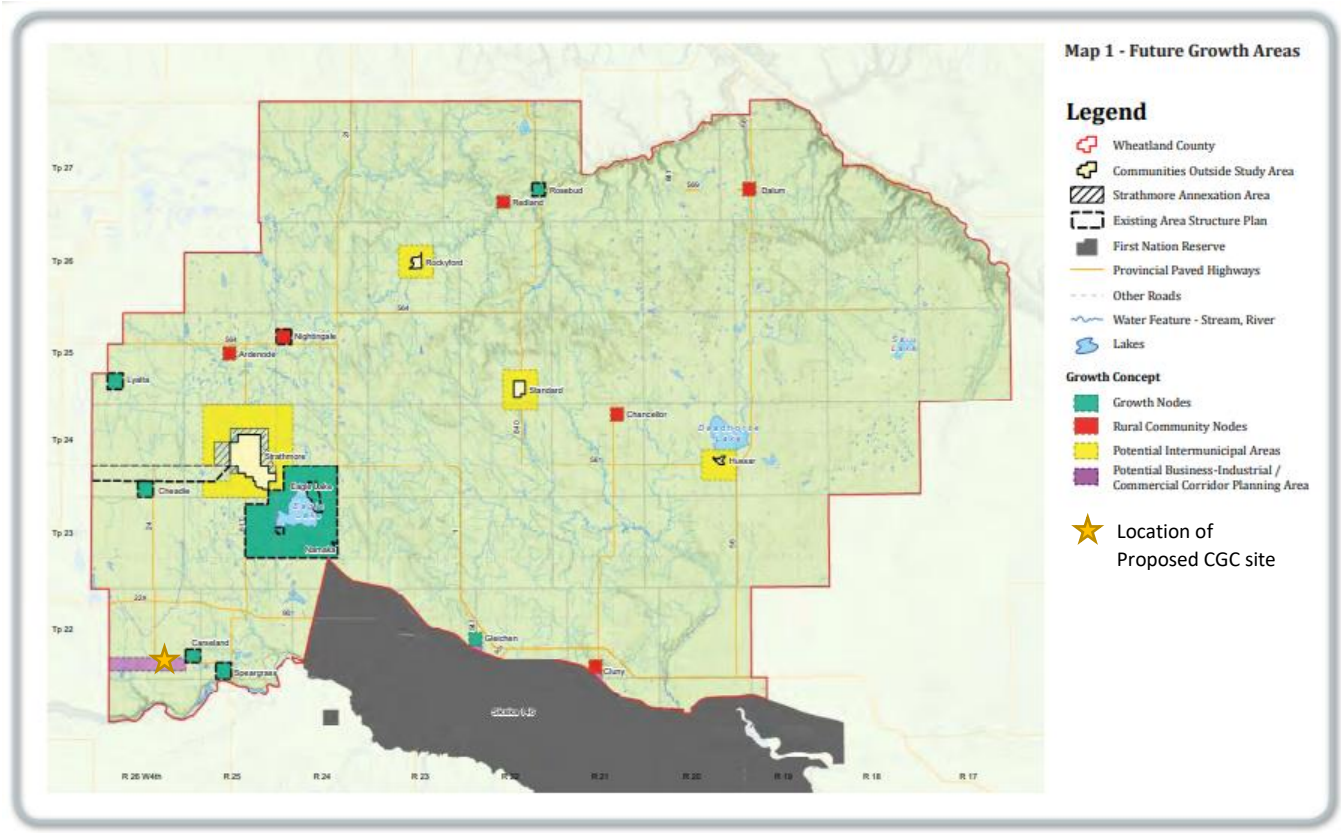


Figure 1 – Future Growth Areas as per the Wheatland County Growth Management Strategy

The CGC site is located within the *Potential Business – Industrial / Commercial Corridor* area, which is located at the southwest corner of Wheatland County, see **Figure 1**.

2.2 INTERMUNICIPAL DEVELOPMENT PLANS

Three separate Intermunicipal Development Plans (IDPs) have been adopted near the Goldfinch Area Structure Plan area and the proposed location of the CGC site, see **Figure 2**. As the Wheatland County / Rocky View

County IDP is located within part of the Goldfinch Area Structure Plan's site, this is the only IDP's whose policies will impact / must be considered for the CGC development proposal.

The Wheatland County / Rocky View County IDP was adopted in 2021. The purpose of this IDP is to foster a collaborative planning approach for lands along the common border between the two municipalities.

As this ACP will support the Goldfinch Industrial Area Structure Plan Amendment application, the following IDP policies must be recognized:

- *4.3.9 A newly proposed statutory plan or amendment to the plan (e.g. Intermunicipal Development Plans, Area Redevelopment Plans and Area Structure Plans) shall be referred to the other municipality for comment prior to a public hearing.*
- *4.3.13 All Land Use Bylaw amendments pertaining to the Plan Area shall be referred o the other municipality prior to a public hearing.*

Therefore, this ACP and its two associated amendments must be circulated to Rocky View County prior to adoption.

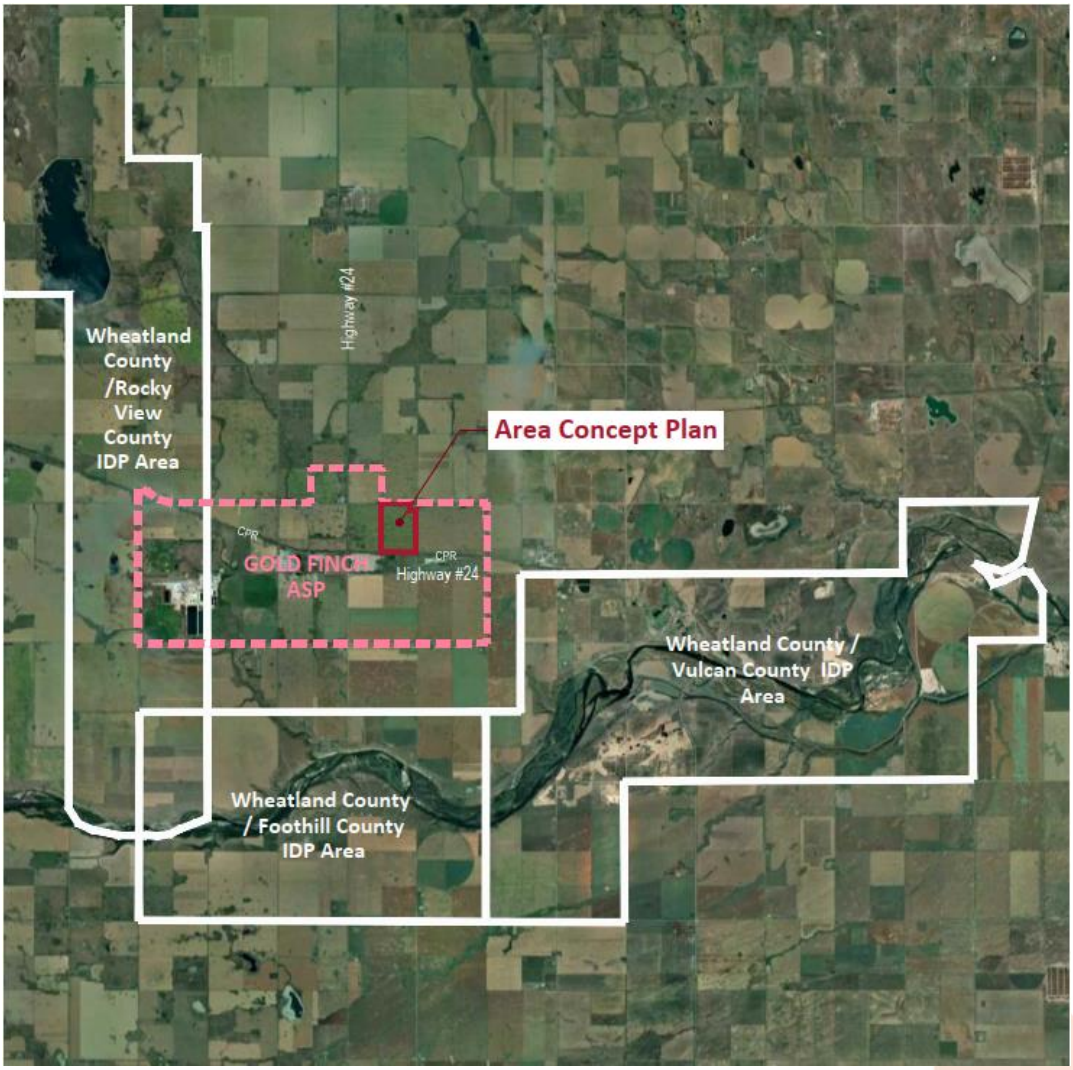


Figure 2 - Locations of Intermunicipal Development Plans near CGC site

2.3 WHEATLAND COUNTY MUNICIPAL DEVELOPMENT PLAN

The *Wheatland County Municipal Development Plan* (MDP) was adopted in 2013. The purpose of this MDP is to provide a general picture of what the County is to look like in the future and an overall direction on how this can be achieved. It is a policy document adopted by Council that provides general direction for growth over the next 30 years.

Section 2.1.1.1 outlines the Economic Vision of the MDP, which states:

> *Ensuring economic sustainability of the County is a key priority. Wheatland County aims to create an attractive place for commercial and industrial development balancing the growth of new economic development with the conservation of agricultural land uses.*

This proposed CGC Inc. development will contribute to local employment opportunities and the economic prosperity of the County, which will support the Economic Vision as presented in the MDP.

The proposed CGC Inc. development will also assist in achieving the following Commercial and Industrial Objectives of the County as outlined in Section 3.7.1:

- *(1) Allow for the expansion and diversification of the County's commercial and industrial base.*
- *(2) Promote the growth and diversification of employment opportunities in designated areas.*
- *(3) Direct commercial and industrial development to designated areas.*

Section 3.7.2 of the MDP outlines Commercial and Industrial Policies, the policies which pertain to the CGC Inc. site are as follows:

- 3.7.2.1 The County encourages commercial and industrial uses that support the agricultural community, enhance tourism and community development, provide employment opportunities, and diversify the local and regional economy.
- 3.7.2.2 Commercial and industrial development is encouraged to locate within identified areas and shall be considered in accordance with the appropriate Area Structure Plan or Area Concept Plan.
- 3.7.2.4 The creation of new commercial and industrial areas shall require the preparation of an Area Structure Plan or Area Concept Plan, in accordance with County requirements. Adoption of the plan may be considered based on the following criteria:
    - (a) Proximity to regional transportation corridors;
    - (b) Proximity to Hamlets and other residential areas;
    - (c) Traffic generation;
    - (d) Stormwater management;
    - (e) Water and wastewater servicing;
    - (f) Mitigation of land use conflicts;
    - (g) Dust, odour, noise, lighting, and visual impacts;
    - (h) Aesthetics and development standards;
    - (i) Efficient use of land and connection to adjacent lands;
    - (j) Environmental impacts.
- 3.7.2.6 The County shall consider transportation access as a major component of commercial and industrial applications in order to properly manage vehicle traffic from employment, patronage, and the shipment of goods and services;

- 3.7.2.7 The County shall require that commercial and industrial applications demonstrate that they will cause no significant adverse impacts on the natural environment, including but not limited to, ground and surface water, soil quality, air quality, wildlife and vegetation. If impacts are expected, the application must demonstrate how these will be mitigated;
- 3.7.2.8 The County shall consider the broader area context and the impact of cumulative development into consideration for all commercial and industrial applications; and
- 3.7.2.11 The County may consider commercial and industrial off-site levies, and / or local improvement taxes, to ensure the fair and equitable distribution of costs between the proponents of all new and future development, in designated commercial or industrial areas.

As per the aforementioned MDP policies, this ACP will include all appropriate chapters and details to ensure it is drafted in compliance with County policy.

As per the MDP's land use map, the proposed CGC Inc. development is located at the conceptually designated industrial area in the Goldfinch Area Structure Plan.

2.4 GOLDFINCH INDUSTRIAL AREA STRUCTURE PLAN

The Goldfinch Industrial Area Structure Plan (ASP) was adopted in 2018. The purpose of this ASP is to provide a comprehensive development concept for the future development of the lands within its plan area, approximately 2, 850 hectares within Wheatland County.

As per the ASP's **Figure 6** – Overlay Area, the northern half of the CGC site has a 'Country Residential Transition Area' overlay, and the site's south boundary is located adjacent to a 'Highway Corridor Area' overlay. As per the ASP's **Figure 7** – Development Concept, presently the CGC site is designated as 'Light Industrial', however, the amendment of this ASP which will be part of this ACP's submission, the proposed future designated of the CGC site through the ASP will be 'Heavy Industrial'. The 'Heavy Industrial' land designation is *intended to accommodate medium and heavy industrial development that creates a moderate to significant nuisance for adjacent landowners*. Thus, general policies relating to the site, as well as the 'heavy industrial' policies as outlined in the ASP have been considered for the development of this ACP.

Lands adjacent to the CGC site to the west are designated as 'Light Industrial', and to the east side is 'Mixed Industrial' (see **Figure 3**).

This section provides a summary of the relevant policies within the ASP that guided the preparation of this ACP. For a detailed list of policies, please see **Appendix A**.

The ASP also provides policies for the locations of local and major roads, a servicing framework, and the sequence of development. The ASP contains policies that apply to the development of the proposed CGC site, which require that a Biophysical Impact Assessment (BIA), a Geotechnical Report, a noise study, and a Historical Resources Overview (HRO) may be required at the ACP stage. At the time of this ACP's writing, a BIA, a Geotechnical Investigation, and an Historical Resources Overview application had all been drafted as supporting documents.

As per the ASP, the proposed CGC site is designated as 'Heavy Industrial' to accommodate medium and heavy industrial development that creates a moderate to significant nuisance for adjacent landowners. Uses that can be developed within this designation include buildings or structures for proposed manufacturing, extracting processes, and fabrication or distribution of goods and materials that create objectionable or dangerous conditions (noise, odours, airborne emissions, lighting, vibration, or other adverse impacts), i.e. resource extraction or processing, manufacturing plants, oil refineries, and rendering plants. The ASP requires that appropriate setbacks shall be established to mitigate negative impacts to adjacent properties.

As noted in the ASP's **Figure 6** – Overlay Areas, the northern portion of the CGC site is covered by 'Country Residential Transition Area' overlay. Overlay areas have been established by the ASP and generally apply to development within 400 m of the areas affected. The purpose of the overlay areas is to allow for more control over areas where the effects of industrial operations require a high level of mitigation or where the context of the location calls for site-specific policy. The ASP requires that a Mitigation Plan will be required at the ACP stage for any areas within or adjacent to an overlay to identify any potential negative effects from the proposed development and provide mitigation strategies for retention of existing vegetation, landscaping, berming, fencing, orientation of buildings and configuration of roadways.

