

## AMENDMENTS

Bylaw	Date	Description	Page #'s Affected
C5-02	March 12, 2002	Amendment to redesignate approx three quarter sections of land from Heavy Industry to Medium Industry	Location Map 2
C13-04	July 13, 2004	Amendment to redesignate a quarter section of land south of Secondary Hwy 636 from Light Industry to Medium Industry	Location Map 2
C15-04	July 13, 2004	Amendment to redesignate two lots on 114 St. from Heavy Industry to Medium Industry to be consistent with the Municipal Development Plan	Location Map 2
C29-07	Sept. 25, 2007	Amendment to Future Land Use Concept Map, covering the NE 33-54-22-4 and SE 33-54-22-4. Light Industry to Medium Industry	Location Map 2
C11-09	Jan. 26, 2011	Amendment to Future Land Use Concept Map, covering all of SE1-55-22-W4 and portions of SW1-55-22-W4; SE2-55-22-W4; NW1-55-22-W4; and NE1-55-22-W4.	Location Map 2

All ASP amendments are also available on the City Website at [www.fortsask.ca](http://www.fortsask.ca)

**CITY OF FORT SASKATCHEWAN**

**ALBERTA'S INDUSTRIAL HEARTLAND**

**AREA STRUCTURE PLAN**

August 13, 2001

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## 1.0 INTRODUCTION

### 1.1 OVERVIEW

The Fort Saskatchewan Alberta's Industrial Heartland Complementary Area Structure Plan provides guidance for the future growth of industrial development in the City of Fort Saskatchewan. It complements and reinforces similar area structure plans prepared by the neighbouring partner municipalities in Alberta's Industrial Heartland, including: Strathcona County, Sturgeon County and Lamont County.

This document provides information on the methodology used to prepare the Plan, and the land use concepts and planning parameters utilized. The land use policy areas are defined and mapped to provide future direction. The implementation section addresses how the Plan is to be applied, and the linkages with the City's Municipal Development Plan and the Land Use Bylaw.

The purpose of the Heartland Area Structure Plans is to guide future industrial development. More specifically the Plans:

- encourage more efficient use of the land resource
- establish complementary land use policies for industrial, transition and environmental areas in the Heartland region
- reduce environmental impacts
- reduce land use conflicts and establish buffers and transition areas around heavy industry
- facilitate efficient provision and extension of transportation and utility infrastructure and joint use of these services
- encourage the use of eco-industrial principles, e.g. co-generation.

Fort Saskatchewan is located adjacent to the northeast corner of the City of Edmonton, and has a population of 13,346 (municipal census, 2000). The City of Fort Saskatchewan Alberta's Industrial Heartland Area Structure Plan covers over 10 sq. mi. of industrial and agricultural land in the northeast half of the City. It's proposed land use policy areas closely reflect the City's recent Municipal Development Plan that identified areas for industry expansion. It also identified transition areas to buffer existing and future heavy industry from lower impact industrial uses and non-industrial uses. The Area Structure Plan, however, provides more specific direction for future uses in the transition area surrounding heavy industry. The Fort Saskatchewan Heartland Area Structure Plan does not include any additional industrial land beyond what is already designated for existing and future industrial use in the City's Municipal Development Plan and Land Use Bylaw.

## 1.2 BACKGROUND

Alberta's Industrial Heartland is a 194 square kilometre (75 square mile) area located northeast of the City of Edmonton, Alberta (see MAP 1). It includes portions of City of Fort Saskatchewan, Strathcona County, Sturgeon County and Lamont County. Heartland is one of Canada's largest processing centres for petroleum, petrochemicals and chemicals, with over \$11 billion in existing investment. The Heartland provides an important processing link from the Athabasca Oil Sands in northeastern Alberta to market destinations in North America and overseas. Over 30 companies are already located in Heartland, including leading international petrochemical corporations such as: Agrium, Air Liquide, Amoco, Chevron, Dow Chemical, Imperial Oil, Praxair, Shell Canada, Shell Chemicals Canada, and Sherritt International.

Alberta's Industrial Heartland has been identified as one several Canadian locations with excellent potential for additional eco-industrial development. The strategic advantages of the Alberta's Heartland area include:

- lower cost feedstocks of natural gas, oil and salt,
- supply of fresh water and lower cost electricity
- excellent transportation access and storage facilities of road, rail, pipeline, salt caverns and warehousing
- affordable and available land
- educated and efficient workforce
- low taxes and favourable business environment.

Alberta's Industrial Heartland Association (AIHA) was established in 1998 as a new model in intergovernmental and industry cooperation. Its membership includes the municipalities of City of Fort Saskatchewan, Lamont County, Strathcona County, Sturgeon County, and the industries belonging to Northeast Capital Industrial Association. AIHA was established to develop and promote the Heartland region as a global leader in processing, manufacturing and eco-industrial development.

## 1.3 METHODOLOGY

The Fort Saskatchewan Heartland Area Structure Plan, like those prepared by the other Heartland partner municipalities, used a five phase methodology. The phases included:

- Familiarization
- Analysis and evaluation
- Development of the first Draft Plan
- Preparation of the Preferred Option
- Revisions and preparation of the Final Plan.

The Heartland Area Structure planning process commenced in September 1999. Background materials were prepared and documented for the study area. This included information on: soils, vegetation, wildlife habitat, cultural/historical features, environmentally significant areas, Municipal Development Plan land use designations, transportation, utility and plant site infrastructure and hydrogeology.

Public consultation was an integral part of the process that started with presentations to the four municipal Councils, and stakeholder open houses in late 1999 to identify issues and concerns. Public open houses, stakeholder meetings and public hearings were held throughout the Heartland Region. Alberta's Industrial Heartland Association (AIHA) distributed information about the Plans in newsletters and press releases. Information about the Heartland Area Structure Plans was available on the web sites of the municipalities and AIHA. In consideration of information and comment generated through public consultation, five successive drafts of the Plans were prepared for each municipality.

The Background Report and four Heartland Area Structure Plans were prepared largely by consultants from AMEC Earth & Environmental (formerly AGRA) and UMA, guided by a Steering Committee under the direction of the AIHA Board and the four respective municipal Councils.

#### **1.4 ENVIRONMENTAL SETTING**

The North Saskatchewan River forms the northern boundary of the City of Fort Saskatchewan's Heartland Area Structure. Its Valley is the dominant natural landscape feature and the River is the dominant drainage course. The main tributary stream flowing into the North Saskatchewan through the industrial area is Ross Creek. The extent of shorelands, valley slopes and banks, treed areas, natural wetlands, constructed wetlands and buffers is considerable in that portion of the industrial area between Highway 15 on the south and the River on the north (see MAP 2).

The River Valley forms an integral part of the continuous corridor of green area extending the full length of the City and provides a natural space linkage with Strathcona County, Sturgeon County, Lamont County, City of Edmonton and other communities in the Capital Region. Ross Creek is an important component in the Fort Saskatchewan recreation trail system, extending along the west boundary of the industrial area between Highway 15 and the River. This trail corridor provides opportunities for four season use, including: walking, interpretation, nordic skiing, biking and running. A recreational trail parallels the North Saskatchewan River on the north side of the industrial area, but aside from a trail developed by Agrium along part of its land, most of the route is informal.

