BYLAW 1-2014

A BYLAW OF STRATHCONA COUNTY IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF ADOPTING THE MEADOW HAWK AREA STRUCTURE PLAN.

WHEREAS Council previously adopted the Meadow Hawk Area Structure Plan, Bylaw 7-2006; and

WHEREAS it is deemed advisable to replace the Meadow Hawk Area Structure Plan;

NOW THEREFORE, the Council of Strathcona County, duly assembled, pursuant to the authority conferred upon it by the *Municipal Government Act*, *R.S.A. 2000* c.*M-26* and amendments thereto, enacts as follows:

- 1. That Bylaw 1-2014 is to be cited as the "The Meadow Hawk Area Structure Plan".
- 2. That Schedule "A" attached hereto is hereby adopted as part of this Bylaw.
- 3. That Bylaw 7-2006 is hereby repealed.
- 4. This Bylaw comes into effect after third reading and upon being signed.

Read a first time this 28 da	ay of January, 2014.
Read a second time this28 da	y of
Read a third time and finally passed this	28 day of January, 2014.
	Mayor
	Han
	Director, V Legislative and Legal Services

Date Signed: February 3, 2014

Document: 5478586



AREA STRUCTURE PLAN



MEADOW HAWK COMMUNITIES INC.

January 2014





Meadow Hawk Area Structure Plan

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1 Introduction

1.1 Purpose

This Area Structure Plan has been prepared on behalf of Meadow Hawk Communities. The purpose of the Plan is to amend the existing Meadow Hawk Area Structure Plan Bylaw 7-2006 to allow for a 13 percent increase in density to a total of 60 lots. The increase in density is consistent with current provincial legislation and municipal statutory plans.

The Plan area is shown on Figure 1 and encompasses all of the E ½ of the SE ½ 23-52-23-4. It comprises some 32.4 hectares (80 acres). The amendment affects only the south half of the area. The north half of has been subdivided in compliance with Bylaw 7-2006. Upon adoption of this updated 2012 Area Structure Plan, existing Bylaw7-2006 will be rescinded.

1.2 Background

The 2006 Meadow Hawk Area Structure Plan Bylaw was adopted following considerable consultation with adjacent landowners and the public, and with input from County Administration. Bylaw 7-60 provides for 53 country residential lots and retains close to half of the area as open space. Open space comprises Environmental Reserve, Municipal Reserve and a naturalized storm water management feature.

As is noted above, the northerly portion of the Plan area has been subdivided as Stage 1 of the Area Structure Plan to create 20 lots in compliance with Bylaw 7-2006. Some 70 percent of this first Stage of development has been dedicated to Strathcona County for public use.

1.3 Policy Context

The Meadow Hawk Area Structure Plan meets the requirements of Section 633 of the Municipal Government Act. As such, it describes the sequence of development, land uses, general future population levels and infrastructure requirements.

The amendment being proposed to the existing Area Structure Plan is consistent with three statutory plans. All three have been amended and/or adopted subsequent to the adoption of the existing 2006 Meadow Hawk Area Structure Plan. The plans and their impact on the Area Structure Plan amendment are discussed below:

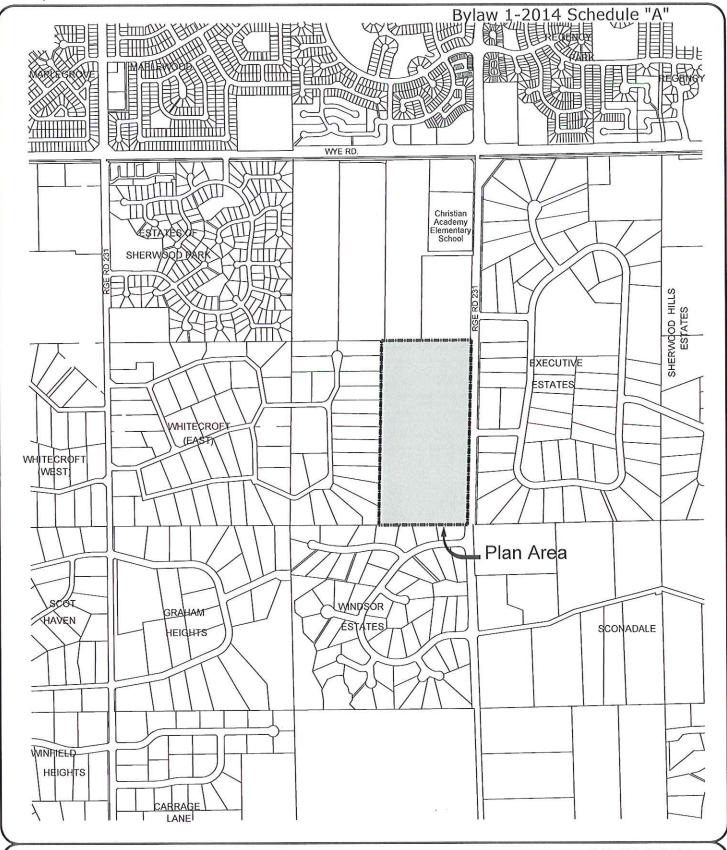
1.3.1 Capital Region Growth Plan

The October 2009 Addendum to the Capital Region Growth defined Cluster Country Residential Areas (CCRAs) in response to the Minister of Municipal Affairs' requirement that such areas be identified and graphically represented, and that density targets be applied to these designated areas to reflect the Capital Region Land Use Plan's objectives to increase densities and minimize the Region's development footprint.

The approach to identifying Country Residential Areas including CCRA "S" is based on Policy E(i) of the 2009 Capital Region Land Use Plan which states:

Country residential uses shall be allowed in designated areas in a clustered form in order to preserve environmental or open space features. Such developments shall utilize municipal water and sanitary services. Private communal services may be allowed at the discretion of the municipality.

This policy emphasizes the conservation design principles that are to be applied in designing Cluster Country Residential subdivisions, and to distinguish Cluster Country Residential Development from Traditional Country Residential development.







Meadow Hawk Area Structure Plan

> Figure 1 Location

E 1/2 of S.E. 23-52-23-4 September, 2013



Stalcorp Inc.

STRATHCONA
COUNTY

The Density Target for CCRAs reflects Cluster Residential development trends within the Capital Region and best planning practices for cluster residential development. The Addendum states that the Density Target for CCRAs shall be 2 units per gross hectare. The intent of the Capital Region Growth Plan is that the density target be achieved.

The Meadow Hawk Plan area is located in CCRA "S". CCRA "S" is generally bounded by the Sherwood Park Urban Services Area to the north, Highway 21 to the east, Highway 628 to the south, and the Transportation and Utility Corridor to the west. Applying the Density Target to the 32.4 hectare Meadow Hawk Plan area results in 65 units.

1.3.2 Municipal Development Plan Bylaw 1-2007

County Council gave third reading to Bylaw 57-2011 to amend the Municipal Development Plan Bylaw 1-2007 on May 22nd 2012. Bylaw 57-2011 aligns the Municipal Development Plan with the Capital Region Growth Plan which sets out density targets for the areas identified within the Capital Region as Cluster Country Residential. All new development located within the area identified by the Municipal Development Plan amendment as *High Density Country Residential* now have the potential to develop to a maximum density of 129 units per quarter section as set out under the Capital Region Growth Plan. This amendment means that the maximum density for Meadow Hawk permitted under the Municipal Development Plan is 65 units.

The Municipal Development Plan also provides direction for preparing Area Structure Plans. Specifically, Strathcona County has adopted a sustainable approach to new development. This means that development will occur in a manner such that the needs of the present do not compromise the ability of future generations to meet their own needs while striking a balance between economic prosperity, social responsibility and environmental stewardship. The Municipal Development Plan states that all new development must take into consideration and adhere to the principles of sustainable development.

The twelve themes for evaluating sustainability as prescribed by the Municipal Development Plan are discussed below in the context of this Area Structure Plan.

