

Industrial Area Structure Plan Fort Vermilion

Bylaw No. XXXX



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1 Purpose and Scope

The Fort Vermilion Industrial Area Structure Plan (Plan) has been prepared for a 960 hectare area of land directly south of the Hamlet of Fort Vermilion at the request of Mackenzie County.

The Plan is intended to provide a framework for future subdivision, servicing, and development of land in order to ensure a supply of heavy and light industrial lands. This Plan is one of four industrial plans being prepared concurrently in the County for industrial land uses. The location is illustrated in Figure 1: Location.

The Plan is primarily based on Council direction and policies from the Municipal Development Plan Bylaw 735-09. It sets out a vision and specifies actions and policies needed to achieve that vision based on the requirements of the Municipal Government Act (MGA). The MGA requires an Area Structure Plane to identify:

- Sequence of development for the Plan area;
- Land uses proposed for the area, either generally or with respect to specific parts of the area;
- Density of population proposed for the area either generally or with respect to specific parts of the area;
- General location of major transportation routes and public utilities; and
- Other matters Council considers necessary.

Area Structure Plans are long-term “living documents.” As the land use, socio-demographic and economic context changes it is not uncommon for plans to be reviewed and amended. Despite such changes, the vision of this Area Structure Plan should remain consistent. However, it is anticipated that more detailed components may be amended in accordance with County needs on an ongoing basis.

The policies and actions identified in this Plan are intended to influence the Mackenzie County Land Use Bylaw, development standards, Outline Plans, subdivision design, and development approvals to ensure that the long term vision for growth determined by this process is achieved.

1.1 Background Report

Along with the Plan, a background report has been prepared. The Mackenzie County Industrial Area Structure Plans Background Report contains most of the analysis undertaken to identify the vision, goals and policies for this Plan and three other industrial plans. This includes a review of the planning context; review of existing land uses, natural features, facilities and infrastructure; and identification of opportunities associated with the same.

1.2 Municipal Development Plan

As the highest level municipal planning document for the County, the Mackenzie County Municipal Development Plan (MDP) is a primary factor in determining the policy direction of the Plan.

1.2.1 Objectives for Industrial Development

The MDP addresses future industrial growth and development in the County. Key objectives expressed in the MDP involving industrial development include:

- Facilitate industrial developments that support agriculture;
- Support a concentrated pattern of industrial development;
- Emphasize the forestry sector as a key component of Mackenzie County's economy and facilitate its continued growth and diversification;
- Support Mackenzie County's role as a centre for oil and gas exploration and development in the surrounding fields;
- Promote and diversify Mackenzie County's economy by emphasizing manufacturing, transportation, and the supply of industrial goods and services;
- Minimize the negative impacts of rural industrial development; and,
- Ensure all industrial areas in Mackenzie County are attractive and feasible.

1.3 Community Consultation

Community consultation forms the cornerstone of the vision, policies and actions identified in the Plan. Early stakeholder consultation helped focus the direction of this Plan, while a public open house ensured wider input into the Plan's vision, policies and concepts. Results of this consultation can be found in the background report for this Plan.

Key points recorded during public consultation were:

1.3.1 Early Stakeholder Feedback

- Stakeholders would like to see the land within the Hamlet of Fort Vermilion boundary built out before opening up and designating new land for development.
- Lots should be large enough for large trucks to manoeuvre within the property.
- Buildings should appear clean and well kept, architectural controls may be suitable as long as long as financial challenges on business owners are considered.
- There is support for a tree line or treed buffer between Highway 88 and the industrial facilities to preserve rural character and create a cleaner looking development.
- Power lines should be run underground to improve the visual appearance of the property on the site adjacent to the hamlet.
- There should be a setback between residential uses and industrial uses to reduce noise and other impacts.
- Most respondents feel that the County offers considerable opportunity for manufacturing development.

1.3.2 Open House Feedback

TO BE COMPLETED FOLLOWING OPEN HOUSES

2 Creating a Vision

Mackenzie County has prepared this plan to clarify, communicate, and deliver its vision for future industrial development and redevelopment in the Plan area.

