
Conceptual Scheme

NW 21-51-22-W4

July 2006



Conceptual Scheme

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1. PURPOSE

1.1 The purpose of a Conceptual Scheme (CS) is to provide supporting rationale for the potential subdivision of this land to accommodate rural residential/agricultural development and to coordinate development planning of adjoining lands. The CS, as stated in Council Policy statement SER-008-019, is required:

- a)** To provide a framework for the subsequent subdivision and/or development of land within the Country Residential Policy Area and the Agricultural/Large Rural Residential Policy Area of the Municipal Development Plan;
- b)** To establish a potential plan of future subdivision or development that applies to a specific parcel of land;
- c)** To ensure that the subdivision under review does not prohibit the ability of remnant parcels, or adjacent parcels, to be further subdivided in the future. This can be achieved through improved subdivision design and the protection of land for future road dedication to provide access to remnant lands owned by the applicant or adjoining lands.

1.2 Furthermore, as per Council Policy statement SER-008-019, the proposed Conceptual Scheme is essential for the following reasons:

- a)** The land being proposed for redistricting or subdivision is within the Agricultural/Large Rural Residential Policy Area of the MDP and is 16 ha (40 ac) or more in size; or
- b)** The land being proposed for redistricting or subdivision has the potential to be further subdivided; or
- c)** The proposed subdivision would result in more than two parcels on the quarter section; or
- d)** There is a need to coordinate development planning or servicing of adjoining lands.

2. OVERVIEW

2.1 The proposed Conceptual Scheme has been prepared by Strathcona County Planning and Development Services in support of a Land Use Bylaw Amendment application and future proposed subdivision. Alfred & Madeleine Comeau have submitted an application to rezone 64.7 hectare (160. acres) parcel from AG Agriculture: General District to RA Rural Residential/Agriculture District in order to allow the future subdivision of six (6) parcels ranging in size from approximately 8.1 ha (20.0 ac) to 12.1 ha (30.0 ac).

3. CONCEPTUAL SCHEME (DESIGN CONCEPT)

3.1 The proposed Conceptual Scheme encompasses the entire NW ¼ of Section 21, Township 51, Range 22, West of the 4 Meridian (Figure 2 and 3) and has been prepared in consultation with the affected and adjacent landowners of the quarter section. The goal of the Conceptual Scheme is to establish a framework for the potential future subdivision and development of the land while ensuring that the policies and guidelines within the applicable statutory plans and bylaws are adhered to. The objectives of the Conceptual Scheme are to illustrate the potential developable area(s), potential lot yield, potential access locations and potential reserve land (Environmental Reserve, Municipal Reserve and Conservation Lot).

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4. BACKGROUND INFORMATION

4.1 Legal Description: NW 21-51-22-W4

4.2 Canada Land Inventory Rating: Class 2 & 4

4.3 Adjacent Land Uses:

a) North: Township Road 514

b) South: Country Residential Subdivision of Donaldson Park

c) East: There are six parcels, five RA District parcels ranging in size of 3.48 acres – 11.0 acres and one AG District parcels consisting of 117.98 acres.

d) West: Range Road 224.

5. MUNICIPAL DEVELOPMENT PLAN

5.1 The subject land is located within the Agricultural Large Rural Residential Policy Area of the Municipal Development Plan. The policy area supports large rural residential development subject to:

a) Section 10.18(a): Maximum parcel density shall not exceed eight (8) parcels per quarter section.

b) Section 10.18(b): Suitable environmental conditions exist for on-site water supply and on-site sewage disposal.

c) Section 10.18(c): The subject land is redistricted under the Land Use Bylaw, to an appropriate land use district other than an AG Agriculture: General District or AD Agriculture: Future Development District.

d) Section 10.18(d): The subject land contains one contiguous developable acre (0.4 ha) of land.

e) Section 10.18(1)(c): The related subdivision and development is designed in such a way so as to minimize the amount of tree removal; and,

f) Section 10.18(1)(d): Internal road access is provided to each of the existing and proposed lots that are part of the subject lands.

g) Section 10.18(3): Council may establish a policy in the Council Policy Handbook outlining the circumstances, under which a Conceptual Scheme is required, as well as the purpose, general content and procedures required for the preparation and adoption of a Conceptual Scheme.