- 1. Land: The efficient use of land in the County is critical given continuing growth pressures and the significant amount of natural habitat that exists. New country residential Area Structure Plans therefore must be as efficient and compact as possible thereby reducing the amount of infrastructure required, conserving land and aiding in preserving natural habitat. This means that conservation design principles should be applied in designing new neighbourhoods. Conservation design principles have been applied to Meadow Hawk. Increasing the density to the maximum allowable consumes the same amount of land and requires the same infrastructure as the current plan. Existing natural areas will not be impacted and will continue to be maintained. The plan as amended will be efficient and compact.
- 2. Water: Because clean drinking water is a basic human necessity, it is important that the quality and quantity of water is not impacted by new development. The storm water management plan proposed for Meadow Hawk ensures that storm water is captured, held and released at pre-development rates according to provincial standards. This means that water will be retained on-site to support the natural areas. Well water quality in the vicinity of the Plan area will not be affected by the Meadow Hawk development because the Plan area will be serviced by a piped waste water system.

- 3. Natural Habitat: When land is developed the overall regional ecosystem is fragmented. This undermines the ability of wildlife to move throughout the natural landscape. All existing natural habitats within the Plan area will continue to be retained. Also, a 10 metre wide strip of land along the west perimeter will be planted with naturalized species that will buffer new development from the existing East Whitecroft neighbourhood and encourage an interconnected system of naturalized spaces to the north, south, west and to some extent, to the east.
 - 4. Waste: Whether the topic is waste heat, construction waste or municipal solid waste the fact of the matter is that industrialized countries generate huge amounts of waste. The County is considering a leadership approach and incentive programs to reduce waste. Builders will be encouraged to apply Built Green practices to assist in reducing waste.
 - 5. Materials: Approximately 40% of the raw material entering the world economy are used for building and construction activities. Build Green approaches to construction include the use of recycled, reclaimed and renewable building materials to the extent possible.
 - 6. Economy: A strong local economy is an important component of a sustainable community. Typically within country residential neighbourhoods, very little if any opportunities exists to support a local economy because the primary use is residential. However, given the proximity of Meadow Hawk to Sherwood Park, the opportunity exists to work and/or shop within a short drive or walk so that the need to travel long distances is significantly reduced and greater sustainability is achieved. Increasing the current density provides this opportunity to more County residents.
 - 7. Carbon: The burning of fossil fuel for the purpose of creating energy and manufacturing products generates green house gases which have been linked to climate change. Building energy efficient homes and maintaining natural treed areas, as is proposed in Meadow Hawk, will assist in reducing carbon emissions and the ability of the natural environment to absorb such emissions.
 - 8. Food: Food production and distribution has become a global industry that functions less and less at the local level. Although little can be done to encourage local food production in Meadow Hawk, the lots are larger than typical urban lots thereby providing the opportunity for vegetable gardens.
 - 9. Transport: Automobiles consume fossil fuels that generate greenhouse gases which pollute the air. They also promote an unhealthy sedentary lifestyle, and require infrastructure that is costly to build and maintain. Conservation design results in more efficient road patterns and encourages trail connectivity between developments. The Meadow Hawk design becomes even more efficient if it can serve a higher population density. Also, a trail will be constructed along Range Road 231 that will link Meadow Hawk and other communities located along this road to the Strathcona Christian Academy Elementary and High Schools, and to commercial and service facilities in Sherwood Park. Walking time is very reasonable some five to ten minutes.

- 10. Equity: Modern development practices have resulted in an inequitable distribution of resources within society. Sustainable neighbourhoods foster fairness and equal treatment for all. Meadow Hawk will be an inclusive community where residents will have a sense of belonging and equal opportunity to access services, public space, learning and employment, as well as recreational and cultural activities. Better access to services is provided by reducing travel time to such services.
- 11. Well-Being: Our physical surroundings influence our physical and mental well-being by providing the framework in which we interact with other people and nature. If our physical environment does not provide the security we require and the ability to interact with each other and our natural surroundings, our well-being may be negatively impacted. Meadow Hawk has been designed to enhance the well-being of future residents by providing for:
 - an attractive high quality development close to nature;
 - access to goods and services within a very reasonable walking distance;
 - a safe environment that discourages through traffic with internal roads that encourage walking and biking activities by avoiding the need for deep ditches; and,
 - trails to promote healthy lifestyles.
- **12. Culture:** Culture and heritage can be defined by the character of a place. Country residential subdivisions such as Meadow Hawk create their own unique culture by retaining open spaces to foster community interaction, and preserving environmental features to promote a culture of common connectivity with nature.

The Meadow Hawk Area Structure Plan is consistent with the twelve themes for evaluating sustainability as prescribed by the Municipal Development Plan.

1.3.3 Strathcona County Country Residential Area Concept Plan Bylaw 58-2011

County Council also gave third reading on May 22nd 2012 to Bylaw 58-2011 being a bylaw to adopt the Country Residential Area Concept Plan. This Concept Plan is consistent with the Municipal Development Plan as amended and includes policies that require all Area Structure Plans to apply conservation design principles and allow for a maximum density of 129 residential parcels per quarter section for lands located within the *High Density Country Residential Area*. This area is also identified in the Municipal Development Plan and generally corresponds to CCRA "S".

The Area Concept Plan includes policies that:

- allow for a minimum parcel size of 0.125 hectares (0.38 acres) in the *High Density Country Residential Area*;
- require all new residential parcels be serviced by municipal water systems;
- require all new residential parcels be accessed by an internal road;
- require transitioning between new subdivisions abutting an existing country residential parcel.

This Area Structure Plan complies with the policies of the Country Residential Area Concept Plan.

1.4 Land Use Bylaw 8-2001

Although not a statutory policy document, the Land Use Bylaw is the regulatory mechanism for implementing such documents. To ensure the Municipal Development Plan as amended and the Country Residential Area Concept Plan can be implemented, the Land Use Bylaw was amended by Bylaw 59-2011 on May 22nd 2012 to include a High Density Country Residential (RC2) District.

The purpose of this district is to support estate residential development to occur on municipally serviced lots 0.125ha (1250 square metres) or larger within a conservation designed subdivision located within the area identified as Country Residential High Density Area within the Strathcona County Municipal Development Plan.

The RC2 District has been applied to the 20 newly subdivided residential parcels located in Stage 1 of the Meadow Hawk Plan area.

1.5 Regional Context

As is noted in Section 1.3, the Plan area is located within the *Country Residential High Density Area* of Strathcona County. The subject site is 0.8 kilometres (one half mile) south of Wye Road, and the Sherwood Park Urban Services Area, on the west side of Range Road 231 (see Figure 1).

The Country Residential High Density Area is developed with a diverse mix of urban and rural residential development including: some mature traditional 3.0 to 5.0 acre country residential communities; a few relatively new 2.0 acre country residential acreage subdivisions; a rural community of 0.3 to 2.0 acre lots; and, suburban estate neighbourhoods comprising 0.3 acre lots with full municipal services. To the north, between the Plan area and Sherwood Park, is a partially developed and fragmented quarter section that contains the Elk Island Public School administration offices and the recently constructed Strathcona Christian Academy Elementary School. The Christian Academy is located just 400 metres north of Meadow Hawk along Range Road 231.