#### **1.5 SOCIO-ECONOMIC SETTING**

Within the City of Fort Saskatchewan portion of the Heartland, much of the land has been in heavy industrial used for petrochemical production since the late 1970s and early 1980s. Heavy industries in this area include: Praxair Canada, Dow Canada, Westaim Technologies, Norcen Energy Resources, Thio Pet Chemicals, Marsulex Inc., Sherritt Inc., Chevron Canada Resources, and Amoco Canada Petroleum.

The remaining lands are used for agriculture, light/medium industrial, commercial and business uses, particularly south of Highway 15 in the transition policy area.

Highway 15 provides the main access route to this area. The area is serviced by several pipelines and rail access provided by CN.

## **2.0 LAND USE CONCEPT**

A land use concept for the lands within City of Fort Saskatchewan's portion of the Alberta's Industrial Heartland as one of the four municipal partners of Alberta's Industrial Heartland Association, is shown on MAP 2. As this Plan is conceptual, the size and boundaries of the policy areas illustrated are approximate.

The land use concept presented here is complementary to the land use concepts prepared for the other three municipal partners of Alberta's Industrial Heartland – Sturgeon County, Strathcona County and Lamont County. The City of Fort Saskatchewan Industrial Heartland Area Structure Plan, provides the basis upon which the City can guide future planning and development of these lands in the ongoing development of Alberta's Heartland as a global leader in processing, manufacturing and eco-industrial development.

### **2.1 LAND USE CONCEPT: PLANNING PARAMETERS**

The land use concepts were determined through specific reference to the following planning parameters.

#### **2.1.1 The Municipal Government Act, 1994**

The Municipal Government Act (MGA), 1994 defines the purpose of an Area Structure Plan as being the definition of a framework for further development subsequent to a development plan. In defining the framework, an Area Structure Plan must address:

- proposed land uses;
- general location of transportation and infrastructure routes;
- density of population; and
- other relevant matters.

The issues must be addressed in a manner that is consistent with all other statutory plans.

The Act also requires that all municipal plans and actions be consistent with the enactment of land use policies adopted by Order-in-Council in 1996. Adopted "to help municipalities to harmonize provincial and municipal initiatives at the local land use level", the policies encourage:

- fairness, openness and equity in the planning process;
- cooperation and coordination among neighbouring municipalities and between municipalities, and provincial government departments;
- facilitation and promotion of land use patterns which coordinate the efficient development and integration of land use, infrastructure, service and facility patterns,
- an appropriate mix and balance of all land uses in an orderly, efficient, compatible, safe and economical manner;
- maintenance and enhancement of a healthy natural environment;
- efficient use of Alberta's non-renewable resources;
- protection and utilization of Alberta's water resources in a sustainable way;
- preservation and use of historical, archaeological and paleontological resources; and
- a safe, efficient and cost effective provincial transportation network.

These policies are reflective of the principles of eco-industrial planning as outlined in SECTION 2.2.

### **2.1.2 Alberta's Industrial Heartland Association**

One of the primary goals of Alberta's Industrial Heartland Association (AIHA), as set by its participating partners, is to contribute to the coordination of municipal services. The preparation of four complementary plans for the four municipal partners is one of the objectives to realize this goal.

The specific tasks associated with the implementation of this objective include:

- minimizing land use conflicts by ensuring that appropriate land is provided for various types of development through definition of detailed policy;
- identifying infrastructure requirements including utilities and services;
- providing stakeholders and interest groups with opportunities for effective input and ongoing communication through a community consultation program; and
- identifying strategies to implement the eco-industrial area structure plans.

### **2.1.3 Land Use Designations of the Municipal Development Plan**

The land use concepts for the four complementary area structure plans are based upon current land use policies. The City of Fort Saskatchewan's Alberta's Industrial Heartland Area Structure Plan incorporates the land use policies from its recent Municipal Development Plan 1999 – 2010, Bylaw C12-99, as the basis for the land uses proposed for the lands within Alberta's Industrial Heartland Area.

All four of the Alberta's Industrial Heartland Association municipal partners stipulated that their land use designations be respected as an integral part of their area structure plans. This helps ensure continuity in the preparation and implementation of their planning and development decisions.

## 2.2 ECO-INDUSTRIAL PLANNING PRINCIPLES

Existing and future development in the Fort Saskatchewan Heartland Area Structure Plan area will be encouraged to utilize eco-industrial planning principles. Although the field of industrial ecology is a relatively new field of study, there is some consensus on the major concepts and strategies. An eco-industrial development is interpreted as a “community of manufacturing and service businesses seeking enhanced environmental and economic performance through collaboration in managing environmental and resources issues, including energy, water and materials”. These principles include:

- Connecting individual firms into industrial ecosystems by:
  - Closing loops through reuse and recycling
  - Maximizing efficiency of material and energy use
  - Minimizing waste generation
  - Thinking of wastes as potential products
- Balancing inputs and outputs to natural system capacities by:
  - Reducing the environmental burden created by releases
  - Designing the industrial interface with sensitivity to the natural environment
  - Minimizing the creation of and transporting of toxic and hazardous materials
- Designing industrial use of materials and energy by:
  - Redesigning processes
  - Substituting technologies and materials
- Aligning policy with a long-term perspective.

There are other specific characteristics of an industrial park operating as a mature ecosystem. Several of the following may have applicability in Alberta’s Industrial Heartland and should be considered:

- Consider the ecological carrying capacity of the air, water and soil to absorb emissions.
- Base energy production on renewable resources, increases in efficiency of current energy production, cogeneration and district heating.
- Design buildings and structures to optimize heat and water conservation, while enabling disassembly for reuse and recycling at the end of the cycle.
- Use indigenous plants in landscaping to support building heating and cooling.
- Consider compatibility for symbiosis in the selection of industries and businesses, and potential to integrate industrial and other appropriate land uses.
- Encourage a web of businesses not only involving producers, consumers, but scavengers and decomposers to support recycling of materials.
- Build in redundancy of materials sources, and discourage dissipative uses of materials and energy.
- Encourage networking through a common information management system.

- Identify and incorporate opportunities for cooperative ventures among industries and businesses, such as: transportation planning, infrastructure development, combined waste management, including recovery and treatment, environmental monitoring and emergency response.
- Construct, operation and maintain infrastructure in an environmentally friendly manner.

### **2.3 GENERAL DEVELOPMENT FRAMEWORK**

Recognizing that Alberta's Industrial Heartland Association is a unique organization, and that the Heartland Area is being introduced in its entirety to prospective industrial activities, the City of Fort Saskatchewan's Heartland Area Structure Plan can be used in two coordinated ways.