The ASP requires landscaping treatment to be utilized to enhance the aesthetic character of industrial development areas and act as a visual screen for areas adjacent to the ASP boundary. The ASP also provides general transportation policies for ACP's, such as the required development of a TIA, and that sound attenuation measures should be identified to mitigate traffic noise. Servicing policies dictate that prior to ACP approval, studies shall be submitted to identify the location and alignment requirements for utilities and that all servicing systems should be designed to facilitate development to the satisfaction of Council.

In addition, land-use redesignation approval and future subdivision applications will not be approved until an ACP is accepted by Council. Also, the ASP specifies that any applications received by Wheatland County within the Goldfinch ASP area must be circulated to Rocky View County.

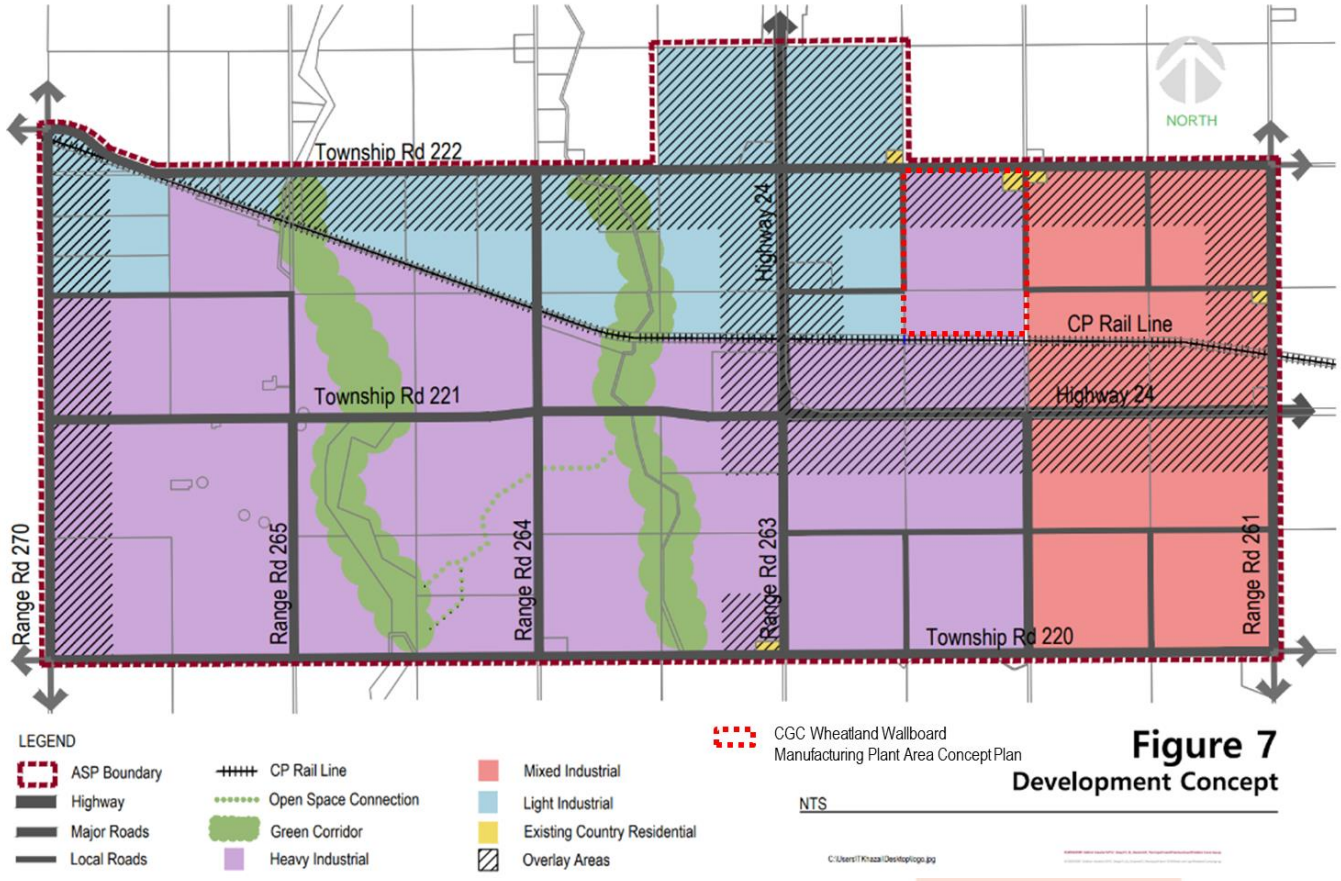


Figure 3 – Goldfinch Area Structure Plan Development Concept (Amended)

This ACP was developed under the guidance of the Goldfinch Industrial ASP, its Vision, Guiding Principles, and applicable policies set out in the ASP, and aforenoted within this Section.

2.5 WHEATLAND COUNTY LANDSCAPE AND SCREENING GUIDELINES

The purpose of the Landscaping and Screening Guidelines is to ensure that future developments within Wheatland County maintain and enhance the visual quality of the County and preserve its rural character for future generations. Specifically, these Guidelines provide guidance to landowners and developers who are operating or proposing to operate a commercial or industrial enterprise anywhere in the County including the West Highway 1 Area Structure Plan area, so that they might prevent their business from creating a negative visual impact on surrounding properties.

Screening shall be applied to outdoor storage areas, vehicle parking and storage areas, stockpile areas, exterior work areas, garbage or waste areas, loading areas, mechanical and electrical equipment, parking and sales lots, and other as required by the County.

The Guidelines also provide requirements and targets for different levels of screening, such as full, partial, and buffer and when which is required, along with suggested methods of screening. The Guidelines also lists requirements for the development of a Screening Plan and landscape maintenance requirements. This ACP's Mitigation Plan (**Appendix B**) was designed with guidance from these Guidelines.

2.6 LAND USE BYLAW

Wheatland County's Land Use Bylaw No. 2016-01 is used to facilitate and regulate the use and development of land and buildings within Wheatland County. The CGC site's land-use is currently designated as AG – Agriculture General District, and is surrounded by AG lands, save for a small CR – Country Residential Lot located adjacent to the site's northeast corner, see **Figure 4**.

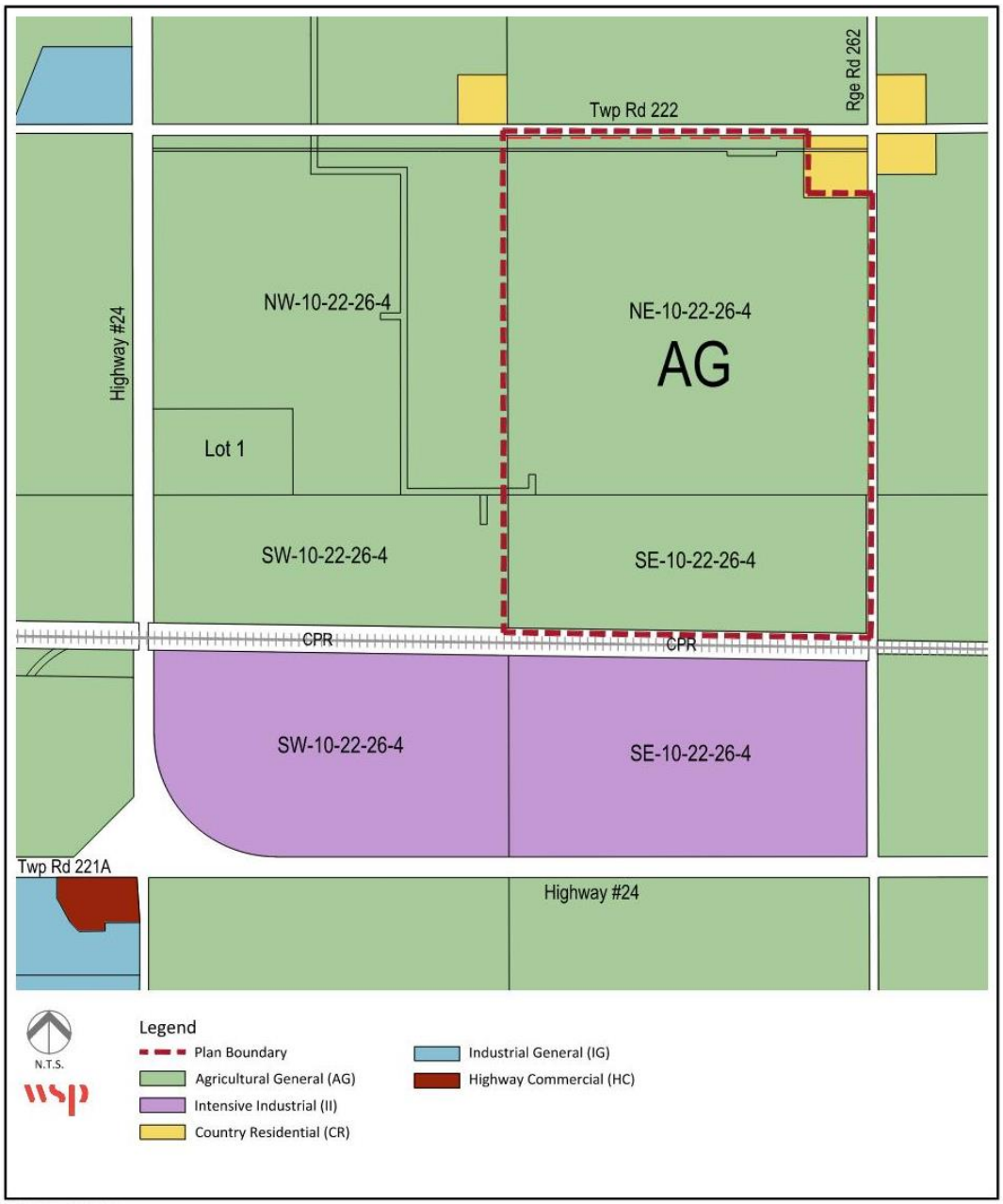
The proposed Wallboard Plant (industrial) use is neither a permitted or discretionary use as per the AG district, thus, a land-use redesignation is required to the II – Intensive Industrial District. The II District is *to accommodate for medium and heavy industrial development that creates a moderate to significant nuisance factor for adjacent landowners*. 'Industrial, heavy' defined as:

> *The use of land, buildings and/or structures for an industrial activity that creates significant adverse impacts beyond the boundaries of the site for which the associated activity takes place due to appearance, emission of contaminants, noise, odor, traffic volume, fire, explosive hazards or dangerous goods. Characteristics of Industrial, Heavy may include:*
>
> *a) Moderate to extensive open storage or stockpiling of raw materials, vehicles and machinery that may be partly or wholly visible off the site;*
>
> *b) Significant noise in the general operations of the use;*
>
> *c) Potential exposure of the environment to chemicals and other forms of pollution from the general operations of the use;*
>
> *d) Hazardous Industry.*

'Industrial, heavy' is considered discretionary within this land-use district, thus, in order to obtain approvals a formal public hearing process is required to be facilitated by the County.

In addition, the Land-use Bylaw contains requirements for Development Permit applications, and general regulations which would also apply to the CGC development, pertaining to access, accessory buildings, height

and grade, dark sky considerations, landscaping / fencing / screening, parking / loading, servicing requirements, signage, and stripping and grading.



3

Figure 4 – Current Land Use Designations within and adjacent to CGC site

LOCATION AND CONTEXT

The below sections discuss the context of this ACP area and constraints related to the proposed CGC site.

3.1 PLAN AREA

The site of this ACP is located in Wheatland County's southwest, and approximately 2.7 km west of the Hamlet of Carseland, see **Figure 5**. The site is 86.7 hectares in size (214.3 acres) and is bounded by Township Road 222 to the north, the CPR line to the south, Range Road 262 to the east, and an adjacent parcel of land to the west (see **Figure 6**). Adjacent lands to the north, east, and west are currently used for agricultural purposes, and south of the CPR line is an industrial property (Stella-Jones Canada) for pressure treated wood manufacturing and storage. One Country Residential lot is located adjacent to the plan area's northeast; this parcel contains a dwelling and a number of accessory buildings used for agricultural purposes.

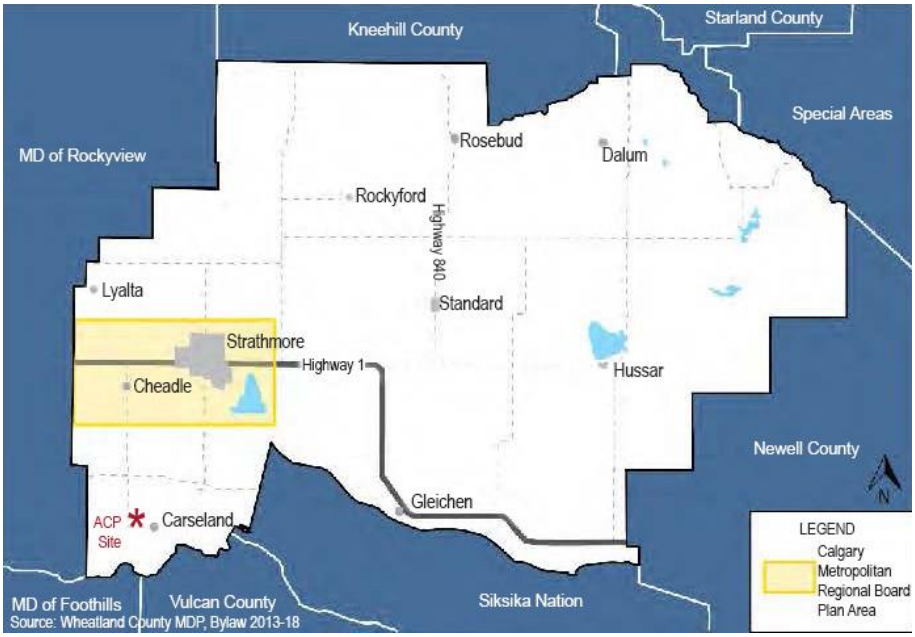


Figure 5 – Context Map, Location of ACP

3.2 EXISTING AND SURROUNDING LAND USES

As noted in Section 2.6, the entire ACP area is zoned AG – Agricultural General as per the County's Land Use Bylaw No. 2016-01 and is currently used for agricultural purposes. The lands surrounding the site to the north, east, and west are also zoned AG – Agricultural General and used for agricultural purposes as well. The lands to the south of the site, across the CP rail line, are zoned as II – Intensive Industrial, to accommodate the pressure treated wood and manufacturing and storage facility (see **Figure 4**). As per **Figure 6**, there are six existing residences located near the site. Adequate berms and buffers must be integrated into the site to ensure that these dwellings are not negatively impacted by the proposed CGC development.

In order for the site's land use designation to be compliant with the proposed CGC development, it is recommended that a land use amendment to the II – Intensive Industrial zone is pursued, which complies with the Goldfinch ASP and this ACP.

Policy 3.2.1

Redesignation application process will be submitted to the County to facilitate appropriate land use for the proposed development in conjunction with this Area Concept Plan approval process.

Policy 3.2.2

No policies within this ACP shall negatively impact adjacencies.