Inventory and Analysis

2.1 Land Use

Surrounding Land Uses 2.1.1

Existing uses surrounding the Meadow Hawk Plan area are described as follows:

- To the north is a ¼ section that has been subdivided into 6 parcels of varying size. The four largest parcels are currently residential in use with some treed cover and pasture areas. As is noted in Section 1.5, the parcel in the northeast corner of the quarter section at the intersection of Range Road 231 and Wye Road is occupied by the Elk Island Public School Board administration offices. As is also noted in Section 1.5, the parcel immediately south of the Board office is occupied by Strathcona Christian Academy Elementary School. The school site is located some 400 metres north of Meadow Hawk and fronts onto Range Road 231. The north boundary of this ¼ section abuts Wye Road, and is located across from the urban residential communities in Sherwood Park.
- East Whitecroft, a mature traditional country residential community comprising larger 3.0 acre lots, is located directly to the west while The Estates of Sherwood, a fully serviced suburban estate residential community comprising 0.3 acre lots, is located to the northwest.
- Executive Estates, a mature traditional country residential community with larger lots is located to the east, across Range Road 231. Sherwood Hills Estates, a residential subdivision with mixed lot sizes ranging from 0.3 acre to 2.0 acre, is located to northeast at the intersection of Wye Road and Highway 21.
- Windsor Estates, a more recent country residential subdivision comprising primarily 2.0 acre lots, is located to the south.

The surrounding land uses reflect the character of residential development in the transitional type CCRA "S". Although CCRA "S" contains traditional country residential subdivisions with a minimum lot size of 2.0 acres, higher density subdivisions also exist that with smaller 0.3 acre suburban estate type residential lots or a mix of suburban estate and traditional country residential lots. These higher density subdivisions are fully serviced with piped water and sewer systems.

On-Site Land Use 2.1.2

The site was a farm that was used as pasture land. A farmstead comprising a 40 year old dwelling and ancillary buildings existed adjacent to Range Road 231. The dwelling has no known historical value and has been demolished along with the ancillary buildings. An approach to the farmstead exists off Range Road 231. This approach is located south of the access road into Executive Estates to the east and will be closed. A new approach is being constructed further to the north to provide access to the 20 lot subdivision that is currently being developed.

Significant portions of the site remain in their natural state. The natural areas are being retained while the balance of the site is being graded for storm water management purposes. No utility or natural resource pipelines exist on the Meadow Hawk lands and no encumbrances are listed on the Certificate of Title.

January 2014

2.2 Land Form

Terrain on the northern part of the site slopes toward the north, and a large wetland has formed on the underlying, poorly-drained soils. The southern half of the property is gently undulating and generally well-drained, but overall slopes toward the southwest, into a small poorly-drained depression surrounded by willows. As is noted above, most of the area which had been cleared for pasture is now being graded to ensure storm water flows into the northerly wetland that is being constructed as a naturalized storm water management facility as part of the 20 lot subdivision and is designated Public Utility Lot. A small portion of the backs of lots proposed in the southwest corner of the Plan area will continue to flow into the willow depression. Tree stands exist in the northwest and southeast. These tree stands and the willow slough are/will be retained in their natural states.

2.3 Land Review

2.3.1 Biophysical Analysis

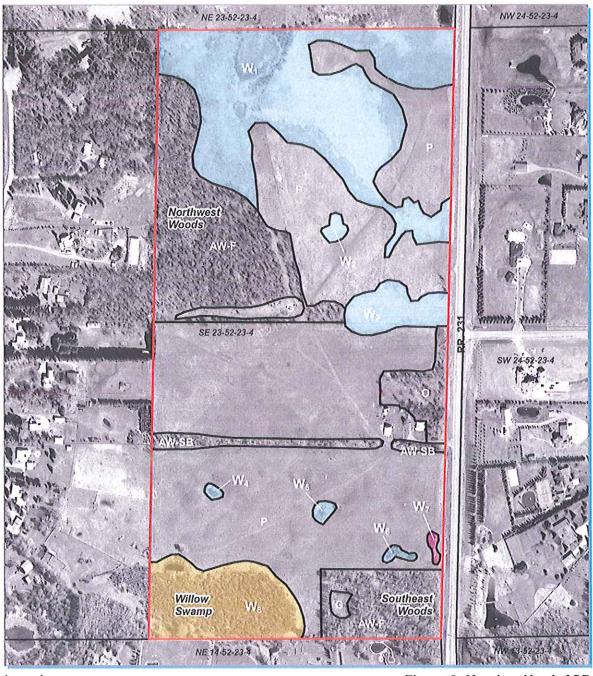
In March 2012 Spencer Environmental Management Services Ltd. updated a 2004 Environmental Assessment of the Plan area. The common objectives of both assessment are to:

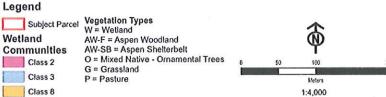
- Assess the quality of treed areas in the northwest and southeast corners of the property, and a willow marsh in the southwest corner of the property.
- Determine the extent and ecological value of a wetland along the north property boundary.
- Identify any sites designated as "priority habitat" in the County's Prioritized Landscape Ecology Assessment of Strathcona County, Alberta (Saxena et al 1997).
- Recommend appropriate designation as Environmental Reserve or Municipal Reserve based on natural features present at the site.

The Environmental Assessment defines the two treed areas and the willow marsh as Priority 3 habitats (see Figure 2). Priority 3 habitats are small in area with limited species diversity and/or little potential to serve as a wildlife corridor. However, the rating is as a result of habitat quality being degraded by past grazing land use and the Spencer Assessment recommends that the three areas be retained in their natural state. As such, the development concept protects these three habitats as Municipal Reserve and/or Environmental Reserve. The three habitat areas are described below:

1. The northwest woods is larger than the southeast tree stand, but of more irregular shape. It is contiguous with the wooded lots of Whitecroft (East), immediately west of the property line and with the rural residential lots to the northwest. These woods have a closed canopy dominated by aspen, with individual black spruce and paper birch trees scattered through the stand. Relatively dense mid and under stories exist. Signs of past and recent browse use by deer are abundant and taller grasses appear to have been grazed. Numerous east/west deer and coyote trails cross the stand indicating travel through the stand towards Whitecroft (East) and the wetland on the north boundary of the property. A large raptor nest on the northeastern edge stand may be used by red-tailed or Swainson's hawks. Wildlife connectivity is apparent between the northwest woods and the lands to the west and north, where development has been limited and much of the forest remains intact. Walking trails should be carefully located in the northwest woods so that wildlife is not discouraged from using the area

Bylaw 1-2014 Schedule "A"





Exerpt from: Meadow Hawk ASP Biophysical Assesment - 2012 Update by Spencer Environmental Management

Figure 2. Meadow Hawk ASP Vegetation Types

Aerial Photograph Date: May 2010 Date Map Created: 07 March 2012





STRATHCONA COUNTY

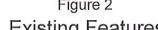


Meadow Hawk

Area Structure Plan

Figure 2 **Existing Features** E 1/2 of S.E. 23-52-23-4





- 2. The southeast woods are also aspen-dominated and are more open. This wood lot has experienced extensive disturbance from grazing so that the development of a shrub under story has been limited and the potential for high vegetation species diversity is low. Regardless, restoration potential is significant once grazing activities are stopped. This woodlot lends itself to walking trails.
- 3. A willow swamp has developed on the wet soils in a depression located in the southwest corner of the site. Hummocks of sedge with rushes and occasionally cattails suggests wet soil conditions typically persist through much of the year. A dugout has been constructed along the north edge of the depression to take advantage of the available moisture. Tall willow clumps provide about 50 to 60% cover. This stand is continuous with a relatively narrow shrub land along the border between Windsor Estates and Graham Heights to the west. Some deer trails converge onto a path leading into this area suggesting connectivity with habitat further west. Trails are not recommended through this swamp area.

In addition to the three habitats, a wetland complex is located in the northeast segment of the site and is being developed as a naturalized storm water management facility that will accommodate storm drainage for much of the Plan area. The facility is designated a Public Utility Lot and extends along the east and north sides of the existing 20 lot subdivision. Two Environmental Reserve areas also exist to protect the integrity of two natural sloughs that form part of the wetland complex. Clumps of tall willows surround the two ponds. Walking trails will be carefully located through this wetland complex.

The Environmental Assessment concludes that the key ecological features on the site are the northwest woods and the north wetland. Both are contiguous with similar habitat off-site, and both likely support ecological functions that extend beyond their boundaries. The woods appear to be used by wildlife as movement habitat and the wetland is part of a larger complex that includes land to the north of the site. However, neither feature is pristine and past land use has resulted in disturbance and fragmentation to some or all of these features.