First, when prospective industrial proponents are assessing the City as to whether it is the appropriate area for industry to locate, they will be able to refer to the planning framework contained herein (see SECTION 3.10). By referring their initial plans to the set of considerations (municipal, provincial, federal, resource and stakeholder), the eco-industrial planning principles and goals and objectives of the plan, and their respective application to the lands within Fort Saskatchewan, these industrial proponents will develop an understanding of the requirements they will have to meet to develop their planned operation. With this general knowledge, they will be better able to evaluate the implications of locating in that particular portion of the Heartland Region.

Once the preferred site has been selected, the second step of this area structure plan can be employed. The industrial interests will be able to proceed with the detailed planning and development associated with that particular site.

This approach reinforces the responsibility of the City of Fort Saskatchewan for the lands within Alberta's Industrial Heartland Area. It enables the City to serve as the main window in dealing with industry regarding the lands within its own jurisdiction. It also reinforces the responsibility of the City to work collaboratively with provincial and federal agencies in ensuring that industry meets the necessary requirements of other levels of government for their development and subsequent operation plans.

#### **2.3.1 Policies, Regulations, Controls and Standards**

Respecting the need for complementarity among the area structure plans prepared for each of the four Heartland municipal partners, as well as the need to respect the legislative requirements and practices that exist among municipal, provincial and federal governments and agencies, the following policies, controls and standards are common to all of Alberta's Industrial Heartland Area Structure Plans.

### **2.3.1.1 Policies**

The land use policies and directives as described in the respective Municipal Development Plans and Land Use Bylaws of the four Heartland municipal partners will provide the basis upon which subsequent planning and development will occur in the lands which the four partners have agreed make up the Heartland Area.

The land use and development policies of the four Municipal partners will be coordinated with relevant environmental and development policies as stipulated by the appropriate provincial and federal agencies. For example, conditions stated by Alberta Energy Utility Board and the Natural Resources Conservation Board for development of particular land uses and activities in the Heartland Area will be incorporated within the land use requirements of the particular Heartland municipal partner within whose jurisdiction the land use or activity is located. Although this is required under Section 619 of the Municipal Government Act, ongoing discussions among the agencies, the City, and the proponent of an industrial activity will help address and resolve concerns about planning and development.

The Transition Area in Fort Saskatchewan's Heartland Area Structure Plan is proposed for future Medium Industry, Light Industry / Business and Business Technology uses. It surrounds the Heavy Industry area, is 0.8 km to 1.6 km in width and does not accommodate heavy industry. There is one exception in the southwest corner of the Heavy Industry Area. Here, the distance between the existing Heavy Industry area and the Fort Saskatchewan boundary is less than 0.8 km. due to the close proximity of the industry with the City's boundary

To minimize the potential for conflicts between residential and heavy industrial uses, no new residential developments will be allowed in the City of Fort Saskatchewan Alberta's Industrial Heartland Area Structure Plan area. Existing residences will become non-conforming uses, in accordance with the Municipal Government Act, Section 643.

Multi-lot light/medium industrial subdivisions may be permitted in that portion of the Transition Zone located south of Highway 15.

### **2.3.1.2 Guidelines and Regulations**

Guidelines developed by provincial and federal agencies will be referred to and incorporated with those of the four municipal partners in the review and approval of proposed land use activities and developments for their respective areas. Regulations registered by Alberta Environment regarding maintenance, reclamation and/or restoration of landscapes associated with plant sites and areas contained within natural areas, as defined by the Public Lands Act, will be referred to in the preparation of landscape management plans required by the four municipal Heartland partners.

Project proponents will be encouraged by the municipal partners to consider establishing a buffer around their development (see SECTION 3.7). This buffer based on the proponent's own assessment of potential for adversely affecting a neighbouring land use or activity due to an incident will be in addition to any setbacks required by their respective municipal partner. This

buffer will be available for uses as defined appropriate by both the respective municipal partner and the proponent based on their mutual assessment of risk.

Project proponents will be encouraged to consider:

- The ecological capacity of the area, paying particular attention to the assimilative capacity of the air, water, and soil to absorb emissions generated by their own activities, as well as in combination with those emissions known to be associated with other established operating facilities or proposed facilities;
- Selecting sites that allow the establishment of systems to support the exchange of materials, services, and ideas with other Heartland activities;
- Planning, design and development of their site to optimize the conservation of heat and water, and to minimize the production of noise and light; and
- Maintenance of the environmental characteristics indigenous to the area (e.g. planting materials, wildlife habitat, topography) in the planning, design, development and reclamation of their site.

### **2.3.1.3 Controls and Standards**

Controls and standards set by the respective municipal partners, and those set and monitored by provincial and federal agencies, will be incorporated in the planning and development of land use activities. This includes: the establishment and maintenance of setbacks from pipelines and transmission corridors as stipulated by Alberta Energy and Utility Board; water intake and discharge parameters associated with the North Saskatchewan River as defined by both Alberta Environment and Environment Canada; air emissions as defined by Alberta Environment and lighting requirements for towers and stacks set by the Canadian Transportation Agency and Transport Canada.

## **2.4 LAND USE PATTERNS**

There are five land use patterns proposed for the City of Fort Saskatchewan Alberta's Industrial Heartland Area Structure Plan (see MAP 2). They include:

- Heavy Industry Policy Area
- Transition Area
  - Medium Industry Policy Area
  - Light Industry / Business Policy Area
  - Business Technology Policy Area
- Environmental Policy Area

The following outlines the intent, objectives and guidelines associated with each of the land uses.

### **2.4.1 Heavy Industry Policy Area**

#### **Intent**

The basic intent of the Heavy Industrial Area is to accommodate heavy industry such as petrochemical and natural resource processing and manufacturing and directly associated support service industries. The latter could include: cogeneration power facilities, air separation units and carbon dioxide purification plants. The accommodation of these activities will be done in ecologically and economically sound ways. This will allow processing, manufacturing and

servicing industries that are seeking enhanced environmental and economic performance to work collaboratively in managing environmental and resource issue, including energy, water, air and materials.

### **Objectives**

- To accommodate heavy industry in an environmentally sound and economically efficient manner;
- To accommodate heavy industrial uses in areas that are characterized by low population densities;
- To maintain appropriate setbacks between industrial activities and other land uses, such as residential neighbourhoods, present near the Transition area; and
- To encourage maintenance and incorporation of open space and environmental buffers with the heavy industrial activities in mutually compatible ways.