Policy 3.2.3

Adequate berms and buffers must be integrated into the CGC site where appropriate in order to protect nearby residences from implications associated with the proposed development.

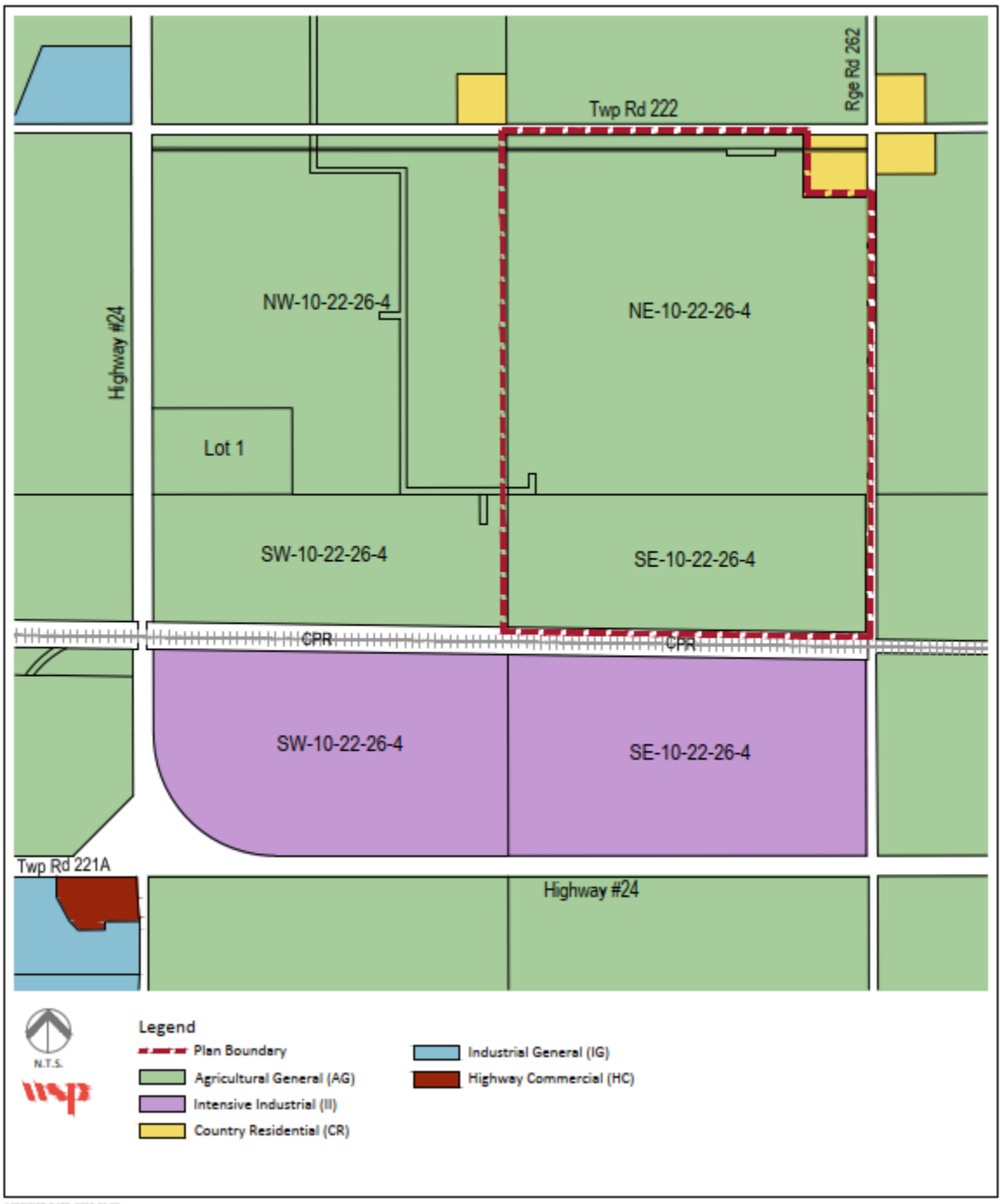


Figure 6 – Existing and Surrounding Land Uses

3.3 DEVELOPMENT CONSTRAINTS

The following section describes the site's natural and built development constraints, including heritage, biophysical, topography, and wells and pipelines.

BIOPHYSICAL ASSESSMENT, TOPOGRAPHY, WETLANDS & MITIGATION MEASURES

A Biophysical Assessment (BA) was completed by WSP in March of 2023 for the subject site, in accordance with Wheatland County's MDP and Land Use Bylaw. as per County requirements. The purpose of the BA was to describe the current biophysical conditions of the CGC site and provide mitigation recommendations which will contribute to project design and approval. The BA noted that no records of Historical Resource Values (HRVs) were found in the study area, and in addition, no known historic resources requiring avoidance or additional assessment were located within or immediately adjacent to the CGC site. Historic Resources Approval from the Historic Resources Management Branch was granted on February 17, 2023.

Figure 7 illustrates the CGC's sites topography; the highest grade of the site existing at its northwest corner, at an elevation of 982, and the lowest area of the site is at its southeast corner at an elevation of 974. As per these elevations, overland drainage generally flows from the northwest to the southeast. In addition, the BA noted that few landscape changes have occurred within the site since the 1950s, and as the site had been cleared for agricultural purposes long ago, native grasslands had been cleared from the site.

A wetland survey of the site was conducted in July of 2022; **Figure 7** illustrates the several wetlands and ephemeral water bodies existing within the CGC site. Although the ephemeral waterbodies were confirmed through this survey, they were not delineated. The fieldwork will be updated in the summer of 2023, likely before this ACP's first reading by County Council. In addition, the BA also did not recommend the retention of any wetlands.

In order to reduce the environmental impact of the development within the CGC site, the BA recommends a number of mitigation measures, which have been included in **Appendix C**.

In addition, WSP was obtained by CGC to undertake a combined *Water Act* application submission for wetland disturbance and construction of a stormwater pond. A Wetland Impact Assessment Report (WAIR) is being submitted to Wheatland County to document the wetland assessment and associated impacts to wetlands as part of the ACP submission. As the project design is still underway, effects to wetlands and associated mitigation strategies are continuously being evaluated, and the WAIR report may require revisions prior to submitting with a *Water Act* application.

A Water Boundary Review application had been submitted to Alberta Environment in September 2022 to determine if the Province will obtain ownership of the bed and shore of the wetlands on site. In October of 2022 the Province responded that the review of historical aerial imagery does not support the permanence of any naturally occurring body of water within the CGC site, and therefore, none of the identified wetlands meet the criteria for Crown ownership under Section 3 of the *Public Lands Act.* Thus, the Province will not obtain ownership of the site's wetlands.

Policy 3.3.1

If unrecorded historical resources are found within the CGC site during development, these must be reported immediately to the Historical Resources Branch, and measures under the Heritage Resources Act may be required.

Policy 3.3.2

Mitigation measures and Best Management Practices as identified in the BA will be used to reduce potential direct and indirect effects off-site. Construction-specific measures will be detailed in the contractor's environmental plan (e.g. Environmental Protection Plan, Temporary Erosion and Sediment Control [TESC] Plan, Weed Control Plan, etc.) that will be developed prior to construction.

Policy 3.3.3

Noxious weeds will be controlled by seeding and/or planting of soil stockpiles after placement and any *prohibited noxious* weeds will be destroyed. Monitoring of stockpiles for *noxious* or *prohibited noxious* weeds will occur the first and second year after seeding/planting to determine if additional weed control measures will be required.

Policy 3.3.4

A *Water Act* approval application must be submitted to remove ephemeral features prior to development permitting.

Policy 3.3.5

Wetland areas that will be lost will be replaced through a replacement plan via the payment of *in-lieu* fees following the *Alberta Wetland Mitigation Directive*. Details the replacement value of the wetlands and the required fees is included within the WAIR.

Policy 3.3.6

The migratory bird nesting period pertaining to the CGC site is April 20 to August 25. Construction clearing activities should avoid this nesting period, however, if they overlap, the site's Contractor will be responsible to develop appropriate mitigation measures to be performed by a qualified professional wildlife biologist (e.g., completing a bird sweep prior to construction, implementing a protective buffer until nesting is completed).

Policy 3.3.7

Although no owl / raptor nests or mammal dens were observed during the site surveys, such activities may be possible within or in close proximity to the CGC site at the time of construction. Should clearing activities be scheduled between March 15 and April 15, additional wildlife surveys to confirm nesting activity should be undertaken.

Policy 3.3.8

Wildlife, as listed by the Alberta Wildlife Act, the Migratory Birds Convention Act, or the Species at Risk Act, encountered during construction will be conserved by the application of species-specific guidance or through the development of site-specific mitigation, provided by a qualified wildlife consultant and in consultation with regulators as applicable.

Policy 3.3.9

If any wildlife is encountered in the Plan Area and requires removal, no wildlife handling will occur without obtaining appropriate Federal or Provincial wildlife-related permits or authorizations and applying associated protocols and conditions.

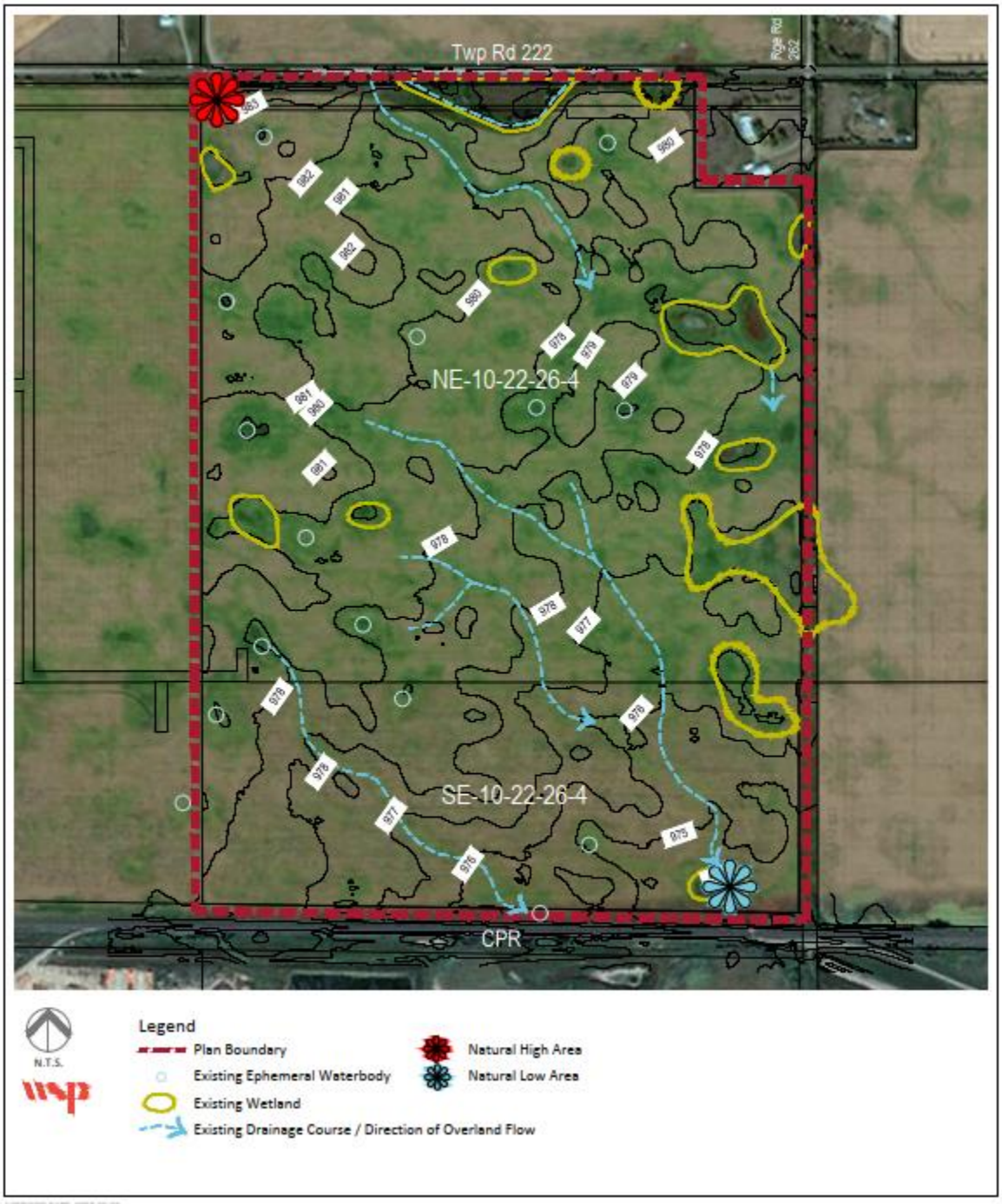


Figure 7 – Site Topography and Wetlands

ENVIRONMENTAL SITE ASSESSMENTS

A Phase 1 Environmental Site Assessment (ESA) was completed by WSP in August of 2022.The objectives of this ESA were to identify areas of actual or potential environmental concern and associated contaminants of potential concern (CoPCs) on or within proximity of the CGC site. The purpose of the Phase I ESA was to provide information to CGC for due diligence purposes in support of the potential purchase of the subject property (the CGC site).

Through the historical records, regulatory review records, and site visits, some evidence of potential environmental concern was identified in connection with the site. Four (4) Areas of Potential Environmental Concerns (APECs) associated with Potentially Contaminating Activities (PCAs) were identified within the Phase I ESA and within **Figure 8**, are summarized in the following table:

Description of APECs	PCAs	CoPCs
1. Active O&G Well and Associated Pipeline	<u>On-site:</u> Active O&G Persist 10-10 CBMCLS (Coalbed Methane-Coals Only) well and associated high-pressure natural gas pipeline located in the southwest corner of the Property.	Petroleum Hydrocarbons (PHCs) Metals Salinity Methane
2. Active and Abandoned O&G Wells and Associated Pipeline	<u>Off-site:</u> Active Persist 1-10 O&G gas flow well located approximately 50 m of the Property boundary. Abandoned Ember 5-10 O&G well (Coalbed Methane) located approximately 50 m of the Property boundary. Active Persist 14-10 O&G CBMOT flow (Coalbed Methane) well located approximately 225 m of the Property boundary. Abandoned Ember 11-10 O&G well (Coalbed Methane) located approximately 270 m of the Property boundary. Persist Oil & Gas Inc. natural gas pipeline located approximately 220 m west of the Property boundary.	PHCs Metals Salinity Methane
3. CP Railway	<u>Off-site:</u> Active off-site CP railway line located within approximately 10 m of the south boundary of the Property.	Rail Treatment Chemicals (creosote, sterilants) PHCs Metals Phenols
4. Stella-Jones Canada Site	<u>Off-site:</u> South adjacent pressure treated wood manufacturing and storage facility, located within approximately 50 m of the south Property boundary.	PHCs Polycyclic Aromatic Hydrocarbons (PAHs) (creosote, copper-8) Metals (chromated arsenic, borates, copper-based preservatives, and phenylmercury acetate) Chlorinated Phenols (pentachlorophenol [PCP] and tetra chlorophenol) Non-Chlorinated Phenol (methyl phenols [cresols]) Fungicides Nitrogen Compounds Dioxins/Furans

The following are the recommendations for the four APECs identified by the ESA Phase I:

- For APEC 3, there have been no reported spills (i.e., dangerous goods) regarding the CP railway line. Any potential contamination from rail associated chemicals (i.e., sterilants, creosote) would be isolated to the area immediately under and near the rail tracks.