2.3.2 Wetland Compensation Plan

Spencer Environmental prepared a wetland compensation plan and amendments in May 2012 for the entire Meadow Hawk property, which was accepted by Alberta Environment. Ducks Unlimited Canada prepared a proposal, which was accepted by Meadowhawk Communities Inc., and compensation in the amount of \$66,900 was paid in early June of 2012 to Ducks Unlimited.

2.3.3 Environmental Site Assessment

The Stage 1 Environmental Site Assessment prepared by Sabatini Earth Technologies Inc. in September 2003 concludes that, based on historic records and aerial photos, site inspection, and interviews with relevant agencies and the home renter that the following *environmental issues* are of low environmental risk:

- Petroleum hydrocarbons
- Air emissions
- Asbestos containing materials
- Bulk chemical storage
- Bulk storage tanks
- · Liquid effluents and site run-off

- PCB's
- Chloroflourocarbons
- Radon
- Radioactive materials

Based on the findings of the Stage 1 Environmental Site Assessment, Sabatini concludes that a Phase II assessment is not required.

2.3.4 Historical Resources

A Historical Resources Overview as per the Terms of Reference of Alberta Community Development (Historical Resources Division) has been completed by Altamira Consulting Ltd. The overview concluded that the development area displays no topographical or hydrological features commonly associated with archaeological sites. This area has been used for agricultural purposes for much of the last century, resulting in significant disturbance. There are no previously recorded sites located within a 0.5 kilometre radius of the development area. Considering that, this area is not considered to exhibit archaeological potential. No further work is recommended for the proposed Meadow Hawk residential development.

Alberta Community Development agrees with the overview and has provided clearance for the development to proceed.

2.3.5 Municipal Services

Piped water and sewer systems are being constructed to service the approved 20 lot subdivision. These systems are sized to accommodate a total of 65 lots within the Plan area. Both the Capital Region Growth Plan and County policy require that the site be serviced with piped systems that are connected to municipal services.

3 Public Engagement

A Public Meeting was held at the Strathcona County Community Centre on Monday, December 9^{th} 2013 as part of the Public Engagement Process . The Open House was advertised for two consecutive weeks in the Sherwood Park News. Some 200 invitations were mailed to surrounding landowners.

The drop-in Public Meeting format combined with a short presentation allowed the public and affected residents to meet with the developer, consultants, and County staff to ask questions and provide input. Story board displays were brought into the meeting room to inform participants of the project elements and any potential impacts to the surrounding community. Comment sheets were provided to each participant.

Eight residents signed in during the Public Meeting. Ten comment sheets were returned to the County in response to the information provided at the meeting. The Mayor and one councilor were also present along with two members of County administration who explained the history of the project.

The two questions posed on the comment sheets and the responses are summarized as follows:

1) Can you support the proposed Meadow Hawk Area Structure Plan amendment as presented this evening?

Eight out of ten respondents agreed that they do support the amendment as presented. Of the supporters, four believed that the impacts of the development would not significantly affect surrounding areas. Other comments included support for the design of the community itself. Some Respondents commented that the community is of a high quality and has been well designed. Mentions were also made regarding the general trend to higher-density in all new Sherwood Park developments and that this proposed plan aligns with Sherwood Park's greater goals of efficient land use, while not being out of character with the surrounding communities.

Two of ten respondents did not feel they could support the amendment voicing that their position of nonsupport is based on principle. The comments focused on the fact that the subdivision has been previously approved at 53 lots and that there should be no deviation from this. However, no specific impacts of the proposed development were noted as being unacceptable by either person.

2) Do you have any additional comments?

All of the additional comments provided were supportive of the development as proposed. Respondents specifically mentioned that the amendment's goal of adding a few extra dwellings will help reduce urban sprawl and will continue to provide the same housing-type choices as originally approved. It was noted that the County needs room to grow and the increased density will help ease the tight housing market in Sherwood Park

The input provided through the Public Meeting process suggests overall support for the amendment. No new concerns were raised.

4 Opportunities and Constraints

The policy directives summarized in Section 1 and the comprehensive investigation and analysis of the Plan area described in Section 2 result in the following opportunities and constraints for future development:

- 1. The policy of the Capital Region Growth Plan to establish a density target in CCRAs has been recognized and embraced by the County's amendment to the Municipal Development Plan and the Country Residential Area Concept Plan Strategic Plan. The intent of the Regional Growth Plan is to reduce the development footprint by directing country residential uses to designated CCRAs and setting a density target of 129 units/gross hectare for new developments in these CCRAs. The expectation of the Growth Plan is that this target will be met. The Plan area is located in CCRA "S" and the County's High Density Country Residential Area. The opportunity exists to increase the current density by 12 lots from 53 to 65 lots as per provincial and municipal policy direction. However, in response to public concerns, the number of additional lots proposed by the amendment has been reduced to seven.
- 2. The plan area is bounded by traditional country residential development to the west, south and east. Pursuant to the Municipal Development Plan and the Country Residential Area Concept Plan design policies, transitional buffering is required along the west and south perimeters in the form of adequate berming and/or vegetation or similar parcel sizes.
- 3. Two key ecological features on the site, including the northwest woods and the north wetland, present an opportunity to introduce conservation design principles and develop an amenity for the neighbourhood. Walking trails need to be carefully located through these features to protect wildlife corridors and the integrity of the wetland ecosystem. The southwest willow swamp also needs to be conserved. Trails are not recommended through this swamp area. These natural features create opportunities as amenity features. However, the features also constrain development so that development must be concentrated outside the natural areas on the balance of the site.
- 4. The southeast woods have experienced extensive disturbance from grazing. Regardless, restoration potential is significant once grazing activities are stopped. Although these woods are developable, they provide a greater opportunity as an amenity feature that can be conserved. If the woodlot is protected from development, restoration may occur. The woodlot lends itself to being a public amenity with walking trails.
- 5. The natural amenities on site, the proximity of the site to Sherwood Park, and the new school provides the opportunity to design a walkable community. Internal trail looping and external connections to the Strathcona Christian Academy Elementary School, Sherwood Park and other communities in the area can be explored. As part of Stage 1 of Meadow Hawk, a trail is being constructed along Range Road 231 to the school. A trail exists from the school to Sherwood Park. A trail along the Range Road will be constructed as part of Stage 2 to the south boundary of Meadow Hawk.
- 6. A road into Meadow Hawk to serve future residential development is being constructed across from the Executive Estates entrance road to allow for an all-directional intersection at this location, thereby reducing the number of intersections along Range Road 231. This approach complies with the recommendations of the Functional Planning Study for Range Road 231.
- 7. The low poorly drained lands located in the north/northeast segment of the Plan area

provide an opportunity for a naturalized storm water retention/wetland feature since most of the site drains in this direction. This feature is currently being constructed as part of the first stage of development of the Meadow Hawk community.

- 8. No utility or resource pipelines exist that may constrain the design of the plan area.
- 9. No further historical archaeological investigation is required based on the overview and Alberta Community's Development's response. No historical structures have been identified.
- 10. The Plan area must be serviced with piped municipal water and waste water systems. These systems are currently being constructed to serve Stage 1 and can be extended to serve Stage 2.

The foregoing factors indicate that because of its location in CCRA "S" and the *High Density Country Residential Area*, combined with the opportunity to protect all environmental features and service the site with piped water and sewer systems, an innovative design approach focusing on principles of sustainability and conservation design should be applied to the site.

5 The Development Concept

5.1 Primary Objectives

The primary objective of the Meadow Hawk Area Structure Plan is to create a community with a unique sense of place that conserves and values the natural environment above all other development considerations in the context of the Capital Region Growth Plan and the County's Country Residential Area Concept Plan. In establishing the vision for Meadow Hawk, the developer took its cues from the land. Included among the principles are maintaining a semi-rural character; respecting and cherishing the natural environment; and designing and building innovative homes that use resources and energy efficiently. In order to achieve these objectives, two major design themes were followed in preparing the development concept: Conservation and Sustainability.