2.1 Vision

At build out the Plan area is envisioned to provide land for an efficient and diversified resource-based industrial economy that generates long-term benefits to County residents, businesses, and surrounding communities while recognizing opportunities for complementary types of development.

In order to implement this vision, the Plan seeks to achieve specific objectives that recognize and build on the industrial policies of the MDP. The objectives of this Plan are to:

- Guide interim and long-term industrial and resource-based growth in a deliberate manner that coordinates with existing and planned infrastructure provisions.
- Promote existing assets in and around the plan area, such as highways, airports, railways and major employment nodes that can be used to strengthen the local economy.
- Protect existing rural residences, institutional uses and agricultural operations adjacent to the Plan area from potential land use conflicts.
- Preserve (and where possible, enhance) important features of the natural environment.
- Recognize the changing needs of the local economy by allowing a range of industrial subdivision options, including large and small lots and serviced and un-serviced alternatives.
- Ensure that development allows for the orderly expansion of municipal, provincial, and federal infrastructure, such as roads, airports, railways, water and waste water services, trails and community recreation facilities.

As a part of delivering these objectives, the Plan must be consistent with existing municipal, provincial, and federal policies, regulations and plans for the areas.

2.2 Land Use Concept

The Land Use Concept generally identifies the intended future land uses and integrates natural and man-made considerations (as illustrated in Figure 3: Development Considerations) with the needs of the County, while meeting relevant policy guides and regulatory requirements.

The land use areas illustrated in Figure 4: Land Use Concept are conceptual. They are intended to provide a broad road map for future development. Further planning through Outline Plans, or a similar planning mechanism, may refine the designation and area of land uses. Major deviations from this concept will require amendments to the Plan.

The Land Use Concept recognizes the established development pattern within the surrounding area, and integrates compatible land uses to foster a distinct rural industrial character. The Land Use Bylaw should be in general accordance with the Land Use Concept and may need to be updated to reflect the identified land uses.

Policies affecting the land use designations of the Land Use Concept are described in Section 3: Development Policies. The breakdown of developable areas from the Land Use Concept is included in the following table.

Table 1 Land Use Statistics

	Area (ha)	% of GDA
Gross Developable Area	962	100%
Net Developable Areas		
Country Residential	240	25.0%
Industrial	490	51%
Institutional	35	3.6%
Agricultural and Rural	177	18.4%

Note: Rounding may cause inconsistencies in column totals.

Based on the total area of the Country Residential we anticipate a potential development of 180 units, which is based on the MDP lot formation rate of 0.93/ha. At complete build out this results in a total potential population of 514 within the Plan area, based on a 2.85 persons per unit rate identified in the 2011 Census.

3 Achieving the Vision

This section sets out policies to guide development in a manner that can achieve the vision for the Plan, as well as fulfill the requirements of the MGA.

3.1 General Development Policies

The following policies reflect the intent of the vision for the Plan and apply to all areas of the Plan.

- All Areas 1. Mackenzie County supports the clustering of similar and complementary industrial uses and supports the sharing of information, products and linkages to resource and transportation networks within clusters.*
- All Areas 2. The County should encourage orderly sequences of development, following a contiguous pattern consistent with the economical use and extension of existing services.*
- All Areas 3. Development should maintain the natural drainage pattern of the land to reduce impacts from development. A stormwater management plan may be required for any development.*
- All Areas 4. Detailed biophysical, geotechnical, hydrological, and similar studies have not been completed as part of this high level planning process. The County should consider requiring such studies along with applications for development.*
- All Areas 5. Developers should be encouraged to retain existing trees during design and development in order to maintain environmental habitat and local landscapes, particularly in buffer areas and beside adjacent roads.*
- All Areas 6. The planning area is considered to have high potential to contain archaeological, paleontological and/or historic period resources. A Historic Resource Impact Assessment may be required prior to development. All development proposals should be referred to the Historic Resources Management Branch for review and will require an application for Historical Resources Act clearance.*
- All Areas 7. Outline Plans should be generally consistent with the Land Use Concept; however:*
- 1. They may deviate from the Land Use Concept provided the objectives of the Plan are maintained.*
 - 2. They may deviate from the affected Land Use Concept when a site specific constraint is identified that requires a change.*
 - 3. Amendments to this Plan may be required.*