- For APEC 4, there are multiple industrial facilities (i.e., Stella Jones Canada wood processing facility) in the vicinity of the proposed wallboard manufacturing facility site in Wheatland County. The surrounding facilities will have to be considered during the design and application process for the Property, including but not limited to ambient air quality monitoring and groundwater use.
- No further action is recommended in the areas of APEC 1 and APEC 2:
    - For APEC 1, there have been no reported spills or incidents regarding the active coalbed methane-coals only on-site well or pertaining to the associated active high pressure natural gas pipeline. This area was investigated as part of a Phase II ESA (WSP, 2022). Further investigation would be recommended should a spill, rupture or incident occur 'on or near' the Property. Appropriate development setback distances should be adhered to.
    - For APEC 2, there have been no reported spills or incidents regarding the two active gas flow and coalbed methane off-site wells, the two abandoned coalbed menthane wells, or the active natural gas pipeline. This area was investigated as part of the Phase II ESA (WSP, 2022). Further investigation would be recommended should a spill, rupture or incident occur 'on or near' the Property. Appropriate setback distances should be adhered to.

Following the completion of the Phase I ESA, two supplemental Phase II ESAs were drafted by WSP, completed in September of 2022 and November of 2022.

The purpose of the supplemental Phase II ESA (September 2022) was to provide additional information to CGC for due diligence purposes in support of the potential purchase of the CGC site (prior to CGC's purchase), and the objectives of this ESA included:

- To collect additional soil and groundwater samples to determine the concentration of phenol in soil and groundwater in other areas of the site;
- To analyze groundwater samples to determine concentrations of total dissolved solids, chlorides, dissolved copper and other potential indicators parameters at the site;
- To conduct detailed salinity analysis on the additional soil samples to look for other indicators of potential contamination; and
- To compare the analytical data from the remainder of the site to the data collected adjacent to the wood processing facility.

The following are the key findings from the analysis of the soil and groundwater samples collected during this investigation:

- The soil analytical results identified that 9 of 18 samples had electrical conductivity (EC) values greater than the commercial/industrial land use guideline of 4 decisiemens per metre (AEP, 2019). The elevated EC values are related to naturally occurring high soluble sulphate and moderately elevated sodium concentrations in the soil.
- The soil analytical results for the phenol parameter were below the laboratory detection limits for all samples from the three boreholes completed in July 2022. The analytical results from the July 2022 samples were below detection limits; therefore, phenols do not appear to be an issue at the site.
- Groundwater samples analyzed for routine and indicator parameters indicated that all but one sample exceeded the applied guideline for EC, sodium absorption ratio (SAR), total dissolved solids (TDS), sulphate, sodium, and manganese. Dissolved selenium and uranium concentrations were above Alberta Tier 1 Soil and Groundwater Remediation Guidelines at select monitoring wells. However, for these elevated rates they are considered to represent the variability of natural conditions, expect at one well

(MW22-06) located in the northeast corner of the property, near the existing farmyard. Thus, it is recommended that collection of additional groundwater samples from MW22-06 to determine if there are existing groundwater impacts in the northeast corner of the site. The analysis should include routine parametes, dissolved metals, total metals, total suspended solids, and total and fecal coliforms.

Based on these key findings, this supplemental Phase II ESA (September 2022) recommends that annual groundwater sampling and monitoring at the existing groundwater monitoring wells should occur, and specifically, groundwater samples should be analyzed for routine parameters, dissolved metals, and phenol.

As groundwater sampling and analysis conducted in the September 2022 supplemental Phase II ESA identified a number of concentrations in MW22-06 that were higher than concentrations in the samples from the other groundwater monitoring wells, collection and analysis of well MW22-06 was recommended. Thus, the purpose of the supplemental Phase II ESA completed by WSP in November 2022, was to collect additional groundwater samples from two monitoring wells (MW22-06 and MW22-08) to determine if previous results were representative of groundwater quality.

The following are the key findings from the analysis of the soil and groundwater samples collected during this investigation:

- There are a number of parameters in the sample from monitoring well MW22-06 with concentrations that remain much higher than the concentrations in the samples from the other groundwater monitoring wells. Low chloride concentrations indicate that the impacts are probably not related to buried domestic waste. Low fecal coliforms concentrations indicate the impacts are probably not related to sanitary sewage. Additional investigations are recommended in the area of the existing farmyard and monitoring well MW22-06 to determine the cause of the groundwater impacts in the northeast corner of the Property.
- Groundwater samples from well MW22-08 were consistent with previous testing results. Continued monitoring will assist in establishing trends and in determining if the dissolved chloride concentrations are stable and considered natural.
- Possible explanations for the unusual results in groundwater monitoring well MW22-06 include the following:
    - Accumulation of herbicides, pesticides or manure in the well's nearby area;
    - Buried debris or rubble in the vicinity;
    - Stockpiled materials in the vicinity;
    - Impacts from equipment and material previously stored along the site boundary; and / or
    - Naturally occurring changes due to existing lithology and fluctuating groundwater levels.

Based on the findings, additional investigation is recommended to determine if there is a buried source of impacts located in the northeast quadrant of the CGC site.

Policy 3.3.3

Prior to development surrounding industrial facilities, such as Stella Jones Canada, shall be considered during the design and application process for the development, including, but not limited to ambient air quality monitoring and groundwater use.

Policy 3.3.4

The recommendations of the Phase I ESA and Phase II ESA pertaining to setback distances, additional assessments, and further investigations of the APECs if a spill occurs and groundwater monitoring wells shall be pursed.

Figure 8 – Location of Areas of Potential Concern

EASEMENT, WELLS, AND PIPELINES

Figure 9 illustrates the location of easements, URWs, and wells on or near the site. An existing oil and gas well is located in the southwest corner of the CGC site, and four additional oil and gas wells are located off-site on the adjacent property to the west.

A gas easement (811 138 866) runs east-west through the property near its northern boundary. One URW (an operating gas pipeline) is located on the site's west side, connecting to the existing on-site oil and gas well.

The below table indicates the ownership of the easements and the URWs within the CGC site:

Type	Location	Registration No.	Owner
Gas Easement	NE 10-22-26-4	811 138 866	ATCO Natural Gas
URW	NE 10-22-26-4	081 198 726	Persist Oil & Gas Inc.
Miscellaneous Wellhead	NE 10-22-26-4	-	Persist Oil & Gas Inc.
Caveat – Surface Lease Under 20 Acres	NE 10-22-26-4	031 426 127	Persist Oil & Gas Inc.
Part of Flowing Gas Wellhead	SE 10-22-26-4	-	Persist Oil & Gas Inc.
Caveat – Surface Lease Under 20 Acres	SE 10-22-26-4	081 007 195	Persist Oil & Gas Inc.
Caveat – Mines and Minerals Lease Interest	10-22-26-4	160 120 316	Persist Oil & Gas Inc.

Policy 3.3.5

Utility rights of way shall be confirmed by land survey and setbacks shall be finalized to the satisfaction of the approval authority as a condition of development permit approval.

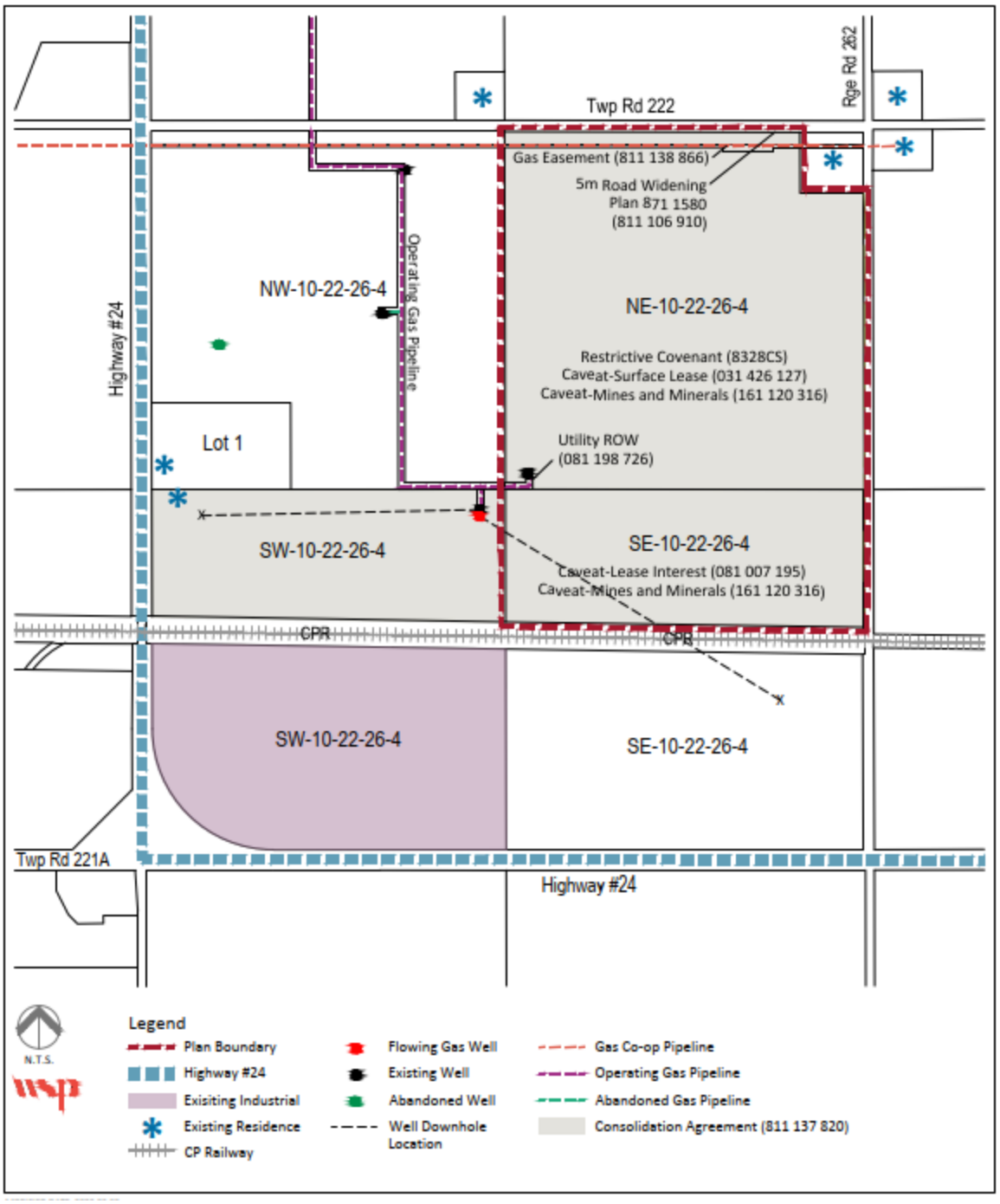


Figure 9 - Easements, Wells and Pipelines

GEOTECHNICAL INVESTIGATION

A Geotechnical Investigation Report was completed by WSP/Golder in May 2022, as per the requirements of the County. The Investigation's findings are as follows:

- Based on the results of 13 geotechnical boreholes (see **Figure 10**), five standpipe monitoring wells and associated laboratory testing, the subject lands are considered suitable for the proposed development from a geotechnical perspective. The predominant conditions encountered in the geotechnical borings comprised up to 2.5 m of stiff to very stiff lacustrine silty clay, overlying very stiff to hard silty clay glacial till to the termination depths of the boreholes (which varied from 6 m to 20 m depth).
- Relatively heavy loads are recommended to be supported by reinforced concrete pile foundations. Shallow foundations (spread footings) and slabs-on-grade are also feasible. The encountered soils are suitable for re-used as engineered fill for site grading purposes, including construction of the rail embankment.
- The prevailing depth to the groundwater table varied between about 3 m and 4 m about one month after completion of drilling. A groundwater depth of about 2 m was recommended for design.

Figure 10 - Geotechnical Investigation Borehole Locations

Policy 3.3.6

Before development permit approval, a geotechnical consultant shall review the Geotechnical Investigation for the purposes of recommending the next steps required to proceed with the development process.

HISTORICAL RESOURCES OVERVIEW

An Historical Resources Act application was submitted to the Historic Resources Management Branch to determine if the CGC site was suitable development from a heritage perspective and it any additional historic investigation would be required. The Historic Resources Management Branch granted approval for the site's proposed development activities (HRA Number 4668-23-0004-001), however noted that subject to Section 31 of the Historical Resources Act "a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the Minister of the discovery".

Policy 3.3.7

Excavation and development of the site shall be in accordance with Section 31 of the Historical Resources Act.

DEVELOPMENT PLAN

4.1 LAND USE

The proposed land use for the CGC site is ‘heavy industrial’, as defined with the Goldfinch ASP. This development designation will accommodate the CGC’s proposed Wallboard Plant, see **Figure 11**.