### **Guidelines**

#### Heavy Industry Activities

- Heavy industrial activities will comply with all municipal, provincial, federal approvals as required. This will include preparation of environmental impact assessments as presented in Alberta Environment's Environmental Protection and Enhancement Act (EPEA) to fully identify all potential impacts relative to the site in question and adjacent area and regions, if need be. Consideration will also be given to the need for conservation and reclamation plans under EPEA for the development and closure of plant sites and associated pipelines. Reference will also be made to the Canadian Environmental Assessment Act and the Canadian Environmental Protection Act as need be. This will be for both biophysical and socio-economic impacts. The assessment will also contain mitigative measures to be implemented in a manner that incorporates the active input of the City in effectively addressing impact management and benefit enhancement. The assessment will be coordinated with other provincial and federal departments and agencies as need be, such as the Alberta Energy and Utilities Board (EUB);
- Heavy industrial activities will comply with all Alberta Environment and EUB regulations, approval conditions, codes of practice and standards and guidelines such as those pertaining to surface water quality guidelines and deep well disposal of wastewater, discharge to the North Saskatchewan River, and maintenance of airshed;
- Industrial services ancillary and/or integral to the heavy industrial activities, such as air separation units and cogeneration power units, will comply with Alberta Environment in a manner similar to heavy industry, and also with the Energy and Utilities Board for noise related matters, power transmission and pipelines. This will include establishment and maintenance of necessary rights of way and setbacks for all lines in accordance with set standards. Consideration will be actively given in consultation with proponents of pipelines, the EUB, Alberta Environment and other government agencies to the development and maintenance of corridors to accommodate pipelines;

- Heavy industrial activity should wherever possible develop on lower capability agricultural land, and retain good agricultural land as a buffer and for agricultural use. Stockpiling and reuse of good capability agricultural soils will be required through the municipal development process;
- Industrial activities will be encouraged to establish and maintain a buffer around their facility that provides significant undeveloped space between them and their adjacent neighbours (see also SECTION 3.7). The need and size of the buffer will be determined through an assessment of the risk associated with each facility as determined by the proponent's own due diligence and environmental management programs combined with the City's needs;
- The buffers will be subject to a landscape management plan prepared by the proponent to the satisfaction of the City. The buffer will be able to accommodate a variety of low risk prone activities as agreed to by the proponent and the City such as grazing, cropping or wildlife habitat; and
- Heavy industry will be encouraged to explore how they might share infrastructure such as pipelines, transmission lines, telecommunication, district heating and cooling, waste management initiatives with one another and with other activities in the area.

#### Agricultural Activities

- Extensive agriculture (grazing, cropping) and intensive agriculture (greenhouses, market gardens, sod farms, nurseries) will be permitted in the area. Future expansions will conform with all regulations and codes established by Alberta Agriculture Food and Rural Development;
- Intensive livestock operations will not be allowed;
- Agricultural activities will be encouraged to work with adjacent heavy industry in attempting to define mutually beneficial operating procedures. This could include shared waste management treatment facilities and procedures or utilization of waste heat or steam.

#### **2.4.2 Transition Zone Policies: Medium Industry, Light Industry / Business and Agricultural Policy Areas**

The Transition Zone includes three policy areas:

1. Medium Industry Area
2. Light Industry / Business Area; and
3. Agricultural Transition Area

### **Intent**

The purpose of the City of Fort Saskatchewan Transition Policy Area is to provide a gradient of land uses between the heavy industrial activities and non-industrial uses. It provides a point of entry into the Heartland as it borders Highway 15, the main highway through the southern portion of the Heartland.

It also provides a spatial setback between existing heavy industry, and the City's eastside residential neighbourhoods. This specific area of the Transition Zone is already designated Industrial Reserve and Light Industry in the Land Use Bylaw. Agricultural uses are likely to continue over much of this specific area, until such time as the Land Use Bylaw is amended to accommodate low impact business technology uses that are compatible with the adjacent residential neighbourhood, complementary with existing industry and environmentally acceptable. When the Land Use Bylaw is amended for this specific area, it will be to a Direct Control District that will allow Council to strictly regulate each new industrial use.

### **Objectives**

- To provide a transition or buffer area between heavy industry, and other industrial and non-industrial uses;
- To provide a reserve area for future industrial uses that are compatible with the adjacent residential neighbourhood, existing industry and other non-industrial uses;
- To accommodate a mixture of land use activities in an environmentally sound and economically efficient manner;
- To accommodate light and medium industrial, limited commercial / business and agricultural uses;
- To accommodate limited highway commercial and commercial activities for highway and industrial area users;
- To allow continued extensive agriculture (grazing, cropping) and selected intensive agriculture (nurseries, market gardens, greenhouses) until such time as the land may be required for industrial or commercial uses;
- To not allow intensive livestock operations;
- To allow recreation and open space uses in the undeveloped buffer area between heavy industry and residential areas west of 109 and 112 Streets, subject to landowner consent; and
- To not allow new residential activity.

### **Guidelines**

#### 1. Medium Industrial Activities

- Located across Highway 15 from portions of Dow as well as Sherritt / Agrium / Westaim, this area will accommodate medium industrial activities that could support the activities associated with the heavy industry activities throughout the Heartland;
- These activities include activities such as: heavy industrial and agricultural equipment sales, rentals and repairs, laboratories, temporary indoor storage, veterinary clinics or

hospitals, minor eating establishments, contracting services, vehicle repair and service stations, and greenhouses/nurseries;

- Access to and from Highway 15 will be centralized in one or two intersections; and
- To maintain the point of entry into the Heartland Area, regulations for the development will require a high standard of site design, signage, open space, architectural control and landscaping.

## 2. Light Industry / Business Activities

- Light industrial activities could include services supporting the Heartland area and other regional activities such as contractor services, small equipment rentals and repairs, light eating establishments, convenience stores, minor professional financial and office business services, administration offices, industrial vehicle sales and rental offices, greenhouses and plant stores.
- Commercial and highway commercial to serve the heavy industry sector and highway traffic, such as shops, offices, convenience stores, gas bars and minor eating establishments may be considered in the Light Industrial / Business Policy Area, provided there are sufficient setbacks from any hazardous heavy industry;
- Both pedestrian and vehicular circulation should be readily accommodated within the developed areas;
- Site regulations will require a high standard of site design, signage, open space and landscaping allowing people to quickly orient themselves;
- Access to and from Highway 15 will be controlled at central locations intersecting with Highway 15 and positioned in consideration to existing and proposed traffic flows and previously established or planned intersections.

## 4. Agricultural Transition

- This area shall act as a buffer between existing heavy industry and existing urban residential land uses.
- All proposed land uses become Direct Control under the authority of Council.
- In this area no dwellings are permitted.
- The area between from 109 and 112 Streets and the existing Heavy Industrial area will be the subject of future study to determine specific locations for possible development setbacks. This may involve determining appropriate locations for limited, low impact industrial uses on a site specific, industrial specific basis in keeping with Council's position that any future industrial districting will be Direct Control.

## **Other Activities**

### **Agricultural Activities**

- Extensive agriculture (grazing, cropping) and intensive agriculture (greenhouses, market gardens, nurseries) will be continue to be allowed in the Medium and Light Industry / Business Policy Areas, until such time as the land is developed for industrial uses.
- Intensive livestock operations will not be allowed.
- Agricultural activities will be encouraged to work with adjacent heavy industry in attempting to define mutually beneficial operating procedures. This could include shared waste management treatment facilities and procedures for utilization of waste heat or steam.

### **Low Intensity Recreation Activities**

- Low intensity recreation uses, such as walking, biking, nature walks, nordic skiing may be permitted to provide linkages and non-motorized access to environmental areas, activity centres and employment, subject to landowner consent.

### **Residential Activities**

- No new residential activity will be permitted.