3.2 Limited General Industrial

The Limited General Industrial Area is intended to provide for the development of a mix of light and heavy industrial uses, with limits on the types and levels of nuisances (e.g. noise, dust, odours, gases, particulate substances, toxic substances) these uses create to ensure compatibility with surrounding sensitive uses, such as the Hamlet of Fort Vermilion and existing Country Residential development.

Within the Limited General Industrial Area heavy industrial uses such as manufacturing, processing, assembly, distribution, service and repair may be developed on lands that are setback away from existing or planned land uses that are potentially sensitive to industrial nuisances. With the aforementioned limitation of permissible levels of nuisance, heavy industrial uses such as manufacturing, processing, assembly, distribution, service and repair should be developed in the Plan area.

Within the Limited General Industrial Area light industrial uses should be encouraged to locate so as to provide a buffer between heavy industrial areas and nearby land uses that are potentially sensitive to nuisance, such as Country Residential. Examples of light industrial uses include agricultural machinery sales and service, automotive equipment and vehicle services, contractor's business and yard, outdoor storage, some oil and gas services and warehousing and similar uses. In general, these uses should generate few offsite impacts.

3.2.1 Limited General Industrial Area Policies

- Limited General Industrial 1. No industrial uses that will create a hazard or negatively impact on the quality of life of Fort Vermilion residents should be permitted.*
- Limited General Industrial 2. As shown in Figure 4: Land Use Concept, heavy industrial uses should be located in areas that are away from existing or planned residential areas. Industrial uses may consist of activities that generally require a large amount of land for outdoor storage space and may or may not conduct industrial activities outdoors. These uses are expected to emit odours, noise, particulate matter, and light due to the character of their operations that can cause negative impacts on nearby sensitive land uses.*
- Limited General Industrial 3. Industrial uses should be developed in a manner that minimizes the potential impacts on adjacent or nearby properties. Methods to ensure industrial developments do not negatively impact adjacent properties and roadways may include the construction of landscaped berms, architectural treatments, landscaping and fencing, distance separation, and the retention or planting of native vegetation and onsite treatment of stormwater.*
- Limited General Industrial 4. Light industrial uses should be located adjacent to existing or planned residential areas in order to serve as a transitional area between residential uses from heavy industrial uses.*

Limited General Industrial 5. Landscaping should be required adjacent to Highway 88. This landscaping should be of sufficient depth and massing to screen views from passersby and to maintain the rural character of the area.

Limited General Industrial 6. Mackenzie County should require that all future Limited General Industrial development is serviced by municipal water and sanitary systems where practical and available.

3.3 Highway Commercial

Highways create attractive locations for commercial businesses due to relatively higher levels of visibility and access. Highway commercial uses are anticipated to be in the form of traffic oriented commercial uses that cater to a regional market catchment. Highway Commercial uses are located along Highway 88 east of Range Road 131A and west of 45 Street.

3.3.1 Highway Commercial Policies

- Highway Commercial 1. Sites should be designed in a comprehensive manner that integrates with existing and future development opportunities on surrounding sites, including consideration of building design, mass, transportation and site operation. This may require cooperation amongst adjacent property owners through a Conceptual Scheme to create attractive and functional commercial areas. Joint access, drainage and parking easement agreements may be required to facilitate cooperative use and development.*
- Highway Commercial 2. New developments should be subject to landscaping and appearance requirements to ensure that these areas are aesthetically pleasing.*
- Highway Commercial 3. Site design should take account of and create a compatible interface with any adjacent development and the surrounding environment.*
- Highway Commercial 4. Development of properties adjacent to residential areas should address potential land use conflicts through building orientation, landscaped buffers, lighting design, architectural treatments and operational requirements.*
- Highway Commercial 5. Low Impact Design (LID) features should be incorporated into developments.*

3.4 Institutional Area

The Institutional Area recognizes the importance of the Mackenzie Applied Research Association's research station to the County and the Fort Vermilion community. Agriculture and Agri-food Canada has operated this research station for many years. The station is an operating research farm with land, buildings and research equipment. The Mackenzie Applied Research Association has been using the station alongside federal and provincial researchers investigating crops for a northern environment. The County is committed to ensuring the use on this property remains a Research Station.