4

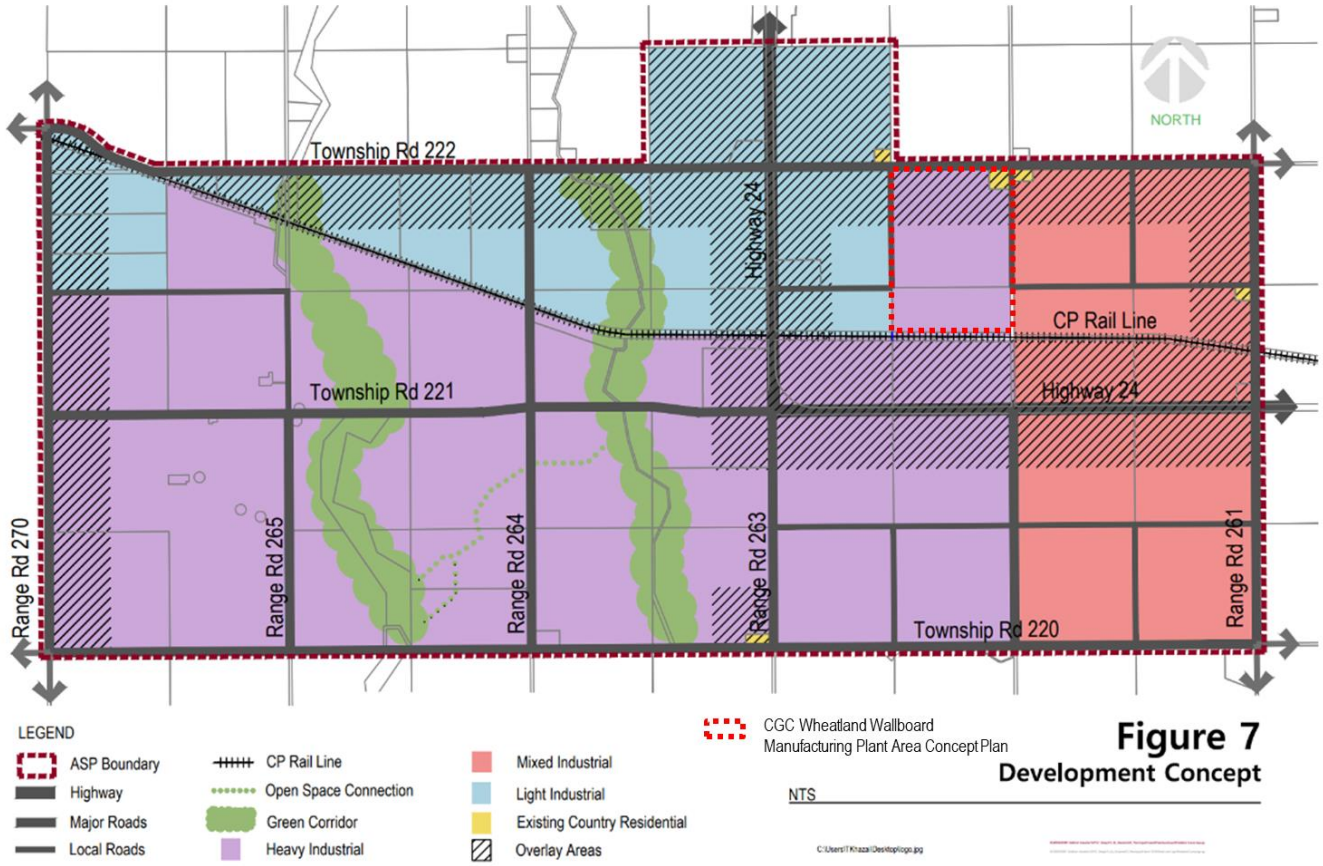


Figure 11 - ASP Land Use Designation of CGC site

4.2 PLANT SITE PLAN

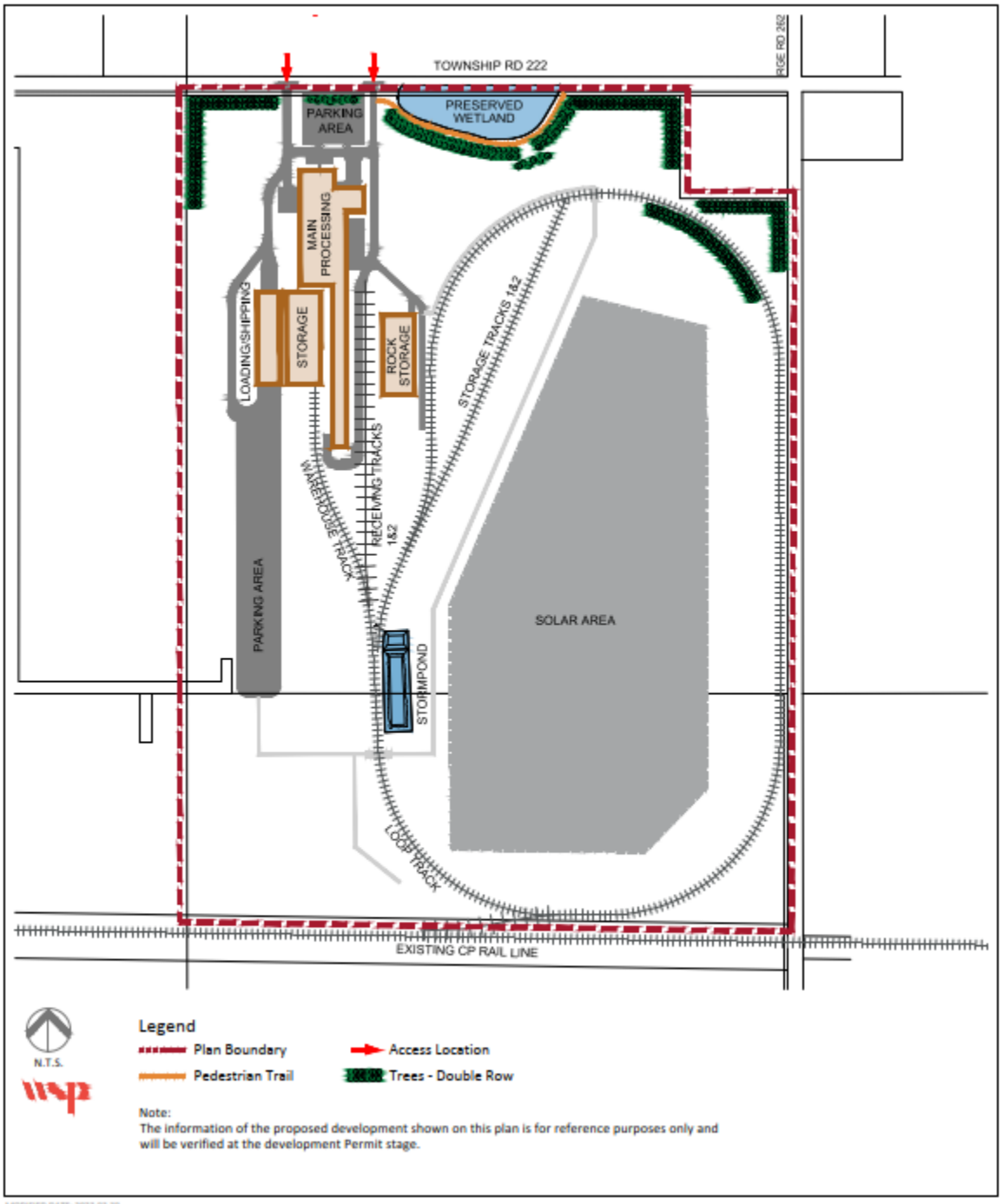


Figure 12 - CGC Wallboard Plant Site Plan

Policy 4.2.1

The industrial Wallboard Plant development shall be generally situated on the subject site as illustrated on **Figure 12 – CGC Wallboard Site Plan**, and its detail will be verified during the development permitting stage.

Policy 4.2.2

The industrial Wallboard Plant development shall be provided in a manner that minimizes potential impact on adjacent properties. At the direction of the approval authority, and in-compliance with County policy, this may include the orientation and placement to of berms and buffers to alleviate privacy and noise concerns, architectural treatment, screening to reduce visual impact, and the incorporation of Crime Prevention Through Environmental Design (CPTED) principles.

4.3 TIA AND TRANSPORTATION CONCEPT

As per County requirements, a TIA was prepared by WSP in March 2023 that was based on the Wallboard Plant concept and the site plan included in **Section 4.2**. The findings of this TIA are summarized as follows:

- After the service commencement, the Wallboard Plant development is anticipated to generate a maximum of 119 trips during the weekday a.m. peak hour (roughly 2 vehicles a minute) and 71 trips during the weekday p.m. peak hour (about 1 vehicle a minute).
- Most of this traffic will be employee traffic arriving and departing from their work shifts.
- Truck traffic is expected to be relatively steady throughout the day, approx. 5 per hour (1 every 12 minutes).
- In terms of intersection traffic capacity, the study shows that traffic flow and intersections will operate acceptably in existing and in future conditions (2025, 2030, 2035, 2040, 2050), with and without the development-generated traffic.
- For the stretch of Township Road 222 between the access and Highway 24, the post-development traffic volume is within the design standards of the existing roadway.

This CGC site's internal transportation concept, which consists of two 'all-directional' site accesses from Township Road 222 and internal parking and shipping / loading areas have been developed in consistency with Wheatland County's planning and engineering standards. A detailed internal network, and interface connections to the existing, surrounding road network will be designed at the Development Permitting stage for the County's review and approval.

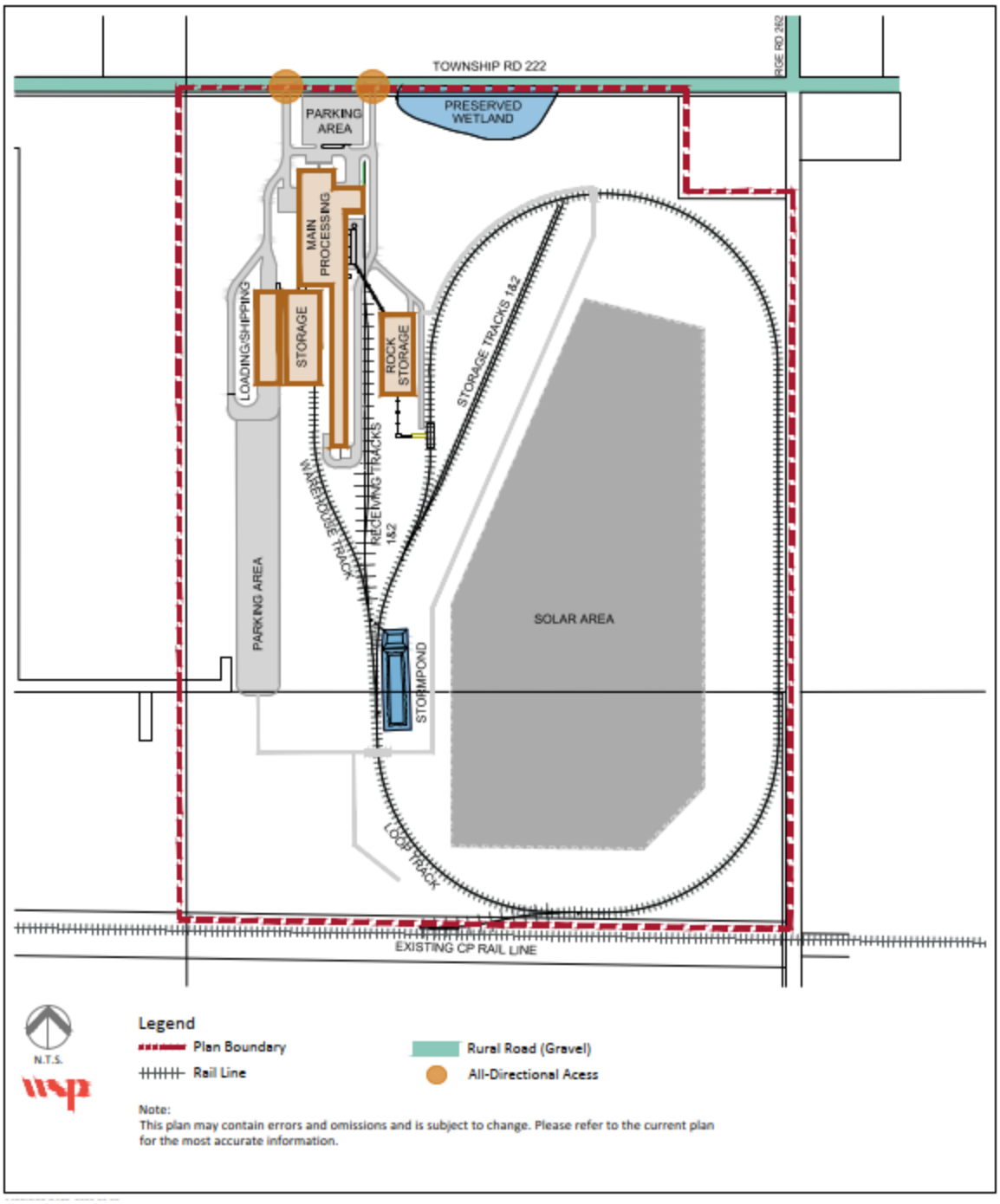


Figure 13 – Transportation Concept

Policy 4.3.1

The internal roadway design shall be developed in consistency with Wheatland County's planning and engineering standards and will be reviewed by the County during the site's Development Permitting.

Policy 4.3.2

At locations where the CGC site's internal roads meet the existing and surrounding road network, intersection treatments shall be developed. These treatments may be cost-shared by all benefiting developers through the Development Agreement process during the site's Development Permitting.

Policy 4.3.3

Internal roundabouts shall be considered in the design of key intersections where feasible, which will be determined during the Development Permitting.

Policy 4.3.4

The internal road network as presented on **Figure 13** may be revised without an amendment to this ACP.

4.4 RAIL

It is proposed that the CGC site will utilize a rail loop track design to transfer raw materials into the site and finished products out of the site. The rail loop has been designed to maximize efficiency and reduce switching operations, minimizing noise and vibration impacts to surrounding areas, see **Figure 14**. Presently, it is anticipated that one bulk train will be delivered approximately every two weeks.

The bulk train will contain raw gypsum material that will be unloaded into the gypsum hopper. Furthermore, there will be additional trains accessing the site to pick up and drop off rail cars containing finished product; however, the frequency of this service is to be determined by CP rail who will be servicing the facility.

The facility has been designed to meet all CP requirements for industrial track facilities and Transport Canada regulations. As the design phase progresses, WSP will adjust the track layout to meet design needs based on feedback from CP, other stakeholders, and the design team.

Details of the rail loop functions are as follows:

- CGC will receive raw materials (gypsum rock) through rail service. CP will bring and take away rail cars to the facility approximately twice a month (every 10-14 days).
- Once rail cars arrive on site, they will be rotated around the rail loop and unloading hopper. Unloading the rail cars is expected to take approximately 24 hours, after which the rail cars will sit idle on the loop until they are collected by CP.
- The loop track design cuts down on train operations, leading to reduced noise and shorter unloading times.
- Other track spurs will be used to bring material into the plant and a few will be loaded with finished products to be shipped by CP to distribution facilities.

Policy 4.4.1

The rail look integrated to the CGC site will meet all CP requirements for industrial track facilities as well as Transport Canada regulations.

Policy 4.4.2

The rail loop will incorporate design strategies to minimizing noise and vibration impacts to surrounding areas.