## **2.4.3 Environmental Policy Area**

### **Intent**

The intent of the Environmental Policy Area is to conserve environmentally sensitive areas within the North Saskatchewan River Valley, Ross Creek Valley and area wetlands, and to enhance preservation of the character of these areas. This will be realized through growth and development that is consistent with the goals and objectives of this Plan as well as those contained in the City's River's Edge Master Plan, Urban Parks Master Plan, City Parks Upgrading Plan and City Parks Master Plan. This will also be realized through the cooperative environmental and recreational initiatives of industry. It should be recognized that major heavy industry landowners in Fort Saskatchewan's Heartland Area already provide and maintain open space and treed buffers, wetlands and natural areas, and limit industrial activity adjacent to the River shorelands.

In doing so, the area will accommodate future activities in an environmentally sustainable manner. This ongoing accommodation will be instrumental in establishing the Heartland Area as an eco-industrial development. The area will also continue to reinforce the North Saskatchewan River and Valley as a regionally significant, natural feature.

### **Objectives**

- To conserve environmentally sensitive areas;

- To provide watershed protection, control soil erosion and maintain slope stability;
- To provide a spatial, undeveloped buffer between heavy industry activity and environmentally sensitive areas, such as shorelands, steeper slopes and areas of native vegetation;
- To conserve culturally significant areas;
- To conserve and enhance the integrity of the North Saskatchewan River Valley and tributary stream valleys;
- To conserve wildlife habitat and corridors;
- To conserve opportunities for recreational and educational activities consistent with the setting, while protecting and enhancing the river valley character; and
- To allow current land uses to continue, where and as appropriate.

### **Guidelines**

#### **Environmentally Sensitive Areas**

- Identify environmentally sensitive areas and utilize existing park plans and landscape management designs to effectively nurture their evolving character. Where existing plans and designs are not available, prepare management strategies;
- Provide for natural vegetation areas, wildlife habitat, and erosion control;
- Allow existing extensive agricultural uses, such as livestock grazing, improved pasture, and oilseed and grain production to continue (no intensive livestock operations will be permitted);
- Allow for minor accessory industrial uses licensed for direct access to the river (intakes, pump stations, outfalls), groundwater return pumps and pipelines;
- Allow for recreational pursuits as determined by the biophysical capability of areas in which they are proposed and currently exist, and in accordance previously completed plans (Note: public access and recreational activity on private land requires landowner consent);
- Encourage landowners with property abutting the North Saskatchewan River and Ross Creek Valley to participate in landscape management initiatives to conserve and enhance the habitat and its cultural significance;
- Encourage landowners with property abutting stream banks to establish and maintain a 30 metre development setback from the top of bank of all streams to maintain the ecological integrity of streams and stream banks.
- Do not permit permanent development in areas prone to erosion, subsidence or flooding, particularly the 1 in 100 year event areas;
- Privately owned property may be considered to create public access or trail linkages by use agreements, conventional easements, environmental easements, or purchase. Public / private

sector arrangements are encouraged to secure and develop additional public access to the shores of the North Saskatchewan River (e.g for the Trans Canada Trail); and

- Establish and maintain a 50 metre development setback from shore of the North Saskatchewan River, and from the top of the River valley break to maintain integrity of the River's edge and to accommodate public access.

#### Culturally Sensitive Areas

- Ensure that culturally sensitive areas are appropriately identified and information about them compiled and maintained in conjunction with the Park Plans previously noted;
- Establish landscape management plans for these areas incorporating public input; and
- Consider requiring Historic Impact Assessments under the Historic Assessment Act be undertaken prior to new development.

#### Low Intensity Recreation

- Provide for the development and maintenance of the Trans Canada Trail connections through the River valley, and accommodate where possible connections with a series of trails for hiking and biking elsewhere in the City, as well connecting with other corridors adjacent to the City.

#### Institutional Uses – Educational Retreats

- Encourage the development and maintenance of institutional facilities for environmental education by industry and / or non-profit arrangements, possibly in partnership with the City;
- Ensure that such facilities are not prone to natural or man-made (industry) hazards such as erosion, subsidence or flooding, particularly the 1 in 100 year flood area; and
- Require that an environmental assessment be prepared to the satisfaction of the City, as part of the development permit application process for facilities that have not been considered for development previously.

#### Utility Corridors and Crossings

- Utility corridors and crossings will be reviewed and permitted on a case by case basis; and
- Appropriate Environmental Impact Assessments will be prepared with input from City, provincial, and federal agencies in accordance with their respective regulatory responsibilities. This will necessitate on a provincial level reference to Alberta's Water Act, and associated regulations and codes pertaining to pipelines and telecommunication lines crossing the North Saskatchewan River. On a federal level this will include reference to the Canadian Environmental Assessment Act as administered by the Canadian Environmental Assessment Agency (CEAA), the Fisheries Act as administered by Fisheries and Oceans Canada and the Navigable Waters Protection Act as administered by Fisheries and Oceans Canada – Coast Guard.

### Residential Activities

- No residential activity will be permitted.

### Commercial Activities

- Commercial public services to outdoor recreationists and environmental education users may be considered, subject to an environmental assessment to the satisfaction of the City, and in respect of landowner approval, setbacks, visual impacts, vehicular access and provision of appropriate servicing infrastructure. These services could be implemented through private/non-profit/public relationships to increase the recreation and educational potential of the river and its valley as part of earlier prepared plans such as River's Edge Master Plan, Urban Parks Master Plan, City Parks Upgrading Plan. The result would increase the liveability of the City and contribute to Alberta's Industrial Heartland as a significant ecological setting in which to conduct business

### Aggregate and Mineral Extraction

- Gravel and clay extraction may be permitted in areas deemed to have economic potential, subject to statutory approvals, including appropriate reclamation plans.

## **2.5 CIRCULATION**

### **Intent**

The existing roadway network in Fort Saskatchewan's Industrial Heartland area consists of six main routes, with Highway 15 being the most significant. These roads include:

- Highway 15 that separates the north and south portions of the City, as it runs northeasterly to the east boundary from the Highway 15 bridge;
- 99 Avenue that roughly parallels Highway 15, bordering the southern edge of Sherritt / Agrium / Westaim, and Dow;
- 119 Street that bisects the Dow site, and Amoco Canada and Chevron facilities and links Highway 15 with River Road;
- 114 Street extends northward from Highway 15 to the Sherritt / Agrium / Westaim sites;
- 100 Avenue that links with 114 Street and carries traffic to the Downtown Business District; and
- River Road, which becomes Township Road 554, extends across the northern part of the industrial area, connecting 119 Street on the west side with 130 Street or Range Road 220 on the City's east boundary.

All of the facilities are serviced directly by spurs of the Canadian National Railway and the Canadian Pacific Railway, which are both in turn connected to major rail lines.

### **Objectives**

- To provide an efficient linkage of road and rail connections within the City of Fort Saskatchewan portion of the Heartland Area to service heavy industrial activities;
- To provide an effective linkage with the other municipal partners of the Alberta's Industrial Heartland Association to ensure the timely sharing of emergency services; and
- To ensure the public has opportunities to access the North Saskatchewan River Valley.