5.1.1 Conservation

The Development Concept, as shown in Figure 3, reflects progressive conservation design that takes into account the natural landscape and ecology of a development site and facilitates development while maintaining the most valuable natural features and functions of the site. Conservation design includes a collection of site design principles and practices that can be combined to create environmentally sound development. The main principles for conservation design are:

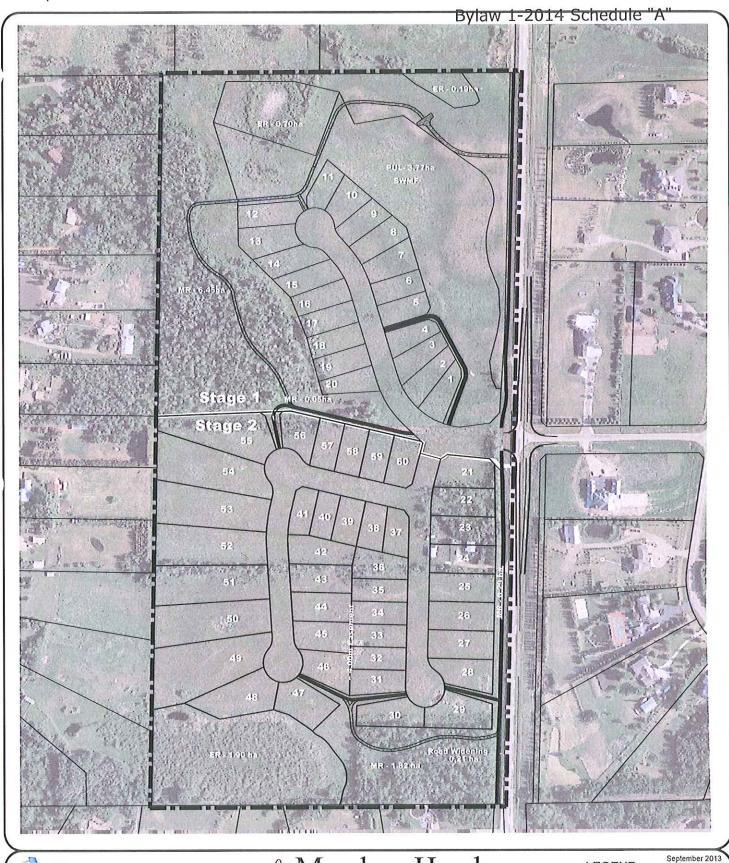
- flexibility in site design and lot size;
- thoughtful protection and management of natural areas;
- reduction of impervious surface areas; and,
- sustainable stormwater management.

In addition to conserving large areas of valuable natural resources, conservation design may create a variety of formal and informal public spaces within developments. These spaces create opportunities for neighbours and residents to meet and to build a unique sense of place. Conservation design offers a variety of recreational prospects which may include organized group activities such as picnics or soccer games, biking or walking in natural areas, or observing the plants and wildlife that thrive in preserved habitats. For residents of conservation developments, these amenities can make a noticeable difference in the quality of daily life.

5.1.2 Sustainability

Conservation design is one of many tools available to communities committed to implementing sustainable development practices. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. However, sustainability does not end with the design of the land. The County has taken a lead role in this regard, through policy that requires all new development within the Country Residential Policy area be serviced with piped water and sewer, a proactive step in reducing contamination of ground resources through the use of septic fields.

The developers commitment to sustainability will be reinforced by encouraging builders to apply the Built Green program to the Meadow Hawk project. Built Green is an industry driven voluntary program that promotes "green" building practices to reduce the impact that building has on the environment.







Meadow Hawk

Area Structure Plan

Figure 3

Development Concept

LEGEND

ASP Boundary

Asphalt Trail



It benefits the homebuyer, the community and the environment and is an opportunity for everyone to choose a "green" future.

The primary purpose of Built Green is to encourage homebuilders to use technologies, products and practices that will:

- Provide greater energy efficiency and reduce pollution
- Provide healthier indoor air
- Reduce water usage
- Preserve natural resources
- Improve durability and reduce maintenance

The program concentrates on four areas of environmental concern:

- **Energy Efficiency**
- Indoor Air Quality
- Resource Use (including Waste Management)
- **Overall Environmental Impact**

The developer will encourage builders and contractors to use Built Green materials and techniques.

5.2 Development Policies

Based on the site opportunities and constraints described in Section 3 and the Primary Objectives of Section 4.1, the specific development policies of this Area Structure Plan are:

- 1. To develop a concept that is sensitive to the ecology of the site such that both primary and secondary protection areas identified as part of the site investigation process are protected.
- 2. To protect the natural integrity of the northwest woods and north wetland. The woods have been dedicated to the County under Stage 1 as part of a larger 6.18 hectare Municipal Reserve parcel. Two Environmental Reserve parcels totaling 0.97 hectares protecting portions of the north wetland have been dedicated while a 3.73 hectare Public Utility Lot is being developed as a naturalized storm water management feature. Combined, some 11 hectares or 70% of the first Stage of the Meadow Hawk community has been dedicated to the County as open space.
- 3. To protect and retain secondary ecological features including the southeast woods and southwest willow swamp as Municipal Reserve and Environmental Reserve, respectively.
- 4. To selectively design the balance of the Plan area in a manner that optimizes the use of the site given the piped municipal servicing systems that are being proposed.
- 5. To provide a development concept that is sensitive to the surrounding community. Buffering using natural tree stands as well as a chain link fence is provided along the interface with East Whitecroft to the west. Berming, fencing and landscaping proposed along Range Road 231 has been designed such that homes within the Plan area will not be visible from the Range Road or Executive Estates to the east.
- 6. To provide an internal trail loop system that will be extended north along Range Road 231 to the school site. The trail will also be extended to the south as far as the first access into Windsor Estates. In the long term, linkages may be considered to the west and north.

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- 7. To ensure that each proposed lot in Meadow Hawk has direct access to the trail making this a walkable community.
- 8. To respect the viewpoints from Windsor Estates and Whitecroft East. Natural features border Windsor and the design ensures that the view to the north from Windsor will be the backs of lots rather than houses. As is noted above, the backs of lots abutting Whitecroft will be landscaped. Meadow Hawk Communities will assume responsibility for planting the landscaped buffer. The buffer will be preserved through a Conservation Easement. The Easement will be in registered in the name of Strathcona County on the certificates of title of each affected lot.
- To further respect privacy for Whitecroft, a 35 metre setback will be required from the rear lot line to the principle dwelling.
- 10. To add diversity in terms of lifestyle options. Lots range in size from 0.3 acre to over an acre and a half acre and are typical of several communities located in CCRA "S" and the *High Density Country Residential Area*.
- 11. To promote sustainable home building practices by encouraging builders to consider Built Green principles.

By applying the foregoing policy objectives, a residential community that *fits the site* with diverse living options is created in a semi-rural setting that is sensitively integrated into the surrounding residential land use pattern. Close to one half of the site will be retained as open space reflecting conservation design principles. A high standard of residential development that recognizes the quality of development evident in existing surrounding communities, such as Windsor and Executive Estates, will be encouraged and is discussed below.

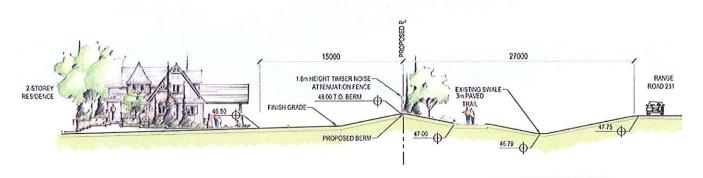
5.3 Design Elements

The **Meadow Hawk** theme will be applied to the entrance and other features within the subdivision. Meadow Hawks are the smallest of the dragon fly species common to the prairies.