3.4.1 Institutional Area Policies

- Institutional Area 1. The County should work with Mackenzie Applied Research Association, Agriculture and Agri-food Canada to promote the continued use of this facility as a Research Station.*
- Institutional Area 2. Should this facility cease to operate, the County should pursue an opportunity to promote the adaptive re-use of the property for tourism purposes or for another suitable institutional use.*

3.5 Country Residential

Within the Plan area are nodes of existing rural residential developments. This form of residential development in this portion of Mackenzie County is an attractive option for some residents because it provides a land-base suitable for rural activities such as small scale agricultural operations, home-based business opportunities, and outdoor recreation, while also remaining in close proximity to major social and commercial services.

Although the long range vision for the Plan is to support industrial development, existing Country Residential uses should be protected from negative impacts of new industrial development and new Country Residential developments should be encouraged as identified in the Land Use Concept.

3.5.1 Country Residential Policies

- Country Residential 1. Country Residential developments should be permitted within the Plan area only where identified by the Land Use Concept.*
- Country Residential 2. Future multi-lot Country Residential subdivisions within the Plan area should be guided by an Outline Plan.*
- Country Residential 3. Mackenzie County should not allow access to Country Residential properties from Highway 88.*

3.6 Agriculture and Rural Development

Portions of the Plan adjacent to the west and east of the Hamlet of Fort Vermilion are identified for Agricultural and Rural Development. In the near term these lands are expected to support rural land uses, such as farming, ranching, rural residences, outdoor recreation and similar uses. In the long term, though perhaps not within the lifetime of this Plan, these areas are expected to serve as future development areas for the Hamlet's expansion.

3.6.1 Agricultural and Rural Development Policies

- Agricultural and Rural Areas 1. Agricultural and rural uses within the Plan should be compatible with existing and planned industrial uses and other nearby uses.
- Agricultural and Rural Areas 2. Intensive livestock operations should not operate within these areas.

3.7 Natural Areas and Open Space

Open spaces, both formally landscaped and natural, are essential components to the physical structure of the Land Use Concept. Open spaces can add to and also help retain the rural character of the plan area as development takes place. The benefits that can be achieved with open space include:

- Lending a rural character to the industrial development;
- Visual transition and noise/odour buffering between uses; and,
- Habitat and corridors for local wildlife.

At the time of development or subdivision, natural areas may be identified through the preparation of technical studies and reports prepared by qualified professionals, as required by the County and paid for by the developer. Where suitable, natural areas should be dedicated as Environmental or Municipal Reserve or protected through similar measures.

3.7.1 Natural Area and Open Space Policies

- Natural Areas 1. In accordance with the provisions of the Municipal Government Act, upon subdivision of any land within the Plan area the County should require that any portion of lands that meet the definition of Environmental Reserve as outlined in the MGA be dedicated as Environmental Reserve or otherwise protected.*
- Natural Areas 2. Any land within the Plan that becomes subject to an Environmental Reserve Easement should remain in its natural state in accordance with the provisions of the Municipal Government Act.*
- Natural Areas 3. Mackenzie County should require the 10% of Municipal Reserve entitled to the County for subdivisions within the plan area in accordance with the Municipal Government Act as land or cash in lieu.*
- Natural Areas 4. Mackenzie County may consider the deferral of Municipal Reserve dedications to other lands owned by the same developer.*

3.8 Stormwater, Water and Wastewater Servicing

Currently, municipal services for water and wastewater are available through the Hamlet of Fort Vermilion directly north of the Plan boundary.