### **Guidelines**

#### Heartland Transportation Planning

- Roadway development in the Fort Saskatchewan Heartland Area Structure Plan will be guided by the City of Fort Saskatchewan Transportation Plan and Municipal Development Plan.
- There is a need for the City of Fort Saskatchewan to work with the other three municipal Heartland partners in the preparation of a transportation plan for internal circulation within the Heartland Region as well as considering the connections between Heartland and adjacent regions.
- Such a plan needs to reinforce the role of Highway 15 as the major vehicular corridor within Heartland, as well as considering articulating the highway's potential connections with other parts of Heartland, especially Sturgeon County to the north.
- Consideration should be given to establishing similar design and operation characteristics that are compatible with the design and operation characteristics of roads of same nature within the areas of the other three municipal Heartland partners.

## 2.6 Utility Servicing

### Intent

The 1997 City of Fort Saskatchewan Northeast Industrial Servicing Study completed by UMA Engineering provides an overview of the present municipal services to the industrial sector and an evaluation of the options for extending and increasing the service in future years.

Currently the City provides potable water to the majority of heavy industries in the City, such as: Agrium, Amoco, Chevron, Dow, Sherritt and Westaim with a total volume of 360,000 cubic metres. This water in turn is received from the Capital Region Northeast Water Services Commission regional system. Some Fort Saskatchewan industries rely on water from groundwater sources or intakes from the North Saskatchewan River.

Water is presently supplied to a number of industries in the Heartland by the Vegreville Corridor and Capital Region Northeast Water Services Commissions. A 1997 Servicing Capabilities Study completed in 1997 by Associated Engineering for the Capital Region Northeast, Vegreville Corridor, and Thorhild Water Services Commissions concluded that the Regional Commissions have sufficient capacity to serve new markets, including new industry. The Regional Commission water pipelines are ideally located to provide water to existing and future industries in Fort Saskatchewan and those in the other Heartland municipalities.

The Sherritt, Westaim, Agrium, Corefco and Umex industrial plants were connected to Fort Saskatchewan's wastewater collection system in 1999. The domestic and process wastewater effluent from these industrial plants is transported through the municipal sewage system to the Capital Region Wastewater Treatment Plant, where it is treated along with municipal wastewater and subsequently discharged to the North Saskatchewan River.

The extension of the wastewater collection system which serves Sherritt, Westaim, Agrium, Corefco and Umex was constructed with considerable excess capacity with the intention that it will be extended in the future to provide service to additional industrial customers in Fort Saskatchewan and adjacent Heartland areas in Strathcona County. The existing industrial plants connected to the system require a flow capacity of 9,000 cubic metres per day. The collection system is capable of providing an ultimate capacity of 43,000 cubic metres per day, which is enough capacity to handle the process effluent from several additional major industrial plant sites. Dow Chemical, Chevron and BP have indicated an interest in connecting to the Fort Saskatchewan wastewater collection system.

### Objectives

- To ensure continued complementarity between infrastructure servicing needs and capabilities of Fort Saskatchewan industry and that of its Heartland municipal partners through a coordinated and continuous inventory and assessment;

- To ensure that the servicing information is effectively exchanged and monitored by the City in cooperation with the other three Heartland municipal partners;
- To ensure that there is adequate water supply for existing industrial clients and future industry to be attracted to Fort Saskatchewan's Industrial Heartland area; and
- To ensure that industrial and domestic sewage of existing and future industry and commercial businesses are treated with appropriate care and environmental sensitivity.

### **Guidelines**

Representatives of the City's Planning and Public Works Department will participate with their counterparts from the other three Heartland municipal partners, as well as industrial representatives from the Northeast Capital Industrial Association in a Heartland Infrastructure Working Committee. This Committee will initiate and maintain an inventory of existing and planned infrastructure expansions and extensions from both municipal and industrial sources. It will also actively consider market demand and opportunities defined by Alberta's Industrial Heartland Association in identifying options for the extension and expansion of water and sewer facilities throughout the Heartland Region.

#### **Water Supply Management**

- Consideration will be given to the long-term plans of Heavy Industry when locating in the City, and in particular their water requirements and the means by which they intend to access and use it. Heavy industries will be encouraged to work with other industries in the area when developing their water management plans, with a view to operating central water management systems.
- Heavy industry, when developing water management plans, will be encouraged to work with other industrial activities in the area to consider developing and operating central water management systems;
- Consideration will be given to how the Capital Region Northeast Water Service Commission line might be more effectively used in the future. Similar consideration will be given to the Capital Region Vegreville Corridor Water Services Commission line; and
- Such water management schemes will require the direct involvement of the City, Alberta Environment, Alberta Agriculture Food and Rural Development, and the Capital and Lakeland Regional Health Authorities.

#### **Sewage Management**

- As with water supply management initiatives, heavy industry in the City will be encouraged to work together with the intent of developing mutually beneficial sewage facilities and measures; and

- Existing and new industry and commercial development will be encouraged to connect with the City of Fort Saskatchewan's oversized collection system for industrial and domestic sewage, and to the Capital Region sewage system.

### **Storm Water Management**

- As new developments – heavy industrial, light/medium industrial, business technology and commercial - are being attracted to the area, increased attention will be given to developing and implementing innovative means to manage storm water runoff and ultimate discharge into the North Saskatchewan River. These means will require the involvement of all existing industrial activities where and when feasible.

## **3.0 IMPLEMENTATION**

### **3.1 IMPLEMENTATION MEASURES**

This Area Structure Plan will be implemented through a range of statutory and non-statutory mechanisms available to the municipalities, and through the respective statutory and regulatory instruments of provincial and federal governments.

Applicable statutory planning mechanisms under the Municipal Government Act include:

- Municipal Development Plan
- Land Use Bylaw
- Subdivision Development and Review Process
- Development Permitting Process
- Development Agreements

### **3.2 DEVELOPMENT STAGING**

Staging of development in all policy areas will be determined by the locational preferences and site selection processes of individual firms and organizations, and by the availability of required infrastructure.

### **3.3 AMENDMENTS TO THE LAND USE BYLAW**

The Land Use Bylaw will be reviewed in light of the policies of SECTION 2.0. Specific areas to be considered include:

- Revising land use district names to provide consistency with those of Heartland municipalities;
- Creation of an appropriate land use district or revision of an existing district to implement the North Saskatchewan River policy areas;
- Establishment of a Direct Control District for the area between existing heavy industry and the eastside residential area; and

- Reviewing the permitted and discretionary use provisions relating to residential and agricultural uses in existing Land Use Districts to clarify policy intent with regard to the continuation of existing residences.

### **3.4 AMENDMENTS TO THE MUNICIPAL DEVELOPMENT PLAN**

Section 638 of the Municipal Government Act requires that all statutory plans must be consistent. This Area Structure Plan has been prepared to be consistent with the City's Municipal Development Plan. However, should a major amendment to this Area Structure Plan be proposed, such a proposal should be considered relative to the Municipal Development Plan, and an amendment made to the Municipal Development Plan if the proposal is found to have merit.

The City of Fort Saskatchewan Municipal Development Plan will be reviewed relative to the other Heartland partners' municipal development plans to determine the merits of providing consistent terminology and policies for comparable policy areas.