The major design elements proposed to be applied to the development concept are shown on Figure 4 and are described as follows:

- 1. All natural areas will be linked with a trail and benches will be placed strategically at select viewing areas.
- The northwest and southeast woods will be retained as natural features. Also, some of the existing trees on the former farm site will be retained within the berm proposed along the Range Road.
- 3. Trails extending through the natural areas will be low impact and the surface will be naturalized using gravel or wood chips.
- 4. A treed buffer will be provided along the interface of East Whitecroft as required by the Country Residential Area Concept Plan. A chain link fence will be erected along the backs of lots. The buffering will be to the satisfaction of the County.
- 5. Front yard trees and shrubs will be required to be planted by the homeowner throughout the subdivision. The planting will be required through restrictive covenant that prescribes landscaping requirements as well as architectural guidelines that will ensure a high quality of development within the community.

6. The loop trail will be extended from the northwest woods to the west cul de sac and between the two cul de sacs. The cul de sac roadways can function as part of the pedestrian circulation system given the low traffic volumes. A connection from the southeast cul de sac to the trail proposed along range Road 231 is provided.



- 7. An undulating landscaped berm with a noise attenuation fence and a meandering asphalt trail is proposed along Range Road 231 (see Stage 2 cross-section below). This design approach will diffuse the view from the Range Road and Executive Estates. The trail links with the internal subdivision trail and will be extended further north to the Strathcona Christian Academy Elementary School and south to the first access into Windsor Estates.
- 8. The fence will not be constructed along the southeast woodlot Municipal Reserve parcel so that a relatively wide wildlife corridor is retained giving movement flexibility to animals crossing the Range Road. However, a wood screen fence will be constructed along Range Road 231 next to the private lot in Windsor Estates from the South property boundary of Meadow Hawk to the first access into that community as provided above.
- The southwest willow swamp has been identified as Environmental Reserve and, as is recommended by the Spencer Environmental Assessment, will not be linked to the trail system.

Other design elements include the use of architectural standards to be applied as a restrictive covenant to ensure a high standard of development, and the use of consistent lot address markers. The markers will provide low level lighting and address identification. No street lighting is proposed.

The water level in the storm water management facility located in Stage 1 will fluctuate but will be enhanced as a site amenity feature through natural grasses planting. An example of a naturalized storm retention feature is shown below.







Design Elements





5.4 Land Use

Meadow Hawk proposes to set a new standard for conservation and innovation in rural residential design. The development concept reflects progressive conservation design principles that promote the retention of a significant percentage of open space in locations and configurations that relate to its ultimate purpose - the protection of natural features integrated with a sustainable residential community.

5.4.1 Open Space

Meadow Hawk has been carefully designed to respect, protect and enhance the natural features of the land. The southwest wetland has been identified as an important drainage feature for the most southerly potion of the development, the northwest woods are an important habitat for wildlife, the southeast woodlot offers the opportunity to restore a previously disturbed forest, and the poorly drained areas in the northeast are being revitalized into a naturalized wetland to serve as a storm water retention pond.

Environmental Reserve

The southwest wetland will be designated Environmental Reserve pursuant to the Municipal Government Act. Portions of the wetland areas at the north end of the site are designated as Environmental Reserve under Stage 1 of the project and have been dedicated to the County. A total of 2.87 hectares will be dedicated to the County as Environmental Reserve under Stages 1 and 2.

Municipal Reserve

As is noted is Section 4.2, a 6.18 hectare Municipal Reserve parcel has been dedicated to the County as part of the Stage 1 subdivision. This parcel contains the northwest woodlot and ensures its natural integrity will be protected. A further 2.16 hectares of Municipal Reserve will be designated to protect the southeast woods and to provide for a landscaped berm along Range Road 23. The total amount of Municipal Reserve dedicated under Stage 1 and Stage 2 is 8.34 hectares.

The Municipal Reserve will not only protect vast areas of habitat areas and provide buffers to adjacent development, it will offer opportunities for recreation and trail development for the residents of Meadow Hawk and surrounding communities. The Municipal Reserve will be developed with walking trails and other amenities in accordance with the County's Open Space Development Standards.

Public Utility Lot

A 3.73 hectare naturalized storm water management feature has been dedicated to the County as part of Stage 1. This feature is currently being constructed.

The development concept will result in some 14.94 hectares of open space allowing for a liveable, walkable and efficiently designed community with a sense of place that meets the County's sustainability principles. The retention of some 47 percent of the site as open space means that Meadow Hawk will stand out from other semi-rural communities as a model conservation design country residential development that meets the principles and policies of the Capital Region Growth Plan and the Country Residential Area Concept Plan.

5.4.2 Residential

The residential land use of Meadow Hawk, as shown on the development concept, has been designed to maximize the developable areas of the site through the implementation of conservation and sustainable design principles, and sensitivity to adjacent development. In this regard, buffering is proposed along the west and east sides of the Plan area.

The north cul de sac optimizes the use of the sliver of land between the woodlands to the west and the poorly drained lands to the north and east.

Further, based on the results of the Rural Sewer Servicing Study, an opportunity exists to accommodate density that maximizes the efficient use of the proposed municipal infrastructure, resulting in a sustainable hybrid subdivision of varying lots sizes. The design, combined with the commitment to Built Green, make Meadow Hawk a truly integrated and sustainable rural community.

5.4.3 Development Statistics

Land Use

Table 1 provides a summary of the land use breakdown proposed by the Meadow Hawk Development Concept.

	Table 1	-Land	Use Area	Breakdown
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Area	Hectares	%
Gross Area	31.84	100.0
Environmental Reserve	2.87	9.0
Range Road 231 Widening	0.72	2.3
Gross Developable Area	28.25	88.7
Municipal Reserve	8.34	26.2
Storm Water Facility (PUL)	3.73	11.7
Residential	13.40	42.1
Roads	2.78	8.7

Note: The total area is an AutoCAD calculation and, therefore, differs by 0.56 hectares from the area as per the Certificate of Title. However, all areas shown on Table 1 are approximate and will be verified at the time of subdivision and detailed survey.

The land use area breakdown shown on Table 1 demonstrates the efficiency that can be achieved by applying conservation and sustainability design principles to the Meadow Hawk site. Of the total gross developable area of 28.25 hectares, 8.7% percent is dedicated for roadways, and 42.1% will be developed as residential that will be subdivided into 60 lots. The percentage of land area dedicated as road is about half of what is typical for rural subdivisions.

Population and Student Generation

The projected population for the Meadow Hawk Area Structure Plan is 192 persons, assuming 3.2 persons per unit. The number of students generated by the development is estimated at 33 assuming 17% of the total number of residents.

6 Municipal Services

6.1 Transportation

6.1.1 Traffic Impact and Access

A traffic impact assessment has been done in conjunction with Stage 1 development, based on 65 lots in the ultimate development. Traffic generation numbers indicate the requirement for a Type IIIc intersection on Range Road 231, per Alberta Transportation Standards. This intersection provides acceleration and deceleration lanes as well as dedicated left turn bays for both Meadow Hawk and the existing Executive Estates. The intersection is being constructed as part of the Stage 1 development. The existing farmstead access south of Meadow Hawk Way will be used for construction access during major infrastructure construction and will then be removed upon completion of Stage 2.

6.1.2 Internal Roadways

The access road from Range Road 231, being constructed with Stage 1, will service both Stage 1 and Stage 2. It is a divided roadway with enough width on each side of the median for two lanes of traffic (see Figure 5).

The access road continues NW as a cul-de-sac that serves Stage 1.

Heading south from the divided access is a short connector road (45 metres in length) which branches off to two cul-de-sacs. These cul-de-sacs exceed the allowable length without a second access, so an emergency access connection will be installed between the two cul-de-sac heads. An emergency access will also be installed from the southeast cul-de-sac to Range Road 231.