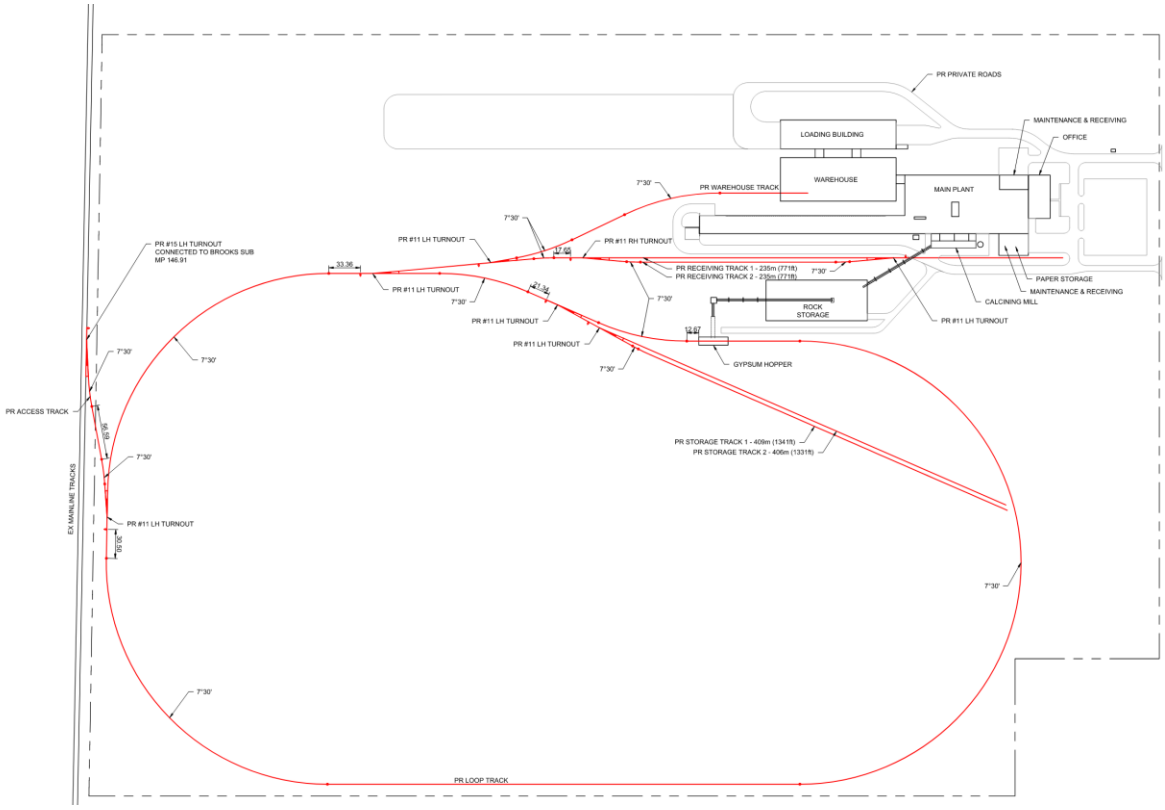


Figure 14 - Proposed Rail Loop Design Concept

4.5 WATER SERVICING AND WATER CONSUMPTION ESTIMATES

Raw water will be delivered to the site by means of withdrawal from the Bow River through a distribution main that will be constructed by Wheatland County adjacent to the property. Water is the only utility provided to the CGC site by the County. At this time, it is expected that the distribution main will be 200mm (8”) in diameter delivering 19l/s, however, the sizing, flow rates, and alignment of the distribution main have not yet been confirmed by the County or their design engineers.

PROCESS WATER

Presently, the quantity of process water has not been confirmed, however it will be within the limits specified by the County in agreement with the current water license issued by AEP. Depending on the quality of the raw water delivered to the site, there may need to be additional treatment required on site for the manufacturing process.

FIRE WATER

Fire water volume storage and pumping requirements will be calculated using methodology as outlined by both AEP and the Fire Underwriters Survey. Firewater storage is proposed to be provided by either heated or insulated above-grade storage tanks, underground storage tanks, or a raw water firewater pond.

POTABLE WATER

Potable water will be provided either by regular delivery to the facility and on-site storage or by using on-site treatment processes to treat the raw water as required, in accordance with AEP Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage systems, Part 2 “Guidelines for Municipal Waterworks”, April 2012.

Policy 4.5.1

Utility rights-of-way and easements shall be provided to accommodate the County's water utility at the discretion of the Development Authority.

Policy 4.5.2

The water distributing looping system and water servicing strategies for the CGC site will be designed to comply with the County's master servicing plans, as amended.

Policy 4.5.3

The water distribution system for the CGC will be designed with sufficient looping and connections to provide adequate fire flows for the proposed development.

4.6 SANITARY SERVICING AND SANITARY WASTEWATER GENERATION ESTIMATES

Sanitary wastewater disposal for the CGC site is proposed by means of a conventional septic chamber system treatment field, please refer to the Site Plan (**Figure 12** for an approximate location of the septic system). The proposed septic system will consist of one (1) septic tank, one (1) sewage lift station, and the chamber system septic treatment field. The septic field will be sized based on the peak daily wastewater volume generated from the facility.

Note that the septic field is not proposed to accept wastewater generated from the manufacturing process, and will only treat domestic wastewater from toilets, sinks, and showers in the office and warehouse areas of the proposed facility. Process wastewater is captured and reused in the manufacturing process.

SANITARY WASTEWATER QUANTITY GENERATION RATE

Estimation of the wastewater generated from the office portion of the Wallboard Plant facility is based on recommendations from Table 2.2.2.2.B "Peak Volumes of Wastewater Per Day" for Industrial and Commercial Building (with Showers) from the Alberta Private Sewage System Standard of Practice (APSS 2021 ed.) From this table, a wastewater generation rate of **90 litres/day/employee** has been selected.

Staffing data has been provided by the manufacturing facility and the maximum number of employees in the facility per day is 119. Based on the above referenced wastewater generation rate of 90 litres/day/employee, 10,710 litres / day (0.12 l/s) of wastewater is estimated to be generated daily.

4.7 STORM WATER MANAGEMENT

A Stormwater Management Plan was drafted by WSP in February of 2023, as required by the County to support the development of the CGC site. The proposed design of the Stormwater Management Plan for the CGC site has been designed to adequately manage stormwater on site for full build-out of the proposed development, and provides the following recommendations, see **Figure 15**:

- Water in the Stormwater Pond will be monitored, sampled and analyzed for specified parameters prior to being released onsite. A Stormwater Pond will collect and store runoff from the developed portion of the Site.
- It was calculated that the Stormwater Pond requires an active storage volume of approximately 8,300 m3 based on the rational method and the 1:100 year 24-hour duration rainfall volume. The Stormwater Pond has been designed with a dead storage depth of 1.0 m, an active storage depth of 2.0 m, and a freeboard of 0.5 m above the design HWL. The Stormwater Pond provides an active storage volume of 10,065 m3.
- If the active storage volume in the Stormwater Pond is going to be discharged over a period of 48 hours, the pumping system should be rated for a flow of 58.25 L/s.
- Peak flow post development runoff will be less than the peak flow predevelopment runoff since the runoff will be collected and stored in the Stormwater Pond during a rainfall event.
- The onsite culverts and the conveyance system will be designed for the 1:25 year 24-hour duration design storm event. Culvert crossings underneath the railway track will be sized for the 1:100 year 24-hour duration design storm according to CP Rail's standard. Erosion protection will be provided at the inlets and outlets of the culverts by riprap aprons.

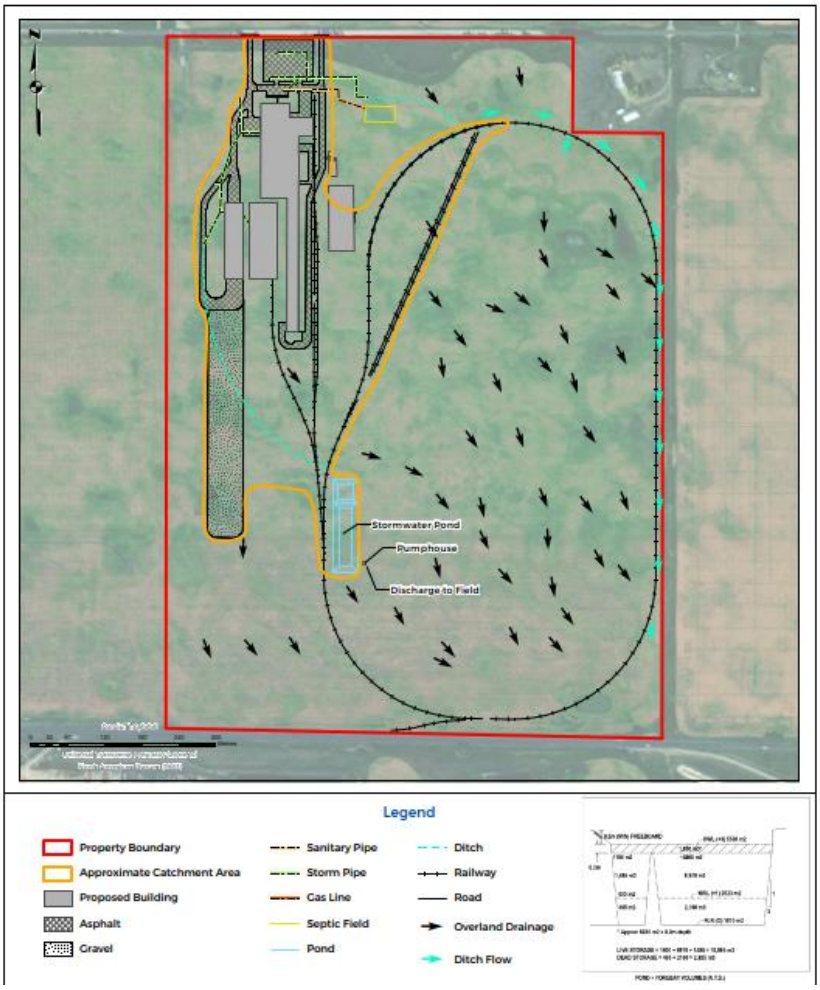


Figure 15 - Stormwater Management Concept

Policy 4.7.1

The proposed stormwater design ensures that no stormwater discharge into the Western Irrigation District (WID) will occur during irrigation season, and any discharge outside of this season will be charged at the applicable pumping rate based on water quality sampling results as determined by a qualified engineer.

Policy 4.7.2

The stormwater design and Wetland Assessment as part of this ACP shall be submitted and approved by the Alberta Environment and Parks before stripping and grading of the site.

Policy 4.7.3

As per County requirements, permeable paving systems shall be integrated where feasible to reduce stormwater runoff.

4.8 SOLAR ENERGY

It is proposed that the CGC site design will include an interior rail loop for material shipments. The plant will be powered in part by a solar array central to the site. This array will supply the plant with environmentally friendly electricity. The interior of the rail loop will contain the solar array consisting of fixed tilt “tables” with solar panels on each. Please refer to the Site Plan (**Figure 12**) for the approximate solar array location.

Policy 4.8.1

At the Development Permit stage, the site plan should identify the location of the solar panels.

Policy 4.8.2

Before installation of the solar panels, *Water Act* approval shall be required if the solar panel locations of wetlands are disturbed, as well as all necessary approvals pertaining to the panels themselves from the Alberta Utilities Commission.

4.9 TELECOMMUNICATIONS, POWER & GAS SERVICING

Shallow utilities such as natural gas, power, telecommunications, cable and fibre optics are available to be extended to the CGC site. Specifically, utilities will be extended by the respective franchise utility providers from their major trunk services. Utilities will be placed within road rights-of-way or within easements registered on private lots within the CGC site, as required by Wheatland County and the franchise utilities.

The underground primary power service supplied to the site by Fortis will enter the site at its northern property line and connect to a pad-mounted transformer that is supplied by the utility company. The transformer will be located on the east side of the Wallboard Plant. The underground secondary power service from the transformer will terminate at the main incoming power switchgear, which is located in the Wallboard Plant’s main electrical room.

Policy 4.9.1

The location and detailed design of shallow utilities within the CGC site shall be verified during the development permit stage.

Policy 4.9.2

Utility rights-of-way and easements, public utility lots, and right rights-of-way shall be required and determined necessary to facilitate orderly and sequential development and future expansion if needed and shall be addressed to the mutual satisfaction of the County, CGC, and the utility companies.

4.10 SOLID WASTE AND RECYCLING

As CGC places emphasis on a commitment to the environment and a focus on reducing waste, the recycling of solid waste is encouraged in favour of disposal. CGC understands that solid waste management and recycling is a responsibility of the property owner and not the County.

Policy 4.10.1

CGC will be responsible for the implementation and facilitation of its own solid waste and recycling management strategy will be in line with the County's solid waste regulations.

Policy 4.10.2

CGC's waste management strategy will strive to reduce waste as much as possible that will be generated from the site's operations, and continually look at improving its solid waste disposal and recycling strategies.

4.11 EMERGENCY SERVICES

Emergency services within the CGC site are focused on fire and protective service needs. Primary fire protection will be provided by the Carseland Fire Hall with backup provided by the Wheatland West Fire Station. A mutual aid agreement also exists between the Town of Strathmore, Vulcan County, and Rocky View County (through Langdon), which has been established to provide emergency services when needed.

In addition, the Orica Carseland Manufacturing Plant located within the Goldfinch ASP area has an additional industrial fire brigade.

Policy 4.11.1

Fire suppression systems will be constructed as part of the CGC site, which will be developed in compliance with the approved standards set by the current edition of the Alberta Building Code, the Alberta Fire Code, and / or other relevant Federal or Provincial legislation.

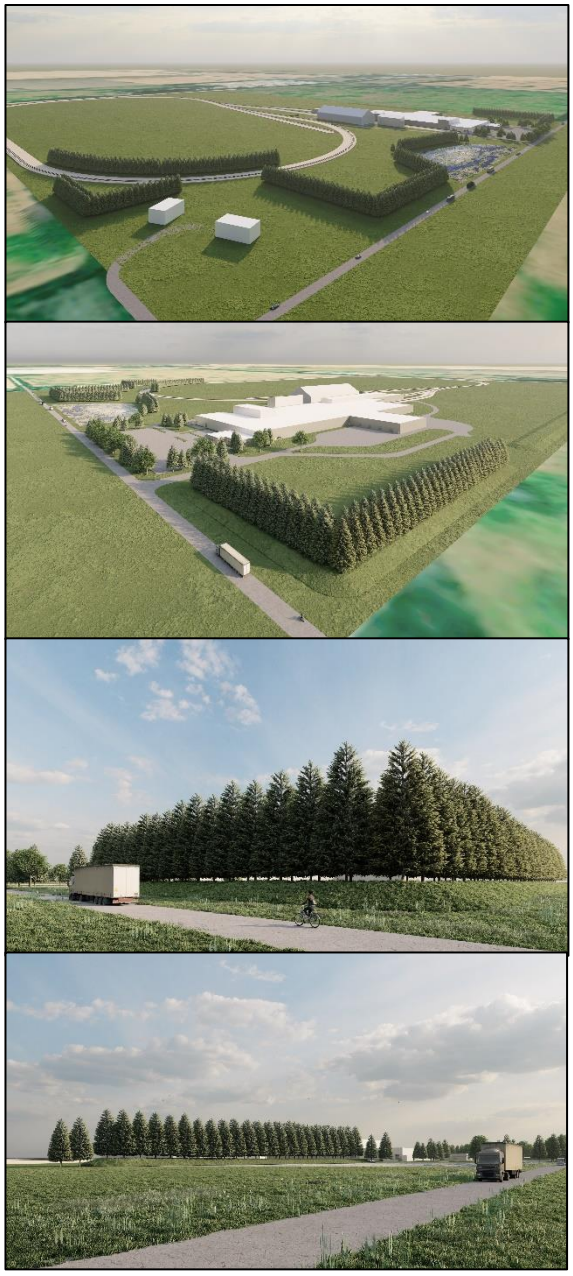
Policy 4.11.2

Fire services for the ACP area shall be provided by existing County emergency service facilities, and where / when appropriate, by mutual aid agreements / contracts through adjacent municipalities.