Stormwater, water and wastewater facilities identified in this Plan are conceptual, and therefore it is anticipated that landowners and developers will address detailed future servicing options for land use developments within the Plan area by submitting Outline Plans and development and subdivision applications. It is anticipated that developments in the Plan area will be serviced by municipal water and wastewater, wherever practical and that stormwater management facilities will be incorporated into site development and subdivision design.

It is expected that developments in the Plan area should contribute proportionately to the installation and expansion of municipal services from which they benefit.

3.8.1 Water and Wastewater Servicing Policies

- Servicing 1. Mackenzie County should require that all development be serviced by onsite water and sanitary systems, or preferably municipal services where available and cost effective.*
- Servicing 2. All development should be connected to municipal water and/or wastewater systems wherever practical.*
- Servicing 3. Infrastructure should be designed to accommodate lands outside of the Plan boundaries where requested by the County.*
- Servicing 4. Municipal services should be provided by a developer at their cost.*
- Servicing 5. A servicing study to the satisfaction of the County may be required to be completed prior to developing any lands.*
- Servicing 6. Developers are encouraged to explore the most cost efficient servicing options available.*
- Servicing 7. Developers should take into consideration the long-term operation and maintenance cost to the County when evaluating servicing options.*
- Servicing 8. The layout of municipal services is likely to be subject to refinement at the subdivision stage.*
- Servicing 9. All water services should be metered and designed for peak servicing requirements and adequate fire suppression needs.*

3.8.2 Stormwater Servicing Policies

- Servicing 10. A stormwater management plan should be required for all new industrial developments.*
- Servicing 11. The stormwater management plan should encourage the design of landscaping that reduces the need for water and incorporates alternative designs that promote water conservation.*
- Servicing 12. Stormwater management facilities (SWMFs) should be incorporated in the initial planning stages for any portion of the Plan area and be designed to improve water quality and to control runoff from future development.*
- Servicing 13. SWMFs should be designed to avoid the impact of sources of pollution from entering existing stormwater systems, drainage courses and natural areas.*
- Servicing 14. Developments should strive to retain stormwater on-site and discharge at a post development rate that does not exceed pre-development release rates.*
- Servicing 15. Naturally occurring wetlands and low-lying areas are preferred as locations for stormwater retention facilities however locations for SWMFs are subject to provincial legislation, regulation, policy and procedures.*
- Servicing 16. All design and installation of SWMFs should be in compliance with provincial legislation, regulation, policy and procedures.*
- Servicing 17. All costs associated with construction of SWMFs shall be borne by the developer.*
- Servicing 18. All costs associated with the maintenance of SWMFs in industrial areas should be borne by the benefitting developers.*

3.9 Shallow Utilities

It is anticipated that more detailed land use and subdivision plans will be completed in the future that identify specific shallow utility design and requirements. Northern Lights Gas Co-op and ATCO are the main utility service providers in the Plan area.

3.9.1 Shallow Utilities Policies

- Shallow Utilities 1. The County will work with utility providers to ensure production and capacity for power and natural gas services are not a constraint to development.*
- Shallow Utilities 2. Where desirable, utility corridors should accommodate passive recreation opportunities such as multi-use trails.*
- Shallow Utilities 3. A developer may be required to provide rights-of way for shallow services.*
- Shallow Utilities 4. Development should not be rejected based on the absence of power and natural gas services.*

3.10 Roads and Access

As this Plan incorporates residential, agricultural and industrial development, future roads and access both within the Plan area and connecting to adjacent lands need to be able to accommodate a wide variety of vehicles, volumes and traffic patterns. The Land Use Concept and Figure 5: Roads and Access describes how current, upgraded and new roadways can service existing and planned developments.