Right-of-way width for the internal roads will be 24m to provide boulevard width for snow storage.

6.1.3 Noise Attenuation

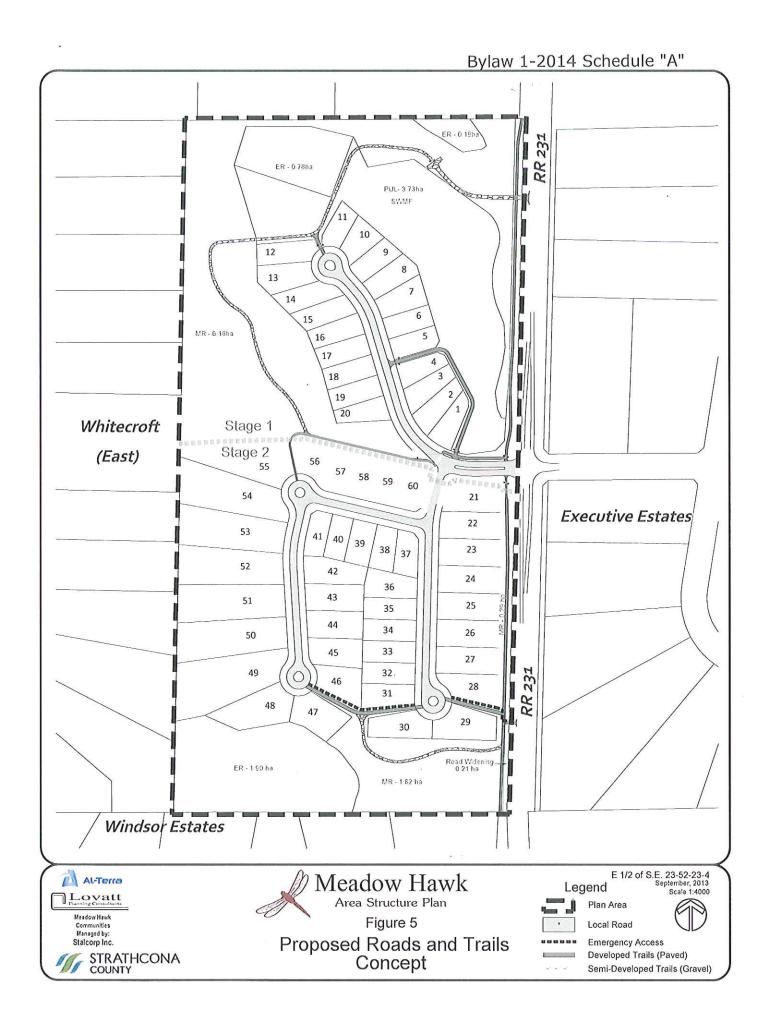
Noise modeling has been done based on ultimate projected traffic on Range Road 231. Results, as contained in the servicing design brief being prepared in support of this ASP, indicate that Stage 1 lots are far enough from the Range Road to be below the accepted noise level of 55 dBa.

To manage noise levels for lots in Stage 2 a berm to the height indicated in the design brief as well as a noise attenuation fence 1.8m in height will be constructed.

6.1.4 Pedestrian Circulation

As a walkable community, pedestrian trails are a significant feature of Meadow Hawk. Looping trails will be constructed throughout the subdivision in accordance with Figure 5. Further, a developed (paved) trail will be constructed along Range Road 231 from the south boundary of the site to the Strathcona Christian Academy Elementary School, located approximately 400 metres north of Meadow Hawk. An existing trail continues from the school into Sherwood Park. Residents will benefit from a continuous trail to the school and into the Urban Services Area.

Semi-developed (gravel) trails are proposed to be constructed through the natural woodlots and wetland areas. The first is within Phase 1 and connects with the Range Road trail to the east and meanders through the existing tree stand in the westerly portion of Phase.1. The second is



located south of the residential lots in Phase 2. It is proposed to loop from the paved trail between cul-de-sac bulbs and through the woodlot eastward to connect with the Range Road paved trail. The semi-developed trails will assist in maintaining a low level of impact within these natural areas (see Figure 5).

6.2 Water Distribution

The development will be fed from an existing 200mm diameter water main, which runs along the east side of Range Road 231. A connection from this water main has been installed across Range Road 231 to supply Meadow Hawk Stage 1. Small diameter mains will be extended into Stage 2 to provide a trickle flow to each lot, as shown on Figure 6. Each lot will require an onsite cistern with a pressure pump to provide their domestic usage.

Fire flow will not be available from this system. The development concept recognizes Fire Smart guidelines in terms of lot width and separation between homes.

6.3 Sanitary Sewage

Consistent with developments of a similar nature within the southeast fringe area of Sherwood Park, the Meadow Hawk development will be serviced by the Septic Tank Effluent Pump System (STEP). This system requires that an on-site septic tank be provided on each lot that will receive sewage flow from the house. A submersible turbine pump is installed in the tank that will pipe effluent to a pressure service line, and into a pressure sewer main located in the roads or utility rights-of-way within the subdivision.

The effluent will be pumped under pressure to a pressure sewer main installed along Range Road 231 for Stage 1, and discharged to an existing gravity sewer located south of Wye Road. With the use of the high head turbine pump, re-pumping of the sewage effluent will not be required between the development and the receiving gravity sewer. The proposed sanitary concept is shown on Figure 7.

6.4 Storm Water Management System

6.4.1 Topography and Natural Drainage

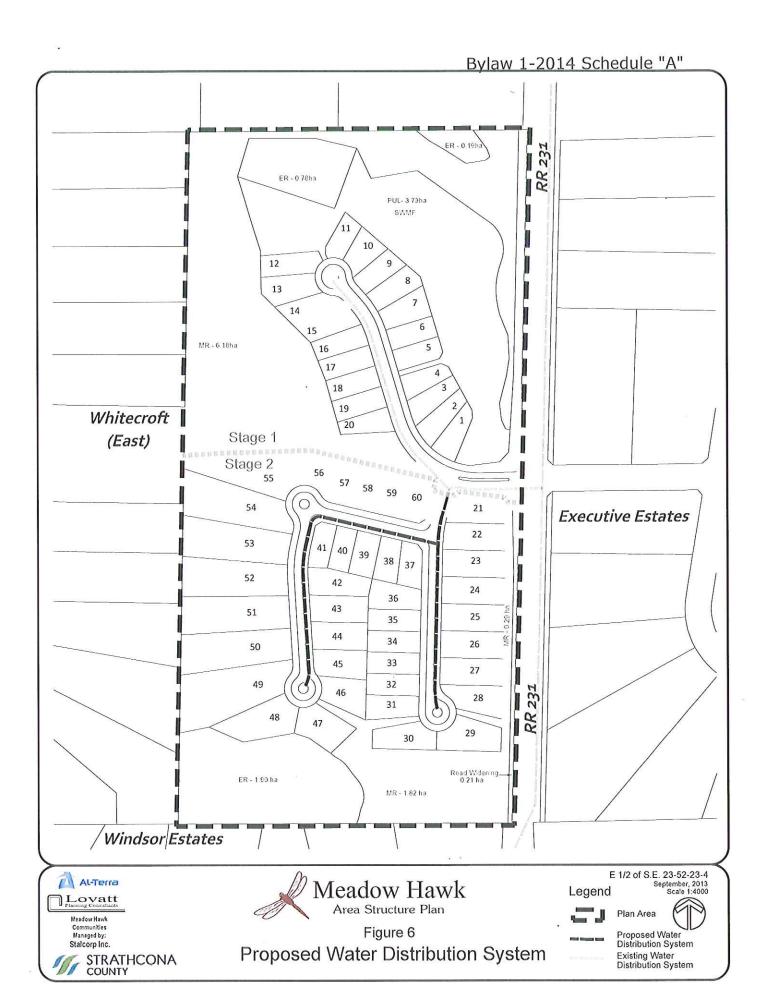
The development area consists of hummocky, undulating terrain with several high nodes and low areas. Drainage from the area goes in three different directions, as indicated on Figure 8.