MITIGATION PLAN

5

As per the Goldfinch ASP, the CGC site falls within the 'Country Residential Overlay' and borders the 'Highway Corridor Overlay' to the south. Policy 5.7.1 within the ASP specifies that a Mitigation Plan must be developed for any sites within the overlay areas that will "produce noise, noxious odours, dust, impeded view corridors, vibration, emissions (airborne and ground), toxic or noxious uses ire / explosive hazards or transfer and handling of dangerous goods" at the ACP stage. Policy 5.7.2 notes that the Mitigation Plan "shall identify potential negative effects from the proposed development and provide mitigation strategies to the satisfaction of the Development Authority including but not limited to retention of existing vegetation, landscaping, berming, fencing, orientation of buildings and configuration of roadways".



The Wallboard Plant falls within these classifications, thus a Mitigation Plan was developed by WSP and included as part of this ACP submission, see **Figure 16**. When developing this Mitigation Plan both the Goldfinch ASP and the Wheatland County Landscape & Screening Guidelines were referenced.

Pertaining to the CGC site, the potential negative effects of the proposed development include noise and negative views. The overall objective of this CGC Mitigation Plan is to ensure a respectful interface is developed, so that adjacent landowners, existing country residential development, and the nearby Hamlet of Carseland are not impacted by the Wallboard Plant operations.

Proposed Mitigation Plan strategies are as follows:

- Within the 'country residential overlay', landscaped buffers and berms will be utilized to screen the development and lessen potential negative impacts;
- Within the 'highway corridor overlay', improvements to the appearance proposed site will be incorporated to minimize unsightly views; and
- No development other than landscaping or berming will occur within 100 metres of the property line of an existing country residential parcel.

The following policies apply to the Mitigation Plan:

Policy 5.1

The landscaping as outlined in the Mitigation Plan will ensure adequate year-round screening, buffering, and sound attenuation measures from the adjacent Country Residential developments and from Township Road 22.

Policy 5.2

Once developed the site's landscaping as per the Mitigation Plan will be monitored, and if a lack of landscaping creates a potential negative visual impact from adjacent properties, the Development Authority may require additional landscaping.

Policy 5.3

The Mitigation Plan includes enhanced open spaces areas, such as a preserved wetland, for use by employees of the Wallboard Plant and for nearby residents.

The details of the Mitigation Plan and design can be found in **Appendix B**.

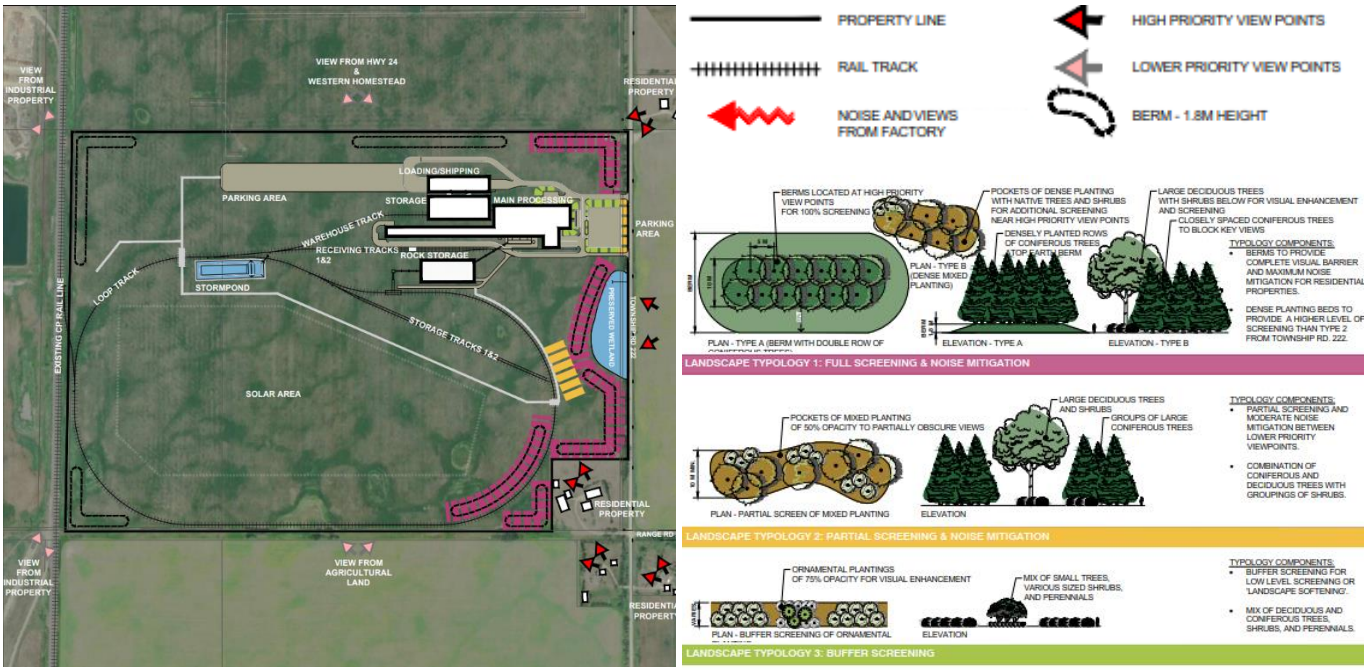


Figure 16 - Mitigation Plan

OPEN SPACE AND MUNICIPAL RESERVE

6

6.1 MUNICIPAL RESERVE

Within the Goldfinch ASP, Policy 5.1.4 specifies that “Municipal Reserve (MR) dedication shall be up to ten (10) percent of the developable lands within an Area Concept Plan…”. A process of subdivision is not required for the CGC site, therefore dedication of MR lands to the County is not required and will not occur as part of this land development process. Instead, Deferred Reserve Caveat will be registered on title, and if / when future subdivision occurs, the MR dedication will occur at this time, or cash-in-lieu, or a combination thereof.

Policy 6.1.1

A process of subdivision is not required as part of the CGC site’s development process; thus, lands will be not dedicated to the County’s Municipal Reserve at this time, however, a Deferred Reserve Caveat will be registered on title to ensure that when future subdivision occurs, the required ten (10) percent of land will be dedicated to the County’s Municipal Reserve, or cash-in-lieu, or a combination thereof.

6.2 OPEN SPACE

A wetland exists at the northern boundary of the CGC site, located along a portion of Township Road 222. This wetland will be preserved and enhanced as a naturalized open space area for employees of the Wallboard Plant and nearby residents to enjoy.

The Mitigation Plan, as introduced in **Section 5** of this ACP identifies the open space and landscaping preliminary design concept for the CGC site. It is expected that at the development permit stage, a landscaping plan will be submitted to provide further details of the site’s landscaping design and siting.

The following policies apply to the CGC site’s Open Space concept:

Policy 6.2.1

At the Development Permit stage, a Landscape Plan will be prepared by a professional landscape architect to further detail the CGC’s site landscaping design and siting. This Landscape Plan must be created in alignment with the CGC site’s submitted Mitigation Plan, and:

- Identify the details of the landscape design for the CGC site;
- Include landscaping treatment at each point of access into the CGC site; and
- Illustrate the trails / pathway connections to the regional trail system.

Policy 6.2.2

The landscaping, berms, and other naturalized features included within the Mitigation Plan have been selected to visually enhance the CGC site, and where applicable, once developed will provide visual screening from Township Road 222 and the nearby Country Residential developments.

Policy 6.2.3

Building setbacks and landscaping requirements proposed within the Mitigation Plan, and the future Landscape Plan, are and will be compliant with Wheatland County's Land Use Bylaw.

Policy 6.2.4

The shrubs, trees, perennials and other landscaping features selected and included within the Mitigation Plan utilize native and drought resistant species. The landscaping plan submitted at the Development Permit stage will provide further detail, as well as xeriscaping techniques where appropriate.

Policy 6.2.5

The landscape plan for the CGC site that will be submitted at the Development Permit stage will encourage the integration of hard and soft landscaping and will include trail and pathway connection to and through the CGC site.

Policy 6.2.6

Low maintenance lighting in compliance with dark sky policies will be identified on the Landscape Plan submitted at the Development Permit stage.

Policy 6.2.7

The site's owner shall maintain all landscaped areas on site in compliance with Wheatland County standards.

Policy 6.2.8

Storage or parking of vehicles is prohibited in any of the CGC site's landscaped areas.

Policy 6.2.9

Development securities may be required by Wheatland County as a condition of the Development Permit to ensure that the proposed landscaping is carried out with reasonable diligence.

Policy 6.2.10

The landscape plan for the CGC site that will be submitted at the Development Permit stage must address / provide adequate site drainage.

Policy 6.2.11

As the site develops, measures from the developer shall be taken to prevent / lessen dust and erosion.

Policy 6.2.12

The open spaces within the CGC site will ultimately be developed in alignment with the Wheatland County policies which are current at the time of development.

IMPLEMENTATION

7

7.1 DEVELOPMENT PHASING

The proposed CGC site will be developed within one phase only, so a Phasing Plan has not been included as part of this ACP.

Policy 7.1.1

Applicable Infrastructure funding will be provided to the County by the developer as per the Off-Site Levy Bylaw and the Development Permitting stage.

7.2 LAND USE DESIGNATIONS AND PERMITTING

As introduced in Section 1.2 of this ACP, in order to obtain the required approvals from Wheatland County to develop the proposed CGC site, a land-use redesignation must occur, to redesignate the site from the AG-Agricultural General District to the II – Intensive Industrial District. This land use redesignation is being applied for in conjunction with this submitted ACP. Once this ACP has been accepted by Wheatland County's Council and the site has been redesignated to the II – Intensive Industrial District, the developer can submit the required Development Permit application.

Policy 7.2.1

A Development Permit application can be submitted for the CGC site following the acceptance of this ACP by Council and the required Land Use Bylaw amendment to redesignate the site has been completed.

7.3 CONSTRUCTION MANAGEMENT

Construction management of the site will be mindful to address dust control, noise, truck routes, and access to the site, and minimize the potential impact on or interference with any nearby residential areas.

Policy 7.3.1

The CGC site's construction process with comply with all of Wheatland County's construction related policies and regulations.

PUBLIC ENGAGEMENT

8.1 PUBLIC ENGAGEMENT PROCESS

8

Stakeholder and public engagement is an important component of the development process. A comprehensive engagement process was facilitated to ensure community members had meaningful opportunities for participation, so that CGC Inc., the Project Team, and Wheatland County Staff can fully understand the current challenges and potential opportunities that the proposed Wallboard Manufacturing Facility may provide. Throughout the ASP review process, the team's goal is to emphasize meaningful discussions with the community and to provide an inclusive and transparent engagement process.

The engagement strategy provides opportunities to glean much-valued input from landowners, stakeholders, and the general public, all of which, in part, will inform the Area Structure Plan. A summary of the key events within the process is found in the table below.

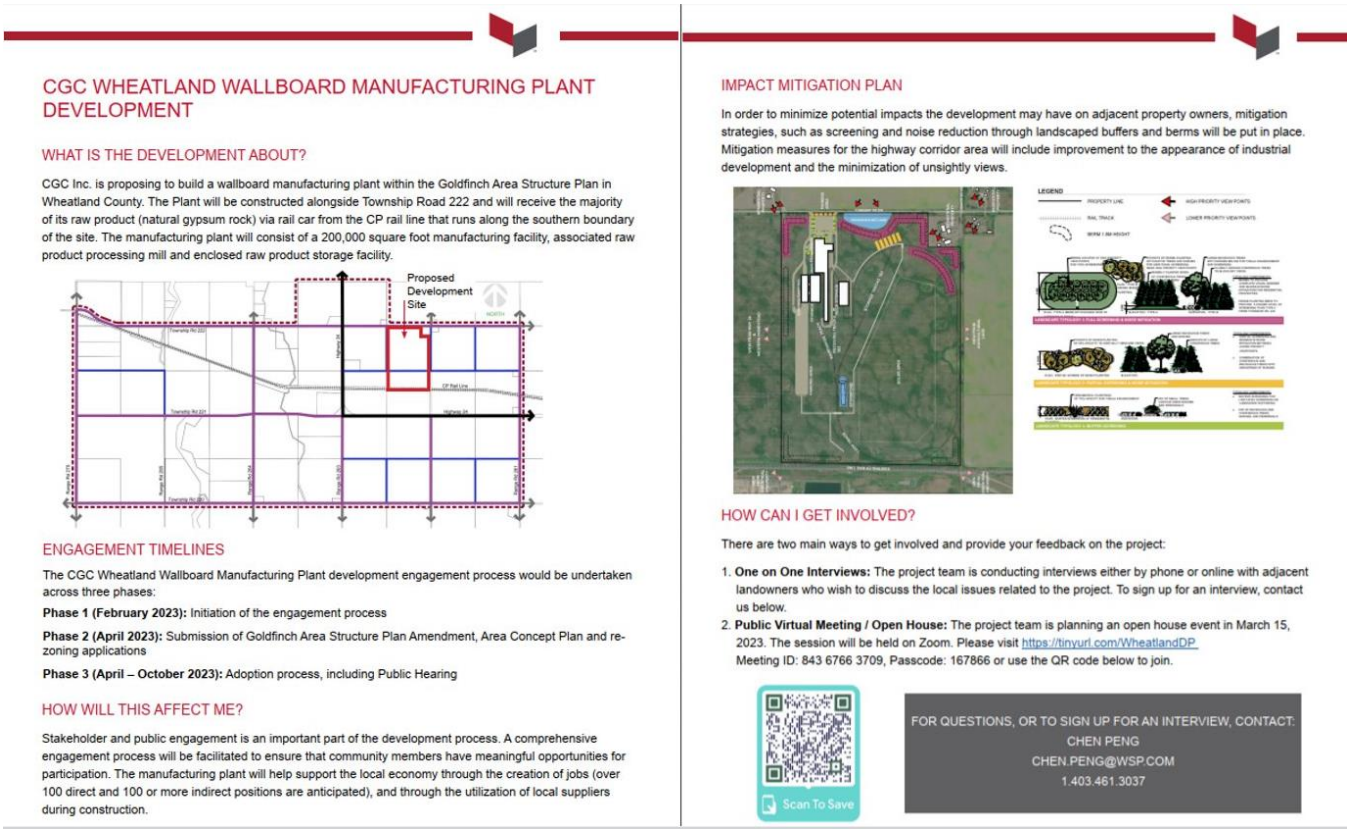
TECHNIQUE	DATE	ENGAGEMENT
Newsletters to Adjacent Landowners	Mailed March 3rd 2023	WSP worked with the County to determine the adjacent landowners list. A newsletter was sent out to the adjacent landowners. The newsletter provided the project background, engagement timelines, mitigation plan and gave notice of the upcoming digital open house event. The newsletter was primarily intended to inform residents and landowners on the launch of the project and encourage people to attend the POH event.
Resident Communications	March 3rd – April 1st 2023	The newsletter mailout and newspaper publication included contact information for the planning team at WSP. From March to April, the team received correspondence from residents by phone and email. The questions, comments, and concerns were collected and addressed in the Open House presentation on March 15th 2023.
Newspaper Advert	March 8th 2023	An advertisement promoting the Public Open House event and providing background information was published in the Strathmore Times local newspaper in early March.
Digital Open House Event	March 15th 2023	The team hosted a live virtual Open House, providing the opportunity for community residents and stakeholders to ask questions about the proposed development concept. The 1.5-hour event began with a PowerPoint presentation introducing the background information, project process, proposed land use concept and servicing strategies, followed by a question-and-answer period. The session was advertised through mail-outs and an ad in the local paper.
Resident One-on-one Meeting	March 22nd 2023	Upon request by one of the adjacent homeowners to the proposed site, Erin Stewart (CGC) and Darrell Sargent (WSP) met with the family at their home to answer their questions and address concerns one-on-one.