3.10.1 Roads and Access Policies

- Roads and Access 1. All roadways, intersections and accesses should be developed to Mackenzie County standards.*
- Roads and Access 2. The County should require all benefitting developers to contribute proportionally to the cost of road upgrades.*
- Roads and Access 3. The County should work with Alberta Transportation and other relevant agencies to incorporate a dangerous goods route that can adequately serve planned developments.*
- Roads and Access 4. The County may consider deviation from the Plan's road and access network if the deviation is to avoid creating isolated undevelopable parcels, enable safer intersection design, or achieve an identifiable better outcome.*
- Roads and Access 5. All new development should be accessed from the internal transportation network, with the exception of the Highway Commercial Area which should have two access points from Highway 88 onto a service road running east west along the front of the commercial properties.*

3.11 Fire Smart

As the Plan area develops over time, it will be important to ensure that emergency preparedness and fire prevention is incorporated into the site design of future industrial businesses.

The proximity of the Plan area to existing natural areas, combined with the presence of densely treed areas throughout the Plan area highlights the fact that forest fires are a real and tangible threat. The ability of local emergency services to provide effective fire protection is dependent, in large part, on future development patterns and onsite preventative measures.

3.11.1 Fire Smart Policies

Fire Smart 1. Mackenzie County should require developers to prepare an emergency preparedness plan as a part of a subdivision or as part of an Outline Plan for multi-lot industrial subdivisions and also for individual industrial development as appropriate. This plan should address applicable recommendations contained in the *Fire Smart Guide Book for the Oil and Gas Industry*, produced by the Alberta Partners in Protection, including:

- Vegetation removal/conversion/reduction;
- Siting and orientation of buildings;
- Siting and orientation of flarestacks;
- Siting and orientation of power lines;
- Siting and orientation of roads and emergency routes;
- External building materials (i.e. siding and roofing materials);
- Storage of flammable materials; and,
- Notification and communication with applicable provincial, municipal and emergency response agencies.

Fire Smart 2. Developers may be required to prepare an emergency plan as part of a subdivision plan, Conceptual Plan, Outline Plan, or similar plan for residential and community uses. The emergency plan would address recommendations in the *Fire Smart: Protecting your Community from Wild Fire* manual published by Partners in Protection.

4 Implementation

This implementation strategy addresses planning processes and suggests a development sequence.

4.1 Implications for Other Municipal Plans and Bylaws

The Plan has been prepared to be generally consistent with the MDP. To achieve consistency between plans and existing policy documents, the following is required:

- Amend the MDP to re-designate the Plan area to Rural Industrial from Hamlet Residential.
- Amend the Land Use Bylaw to reflect any differences between the Land Use Concept and the current land use districts. A delay in completing this task runs the risk of an increase in Country Residential development during the interim, increasing the opportunity for land use conflicts.

4.2 Outline Plans

The Plan addresses future development in conceptual terms. Prior to development, and at the discretion of the County, an application for subdivision and development may require the preparation of an Outline Plan or similar planning mechanism. The boundary of future Outline Plans should be based on good planning practice and not necessarily land ownership.

4.3 Municipal Reserve

Mackenzie County requires that 10% of all subdivision areas be dedicated as Municipal Reserve, in accordance with the provisions of the Municipal Government Act. To create a complete and functional community, cooperation and a strategy is required to ensure that Municipal Reserve is located in appropriate locations to serve future residents. To accomplish this where there are multiple land owners in an area, some land owners are often required to have to provide more than their share of the 10% reserve dedication, while others are requested to pay 'money in lieu' of dedicating land to compensate those land owners who provided the land so that in effect every developer makes a similar contribution of 10%. The County should take Municipal Reserve dedications through the cash-in-lieu option if the land is not required. These funds should be used for new or upgraded recreation facilities in nearby areas of the County, such as the Hamlet of Fort Vermillion.

4.4 Conceptual Development Sequence

Conceptual Development Sequencing is shown in Figure 7. Development staging should follow a general practice of contiguous expansion and it is anticipated that future development will generally occur in areas adjacent to existing industrial developments and major transportation corridors. However, while the various industrial Plans being developed concurrently provide a large amount of industrial land supply throughout the County, the sequencing and extent of development within the boundaries of this Plan will largely be governed by the market demand for industrial land locally. Therefore, non-contiguous development may be considered, provided the developer pays for service extension costs to the satisfaction of the County.