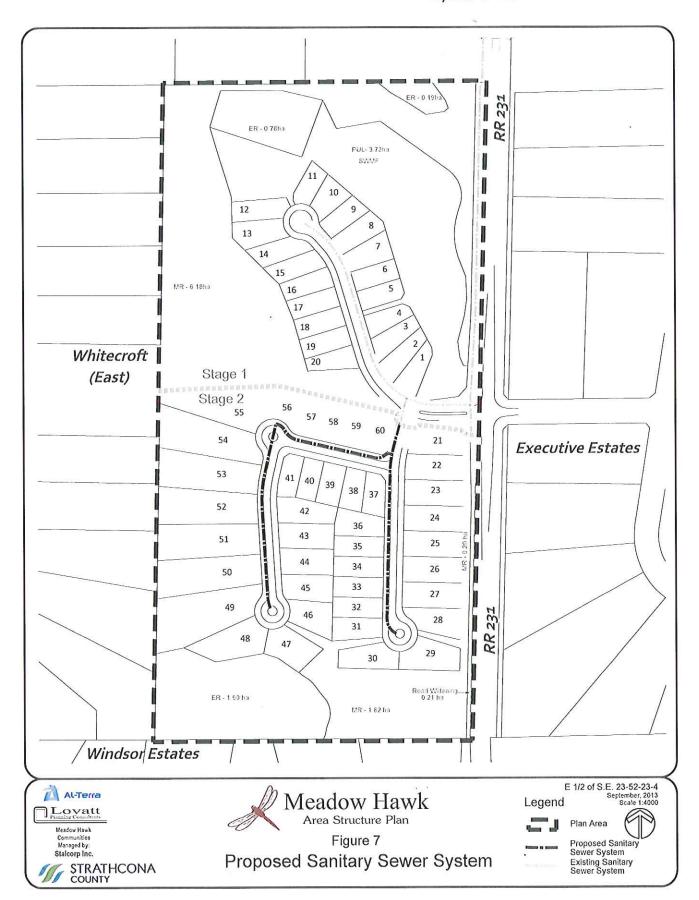
- 1. The south portion of the site, roughly 5.5 hectares, drains to an existing marshy depression in the southwest corner of the property.
- 2. An area of about 3.5 hectares along the west side in the south portion drains west thru existing Whitecroft.
- 3. The balance of the site, roughly 23 ha, drains north and collects in the various wetlands along the north boundary. When water builds up high enough in these wetlands, it spills over to the northeast and drains through an existing 600mm culvert that crosses Range Road 231 and into the Executive Estates wetland system, then eventually makes its way east into Boag Lake, from where it ultimately flows to the North Saskatchewan River.

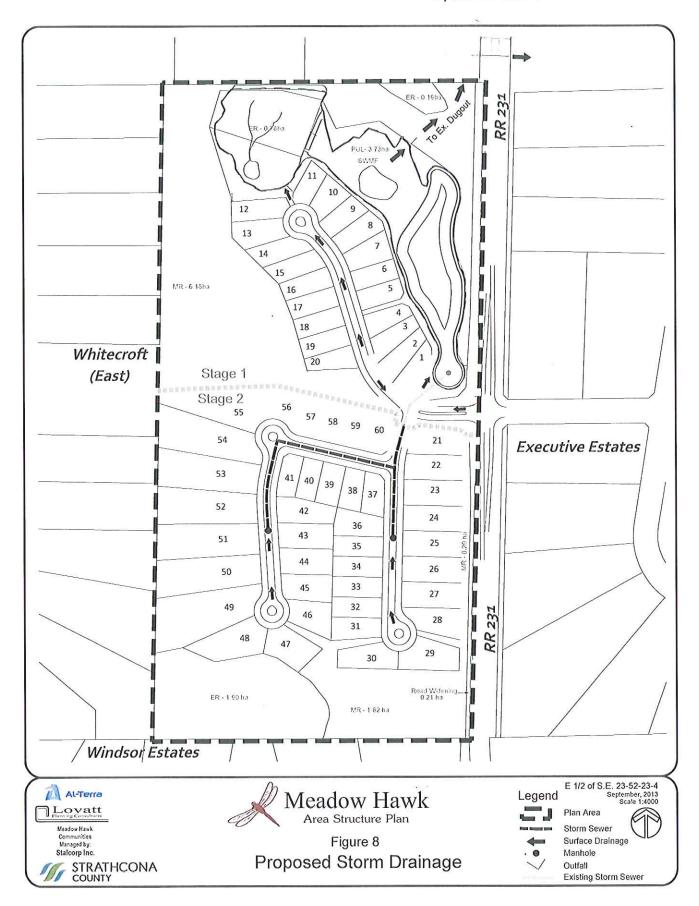
6.4.2 Proposed Drainage

Drainage of this area will be done by an urban road cross-section draining to catch basins and a piped storm sewer system, except for the northwest end of the north cul-de-sac, which will drain by surface swale to the nearest natural wetland, as shown on Figure 8.

A storm water management facility is being constructed within Stage 1 to mitigate the increased runoff for the entire Plan area, except for a fringe along the south and west sides where undeveloped areas will continue to drain to the south and west. No drainage from any hard surfaced area in these fringes will be permitted to drain south or west. At completion of development, the area draining to the south and west will be less than the current situation.







A storm water management report has been prepared and accepted by Strathcona County and Alberta Environment reflecting the foregoing concept.

6.5 Geotechnical Investigation

A site specific preliminary geotechnical/hydrogeological investigation was carried out by . Sabatini Earth Technologies Inc. (SETI) in August 2003. Based on a series of eleven boreholes throughout the site, the report concludes that the subject site is generally suitable for the proposed residential development.

6.6 Shallow Utilities

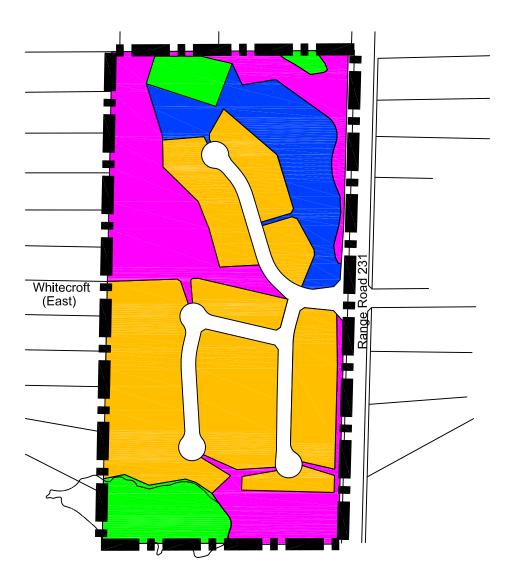
Power, gas, telephone, and cable TV may be provided to the plan area by the extension of existing facilities. Alignments of the shallow utilities within the subdivision will be in accordance with the both the County and shallow utility company requirements.

7 Staging and Implementation

Proposed phasing is shown on Figure 3. Stage 1 comprises the existing 20 lot subdivision and the extensive open space component of the Meadow Hawk Development Concept. Stage 2 comprises the 40 lots being proposed for the south portion of the Plan area along with the balance of the open space to be dedicated to Strathcona County.

The Land Use Bylaw for Stage I has been amended such that the 20 lots are zoned High Density Country Residential (RC2) District. Stage 2 lots are proposed to be rezoned from Agriculture: Future Development (AD) District to the RC2 District in accordance with the County's Municipal Development Plan and the Country Residential Area Concept Plan.





Meadow Hawk Area Structure Plan Amendment Bylaw 1-2014 Date of Adoption February 3, 2014

EXISTING LAND USE

Residential

Environmental Reserve

PUL

Municipal Reserve Road Plan

ASP Boundary