These engagement efforts helped to build awareness and garner feedback which culminated in the virtual Open House Event. The community feedback provided during these events will support the team's design

work and provide the decision makers with a community influenced outcome. These results will be reflected in the final draft of the Area Concept Plan.

8.2 COMMUNITY FEEDBACK

The informative newsletter shown in **Figure 17** was sent to all the landowners within the area surrounding the proposed development lot. The project team has been contacted by 7 property owners in the public consultation area, and one-on-ones have been conducted via phone calls, emails and site visits.



CGC WHEATLAND WALLBOARD MANUFACTURING PLANT DEVELOPMENT

WHAT IS THE DEVELOPMENT ABOUT?

CGC Inc. is proposing to build a wallboard manufacturing plant within the Goldfinch Area Structure Plan in Wheatland County. The Plant will be constructed alongside Township Road 222 and will receive the majority of its raw product (natural gypsum rock) via rail car from the CP rail line that runs along the southern boundary of the site. The manufacturing plant will consist of a 200,000 square foot manufacturing facility, associated raw product processing mill and enclosed raw product storage facility.

ENGAGEMENT TIMELINES

The CGC Wheatland Wallboard Manufacturing Plant development engagement process would be undertaken across three phases:

Phase 1 (February 2023): Initiation of the engagement process

Phase 2 (April 2023): Submission of Goldfinch Area Structure Plan Amendment, Area Concept Plan and re-zoning applications

Phase 3 (April – October 2023): Adoption process, including Public Hearing

HOW WILL THIS AFFECT ME?

Stakeholder and public engagement is an important part of the development process. A comprehensive engagement process will be facilitated to ensure that community members have meaningful opportunities for participation. The manufacturing plant will help support the local economy through the creation of jobs (over 100 direct and 100 or more indirect positions are anticipated), and through the utilization of local suppliers during construction.

IMPACT MITIGATION PLAN

In order to minimize potential impacts the development may have on adjacent property owners, mitigation strategies, such as screening and noise reduction through landscaped buffers and berms will be put in place. Mitigation measures for the highway corridor area will include improvement to the appearance of industrial development and the minimization of unsightly views.

HOW CAN I GET INVOLVED?

There are two main ways to get involved and provide your feedback on the project:

1. **One on One Interviews:** The project team is conducting interviews either by phone or online with adjacent landowners who wish to discuss the local issues related to the project. To sign up for an interview, contact us below.
2. **Public Virtual Meeting / Open House:** The project team is planning an open house event in March 15, 2023. The session will be held on Zoom. Please visit https://tinyurl.com/WheatlandDP
   Meeting ID: 843 6766 3709, Passcode: 167866 or use the QR code below to join.

FOR QUESTIONS, OR TO SIGN UP FOR AN INTERVIEW, CONTACT:
CHEN PENG
CHEN.PENG@WSP.COM
1.403.461.3037

Figure 17- Community Newsletter Mail-Out

On March 8th an advert was published in the Strathmore Times newspaper advertising the Public Open House event and provided instructions on how interested parties could attend the event, as shown in **Figure 18**.

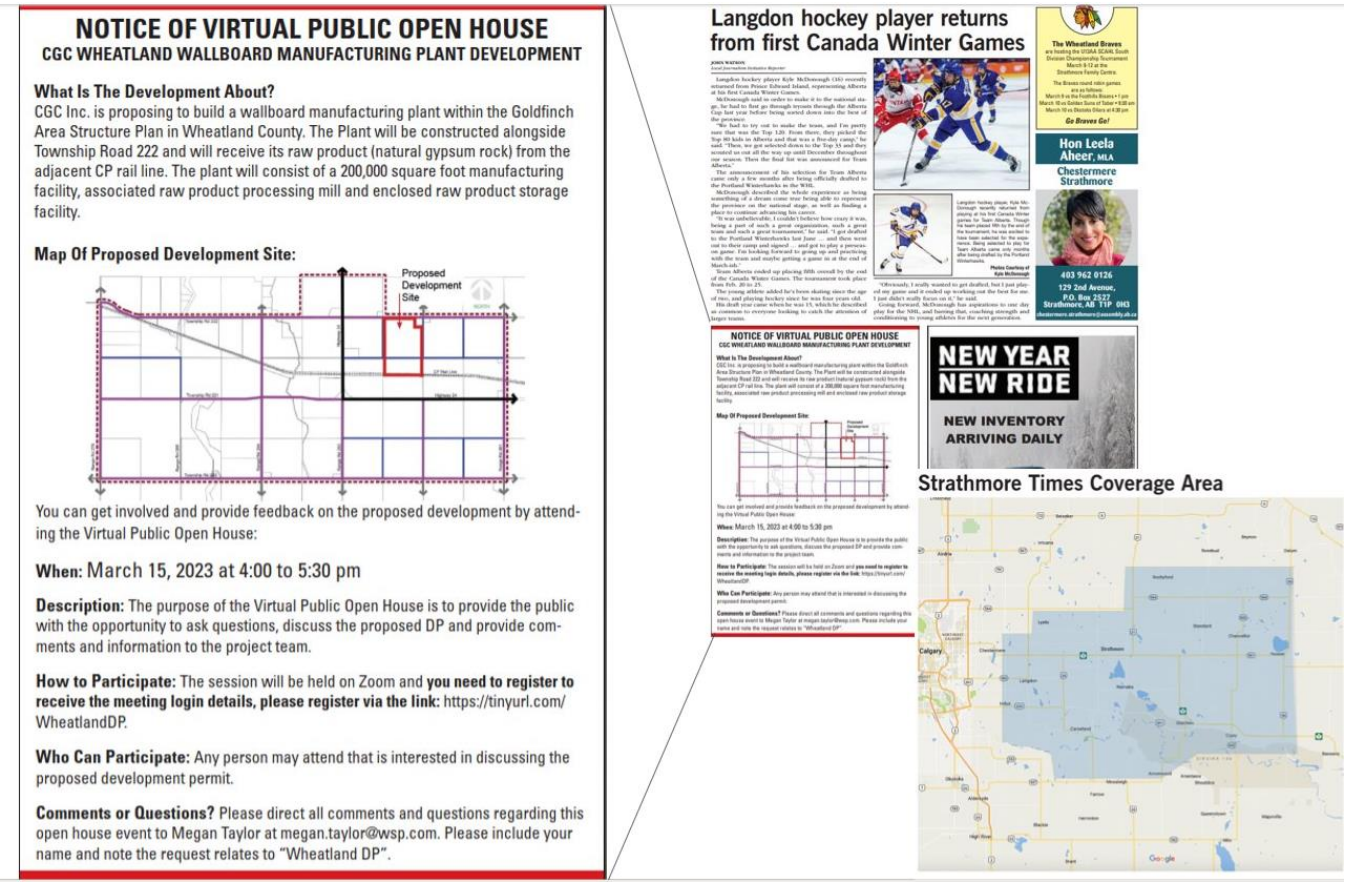


Figure 18 - Strathmore Times Advert

Questions and Responses:

The following records the questions and comments received during the POH event on March 15th, 2023, as well as the ongoing one-on-one communication with the residents.

Employment Opportunities:

Question/Comment: Am I to understand that the factory will not be employing locals to have jobs in management or administration?

Response: CGC wants to be a good community member and will be hiring approximately 100 employees. We have not heard anything from them about hiring restrictions based on geography.

Plant Operation:

Question/Comment: How will the development address noise and lighting issue?

Response: We are currently at the stage of developing the Area Concept Plan. We will take noise and lighting concerns into consideration as we enter the building design stage. We have developed a mitigation plan to help address noise and lighting issues.

Question/Comment: How will the gypsum dust be contained?

Response: Unloading and storage of the gypsum rock will occur inside a structure with a dust collection system. Gypsum rock will be transferred within a closed conveyer system and processed inside enclosed

structures with dust collection systems. The dust collection systems will minimize the amount of gypsum dust released outdoors.

Question/Comment: How will air quality be monitored once the plant is operating? Between the extra trains, trucks, and “enclosed storage areas”, there is bound to be an air quality impact. How can I get an air quality document? Can I receive a copy via email?

Response: Air quality is regulated by the Province, and we will be following their standards. Ambient Air Quality Modelling is being completed by WSP as part of an application under the Alberta Environment Protection and Enhancement Act (EPEA) to construct and operate the facility. The EPEA Application will describe the pollution control methods that will be used to meet the relevant air quality standards. The EPEA Application documents will be available to affected stakeholders during the Public Consultation portion of the EPEA application review process.

Question/Comment: What is the estimated start of construction date?

Response: It is expected that construction will begin in spring 2024.

Rail Line:

Question/Comment: Respondent expressed concern around the noise produced from the shunting of train carts.

Response: The bulk train continues around the loop so the shunting will not be as significant as other rail configurations that require more shunting and hard stopping of trains. Material will be dropped off at the hopper.

Question/Comment: What level of consultation with CP rail has occurred?

Response: Our team has been meeting with CP Rail regularly, and we are currently waiting to hear back from them regarding the facility. We will be engaging with them regularly throughout the process.

Mitigation Plan and Property Value:

Question/Comment: How many years after planting the trees will the tree berm look like the rendering shown.

Response: The trees will grow to the height shown in the renderings within ten to fifteen years.

Question/Comment: Concerns were expressed about the timeline for the trees to grow large enough to block views of the plant. For 10-15 years, we will be looking at the plant and will no longer be able to look at the open prairie and mountains.

Response: The berm is 6 feet high, which will help to improve and break up the visual of the plant. Every year, it will improve as the trees grow. The use of berms and trees is identified in the Goldfinch Industrial Area Structure Plan (ASP) policies as appropriate forms of noise and visual mitigation. The mitigation measures meet the requirements of the ASP and the County’s Landscape and Screening Guidelines (2021).

Question/Comment: Resident expressed concern about a specific berm that was not indicated along the back of his house, rather in the rail loop. He asked if it could be moved.

Response: The team explained why the berm was proposed for that location to provide noise and visual mitigation across the site. The team recognizes how important the views of the mountains are to the

resident and informed the resident that their concerns will be taken back to the team to consider in the design stage.

Question/Comment: Expressed opinion that the development team cares more about the requirements of the County than the residents.

Response: The team explained that this is not the case. The development of the Goldfinch Industrial Area Structure Plan (ASP) went through a public engagement process and was adopted by County Council in 2018. The policies in the ASP reflect the public interest, and we are following the direction provided by the ASP. The mitigation plan is designed to address the policies of the ASP and, in doing so, mitigate the potential for noise while also screening the view of the plant.

Question/Comment: Inquiry into whether homeowners will be given compensation for decreases in property value due to the development of the Plant.

Response: The perception of property values is subjective. The jobs being created may make property values increase and could make properties located near the plant more attractive for workers or businesses associated with it (that may service the plant). In general, the additional 100 jobs that the plant will bring to the community will trigger additional housing demands in the local market. We also understand the potential impact that the development may have on properties immediately adjacent to it. We will work with each homeowner individually to address their particular concerns and work to reduce potential impacts that the development may have.

Question/Comment: One resident raised the concern that the sale of their house will be made difficult by the development and that the unfenced rail line poses a safety issue for potential families looking to buy a home in the area.

Response: The perception of property values is subjective, and dependant on the values associated with an individual owner. The jobs being created may make property values increase and could make properties located near the plant more attractive for workers or businesses associated with it (that may service the plant).

Water/Wastewater:

Question/Comment: Is there any risk to the surrounding residents' wells from wastewater/materials used?

Response: Other than sanitary sewage from the lunchroom and washrooms, no wastewater will be released onsite. Stormwater from the operating areas of the Facility will be collected and tested to verify that it meets the specified criteria before being released onsite. Secondary containment and pollution control equipment will be included in the facility design to minimize the potential for contaminants of concern to be released to the environment. Ongoing environmental monitoring will be conducted at the Facility to identify potential spills and releases and remediate them before they migrate offsite.

Question/Comment: Where will the water for manufacturing the wallboard coming from?

Response: The County has gone out for proposals to design the water supply system to feed into the Goldfinch ASP, to allow for industrial growth.

Traffic and Roadways:

Question/Comment: What will be happening with Township Road 222 and its intersections? The highways leading to the proposed site are single lane, was that in the considerations for the traffic impact assessment?

Response: Yes, we have completed horizon calculations – from the analysis we have determined that the intersections will work sufficiently without alterations/modification.

Question/Comment: Will the road be paved?

Response: This is an application for an ACP, and there is no requirement at this stage to pave the road, as the ACP will not result in any increase in road use. The TIA shows that the use of the road with the new development will be within design standards. Further consideration will be given during the development permit stage.

Question/Comment: Resident voiced concern about how much traffic will be going to highway 24, which is opposite to their property, and how it will affect the condition of the road. Resident believes that the traffic study survey should have been conducted during the harvest to fully understand the impact to the road.

Response: The traffic study was conducted and based upon the information that was given. There is a prescription that must be followed in general and for the road we are following the recommendations outlined by the county. The TIA shows that the use of the road with the new development will be within design standards. Further consideration will be given during the development permit stage.

Question/Comment: Is main access to site off of Township Rd 222, and if so, are there plans to oil that roadway.

Response: The main access to the site will be off of Township Rd 222. The Transportation Impact Assessment for this proposed development indicates that the additional traffic generated by this development will mainly be employee traffic arriving and departing from their work shifts. The Assessment report determines that for the stretch of Township Road 222 between the access and Highway 24, the post-development traffic volume is within the design standards of the existing roadway and will not trigger the upgrade of Township Rd 222. The County will review and comment on the assessment during the Area Concept Plan adoption process.

Other Wallboard Facilities:

Question/Comment: Where is the closest manufacturing plant to this location? Has USG studied how that manufacturing plant has impacted the community, including both positive and negative aspects?

Response: The closets wallboard plant is in Eastern Canada – we cannot answer questions relating to the operation of this plant.