### **3.5 AMENDMENTS TO THE AREA STRUCTURE PLAN**

An amendment to the Fort Saskatchewan Heartland Area Structure Plan shall be required, if in the opinion of the City, a development proposal results in a significant change in the general land use pattern of an area or site.

### **3.6 SUBDIVISION**

The subdivision approval regulations and approval processes will be reviewed relative to the policies stated in SECTION 2.0.

### **3.7 ADVOCACY WITH OTHER APPROVAL AUTHORITIES**

The primary authority for approval of new industrial development in the Heartland Area Structure Plan areas may rest with provincial agencies (Alberta Energy and Utilities Board and Alberta Environment), and in some cases, also federal agencies (National Energy Board). It is important, however, that the Heartland municipalities provide input and liaise closely with these bodies, both during and outside of specific development approval processes.

This is particularly important when balancing industrial development objectives with the potential concerns of existing residents and other stakeholders about industrial encroachment. The resolution of such concerns must rest with the industrial proponent. It is important to all parties that there be recognized objectives and a consistent framework for assessing the extent of mitigative action required relative to the proximity and level of impact of the industrial development proposal.

To this end, and in order to facilitate an orderly transition in use and ensure compatibility between new heavy industry developments and existing residential uses, the Heartland

municipalities support and encourage the development and application of quantitative, cumulative, hazard and nuisance assessment procedures and standards by other regulatory authorities with approval jurisdiction. This should be done in consultation with affected municipalities and other stakeholders.

Where any source(s) within a new heavy industrial development may present a risk of fire, explosion or chemical release to an existing residence in its vicinity, the risk(s) should be quantitatively assessed by the proponent and mitigated to reduce the cumulative risk to an acceptable level at the location of the residence. Such assessments should be carried out in accordance with Major Industrial Accidents Council of Canada (MIACC), US Environmental Protection Agency, Canadian Standards Association, or similar procedures as deemed appropriate by the EUB or other applicable regulatory agency.

Where any source(s) within a new heavy industrial development may create an impact associated with noise, light, odour or other nuisance to an existing residence in its vicinity, the level of nuisance should be quantitatively assessed and mitigated to reduce the cumulative impact of each nuisance factor to a level below a standard which, in the opinion of the regulatory authority with jurisdiction, does not present a significant impediment to the residential use and enjoyment of property at the location of the residence.

### **3.8 RECOMMENDED FUTURE PLANS AND STUDIES**

Several non-statutory mechanisms are available to implement a consistent approach to addressing issues which have arisen through the preparation of the Heartland Complementary Area Structure Plans. Examples of these are listed below.

- Transportation Plans will be prepared to address the particular transportation challenges of the Heartland region. These challenges include, but are not limited to the following:
  - the characteristics of industrially related traffic patterns;
  - specific transportation needs of industry;
  - the rationale for, implications of and planning steps required for improved road crossings of the North Saskatchewan River;
  - requirements for a comprehensive transportation network for Heartland; and
  - provisions for comparable levels of rail service on both sides of the North Saskatchewan River.
- Alberta's Industrial Heartland Association and its member municipalities will establish a working committee to plan for future water and sewer infrastructure and pipeline corridors. Part of this process will be to assess the current and future requirements for industry, and the options for addressing future needs. The results will be beneficial to existing industries wanting to expand, or new industries locating in Heartland.
- It is suggested that residents within the Heartland area be involved in discussions on any matters that are of mutual concern to residents and industry.

- The four municipal partners of Alberta's Industrial Heartland Association will work with senior levels of government to communicate the regulatory requirements that industry must meet, and how these requirements are being met, in order to provide confidence and reassurance to residents of Heartland and adjacent areas.
- A study will be conducted on noise, which includes levels, causes and impact from existing industrial complexes throughout the Fort Saskatchewan Heartland Area, and that the study include recommendations on methods of reducing and mitigating the impact of such noise.

### **3.9 PLAN MONITORING AND AMENDMENT**

The Heartland Complementary Area Structure Plans should be monitored annually with respect to all policy initiatives and implementation mechanisms addressed in the Plan documents. This monitoring could include such items as: successes in the application of eco-industrial principles, ongoing land use, infrastructure and other issues, emerging environmental issues, cumulative effects of industrial development. The Heartland Complementary Area Structure Plans should be given a thorough review every five years.

### **3.10 PLANNING FRAMEWORK**

To meet the goals and objectives of the Heartland Area Structure Plans, a planning framework was developed. Applicable to the entire Heartland Area, it is first intended to help prospective industrial parties identify and assess potential sites upon which they might locate. The framework could also be used as a "check list" in determining what had to be considered in locating at any of these sites. An initial comparison of the framework applied to these sites, would help the parties select the site they wished to consider in more detail.

Secondly, the framework could be used to help guide industrial parties or proponents through the detailed preparation of material necessary to support their applications to develop their facilities where they desired.

The framework consists of a spatial component and six sets of considerations. The spatial component lists the potential development areas in each of the Heartland municipalities that have been identified for industrial use. These potential development areas were defined through reference to biophysical characteristics and natural features, current land uses, public concerns and suggestions, possible circulation patterns, existing transportation routes, and aesthetics.

The six sets of considerations were defined in accordance with the aspects that would have to be taken into account when planning the development of an industrial facility for any one of the potential development areas. These considerations are in essence performance criteria. They refer to particular standards with which an industrial activity has to comply. For example, under "Provincial Considerations", reference is made to airshed. If the operation of a proposed industrial activity can not be shown to be able to operate, and its operation maintained within the limits established for the release of NOX (nitrogen oxide) and/or VOC (volatile organic compounds), permission for this industrial activity to be developed would not be given.

Similarly, within the “Municipal Considerations”, if a proposed industrial activity does not or cannot respect the setbacks established for local watercourses, permission for development would not be granted.

Each set of the considerations is arranged in a matrix with the development cells. They are illustrated in the following figures.

## **Glossary**

**Agriculture** – means all forms of farming except for intensive livestock operations.

**Agricultural Land Use** – means the use of lands, buildings or structures for the raising of non-domestic animals and/or the growing of plants for food or other production.

**Airshed** – means a geographic area where air pollutants from sources “upstream” or within the area flow and are present in the air.

**Archaeological Resource** – means “...a work of man that (i) is primarily of value for its prehistoric, cultural or scientific significance, and (ii) is or was buried or partially buried in land in Alberta or submerged beneath the surface of any watercourse or permanent body of water in Alberta.” As recognized by Alberta Community Development.

**Area Structure Plan** – means a plan adopted by Council as an area structure plan bylaw pursuant to the Municipal Government Act that provides a framework for future subdivisions and development of an area.

**Business Technology** – means uses that are low impact, create no nuisance outside of enclosed buildings, attract low traffic volumes, serve industry rather than the general public and demonstrate eco-industrial principles.

**Buffer** – means a landscaped or natural area set aside or maintained that may include a row of trees, shrubs, earth berm, setback, or fencing to provide visual or physical separation and/or noise attenuation between lots or a public roadway.

**Cogeneration** – means joint generation of electricity and thermal energy (usually steam). A steam turbine may be bedded to produce more energy from high-pressure steam recovered for the hot flue gases from first stage gas turbine. (Note that for use of G.T. heat hot oil, hot water, direct process heating or other heat energy purposes are also cogeneration).

**Commercial** – means development that includes those activities that are principally for either the sale of goods or the provision of services, or both.

**Community** – means two or more neighbourhoods which share infrastructure and a broader range or magnitude of facilities including those typical of neighbourhoods as well as churches, emergency services, libraries, business ventures, expanded commercial opportunities, drop-in centres, seniors facilities and/or schools.

**Contiguous** – means adjacent to existing urban development.

**Corridor** – means a continuous strip of land connecting two geographically separate points and containing two or more facilities for the conveyance of people, energy, information or materials. Such a definition covers railways, highways, pipelines, communication, and transmission facilities.

**Density** – means the number of dwelling units or the square metres of floor space in commercial and industrial buildings per acres (or hectare).

**Discretionary Use** – means the use of land or a building provided for in the Municipal Land Use Bylaw for which a development permit may be issued upon an application having been made and subject to enabling conditions for each discretionary use being satisfied.

**Eco-Industrial Development** – means a community of manufacturing and service businesses seeking enhanced environmental and economic performance through collaboration in managing environmental and resources issues including energy, water and materials. By working together, the community of businesses seeks a collective benefit which is greater than the sum of the individual benefits each company would realize if it optimized its individual performance only (source: Lowe, Moran and Holmes, 1996).

**Environmentally Sensitive Area** – means an undisturbed or relatively undisturbed site that, because of its natural features, has value to society and ecosystems worth protecting, but is susceptible to further disturbance.

**Extensive Agriculture** – means agricultural activity which depends on large area of land for either the raising of crops or grazing of animals. Extensive agricultural uses also include structures integral to farming activities.

**Feedstock** – means material converted to principal product(s), byproducts and/or waste. Does not include energy inputs to processor plant.

**Goal** – means an idealized end towards which planned action is directed, and which provides an indication of what is to be achieved.

**Heavy Industry** – means a manufacturing or processing activity that

- a. may consume larger amounts of land, energy, water or other natural resources in its operation, or that requires access to transportation facilities capable of handling bulk materials or commodities;
- b. by the nature of their operation may have a detrimental offsite effects such as noise, vibration, light, dust, odour, humidity, smoke, fumes, or heavy truck traffic and other impacts affecting the safety, use, amenity and enjoyment of adjacent sites;
- c. may have a detrimental effect on the environment through pollution of air, soil or water, or create hazard arising from fire, explosion, radiation or contamination.

**Historic Resource** – means an work of nature or of man that is primarily of value for its paleontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest. As defined by Alberta Community Development.

**Industrial** – means development that includes those activities that are principally for the processing of materials or the manufacture, assembly, service, repair, storage or transportation of materials, goods or equipment.

**Industrial Development** – means all activities and infrastructure associated with the development of an industrial base to accommodate and service the extraction, removal and processing of non-renewable resources.

**Infrastructure** – means the services and facilities in which the municipality has capital investment and maintenance responsibilities, including roadways, sidewalks, bridges, street lights and traffic signals, transit buses, solid waste management systems, potable water distribution system, storm sewers, sanitary sewers, sports fields, playgrounds, arenas, pools, police and emergency response stations, vehicle and equipment, civic buildings, parks, boulevard trees and computer and telecommunications equipment.

**Intensive Agriculture** – means an agricultural activity that is capable of being economically successful within a confined area such as greenhouse activities and/or sod farming.

**Intensive Livestock Operation** – means a facility that is capable of confining a specified minimum number of livestock for growing or finishing for market at a housing density of more than one livestock manure unit per 2,000 ft<sup>2</sup>.

**Land Use Bylaw** – means the bylaw that divides the municipality into land use districts and establishes procedures for processing and deciding upon development applications. It sets out rules that affect how each parcel of land can be used and developed and includes a zoning map.

**Land Use District** – means an area designated for a particular type of use as designated in the Land Use Bylaw.

**Light / Business Industry** – means industrial / business uses that conduct their operations such that no nuisance factor is created or apparent outside an enclosed building that would make the use incompatible with adjacent non-industrial uses.

**Linkage** – means a physical way of pedestrian related connection of one building or activity center with another, by means of walkway, pedway or sidewalk.

**Low Intensity Recreation** – means recreational and leisure that are activity and or nature oriented and low density, such as walking, running, nordic skiing, biking, bird watching, rather than facility oriented and congregational.

**Low Risk Prone Activities** – means those activities that are permitted in the buffer zones surrounding plant sites. They minimize the exposure of dense human populations to potential upset events (i.e., release of chemicals, explosions) associated with petrochemical and other manufacturing/processing plants by restricting permanent human habitation.

**Medium Industry** – means industrial uses such as manufacturing, processing, assembly, distribution and repair services that conduct part of their operations outside and require yard storage.

**Municipal Development Plan (MDP)** – means a plan adopted by Council as a municipal development plan pursuant to the Municipal Government Act.

**Natural Area** – means remnant or self-sustaining areas with native vegetation, water, or natural features.

**North Saskatchewan River Valley** – means the North Saskatchewan River Valley, its banks and the banks of its tributary systems.

**Objective** – means directional statements that are usually phrased in measurable terms for given time frames.

**Paleontological Resource** – means “...a work of nature consisting of or containing evidence of extinct multi-cellular beings and includes those works or classes of works of nature designated by the regulations as paleontological resources.” as defined by Alberta Community Development.

**Policy** – means a statement identifying a specific course of action for achieving objectives.

**Recreational Use** – means a public or private athletic or recreational facility or amenity, a joint-use site or a park or playground that serves the surrounding neighbourhood or community.

**Residential** – means development that includes all manner of dwellings intended for habitation by person and their associated ancillary uses.

**Site** – means one or more lots of parcels for which an application for a development permit is being made, and may include streets, lanes, walkways and any other surface upon which development is proposed.

**Statutory Plan** – means a Municipal Development Plan, Area Structure Plan, Area Redevelopment Plan or Inter-Municipal Development Plan adopted by Municipal Council pursuant to the Municipal Government Act.

**Stormwater** – means surface run-off that is the result of precipitation.

**Sustainable Development** – means development which meets the needs of the present without compromising the ability of future generations to meet their own needs (definition by the World Commission on Environment and Development).

**Trail** – means a linear recreation corridor and associated facilities that are marked, mapped and maintained and allows for travel by people in one or a combination of non-motorized and motorized modes.

**Transition** – means a land area where compatible land uses buffer heavy industrial development from other land uses such as residential, institutional and agricultural. Appropriate transitional land uses such as agri-business and light/medium industrial.

**Wetland** – means areas in the landscape where water is the primary factor controlling the environment and associated plant and animal life. Wetlands are transitional habitats between upland and aquatic environments where the water table is at or near the surface of the land, or where the land is permanently or temporarily inundated by water.