5.2 The Conceptual Scheme illustrates the proposed land use bylaw amendment application and future proposed subdivision for the balance of the quarter section (Figure 2 & 3). The maximum lot yield (maximum parcel density for the quarter section) shall not exceed six (6) parcels for the entire quarter section. **Please note that the developable areas are approximate and may change at the subdivision stage.**

6. LAND USE BYLAW

6.1 Pursuant to the Land Use Bylaw 8-2001, the subject lands are proposed to be redistricted to RA Rural Residential/Agriculture District. The purpose of the RA Rural Residential/Agriculture District is to foster agriculture and agriculture-related uses that would be compatible in the area in certain situations. The district also provides for complementary residential related uses that are compatible with the residential character of the area. Uses that may have more of an impact on the area are included as discretionary uses so they can be considered by taking specific site circumstances and impacts into account.

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6.2 The RA Rural Residential/Agriculture District requires lots to be a minimum of 200 meters in width.

6.3 A Land Use Bylaw Amendment has been submitted concurrently to rezone approximately 64.7 hectares (160 acres) of the NW 21-51-22-W4 from AG Agriculture General to RA Rural Residential/Agriculture District.

7. CURRENT SITE USES

7.1 The quarter section consists for 64.8 ha (160 acres)

7.2 The quarter contains two established residences with a number of accessory buildings related to the current farming operation in the north west corner of the quarter section.

7.3 **Phase 1 of the Conceptual Scheme proposes an Environmental Reserve (ER) dedication of 2.9 ha +/- (7.1 ac +/-), proposed Municipal Reserve (MR) dedication of 6.4 ha +/- (15.9 ac +/-) as required under section 661(a) and (b) of the MGA). The proposed reserve areas are subject to change based on the completed Biophysical Assessment and subject to final calculation upon subdivision.**

8. SITE CONSIDERATIONS & PROPERTY INFORMATION

8.1 The general topographic relief of the quarter section is characterized as rolling with scattered shallow depressions supporting a relatively simple ephemeral drainage system. Two undisturbed upland forests remain on the subject property. No permanent creeks were observed on the site, however, ephemeral drainage swales were observed

8.3 The subject property contains some priority upland and wetland habitat, as identified in the Priority Landscape Ecology Assessment (PLEA) of Strathcona County.

9. ENVIRONMENTAL CONSIDERATIONS

9.1 In 1996, Strathcona County identified the need for a comprehensive identification of natural features and wildlife habitats that can be applied consistently across the County landscape. The overall goal of the landscape ecology study was to complete a prioritized landscape and wildlife habitat inventory to be incorporated into the County's planning process. The resulting Prioritized Landscape Ecology Assessment (Geowest Environmental Consultants Ltd. 1997) is used to guide new development and subdivisions and to direct future habitat and landscape restoration projects.

9.2 The Prioritized Landscape Ecology Assessment identifies the NE 21-51-22 W4M site to have a significant amount of priority upland habitat. The value of the habitat is in the complex of spruce bog, aspen poplar and wetland habitats as well as the contribution to a larger contiguous habitat. Fragmentation and disassociation with other habitat units is the greatest risk to maintaining the habitat value and wildlife populations it supports.

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9.3 Pursuant to the MDP, Section 4 — Environmental Management, “in areas where native vegetation is important for soil conservation, water resource protection or wildlife habitat, Strathcona County will discourage further clearing or development, unless it is demonstrated to the County’s satisfaction that these resources will not be negatively affected.”

9.4 Subject to the MGA Section 664(1), the owner of the parcel of land that is the subject of a proposed subdivision may be required to provide part of that parcel of land as Environmental Reserve if it consists of: a swamp, gully, ravine, coulee, natural drainage course, land that is subject to flooding or is unstable, a strip of land, not less than 6 meters in width abutting the bed and shore of any lake, river, stream or other body of water for the purpose of preventing pollution or providing public access to and beside the bed and shore. In addition, the applicant will be required to provide Municipal Reserve.

9.5 **A Biophysical Assessment was conducted on the subject parcel May 15, 2006.** The purpose of the site assessment was to determine the potential for lands to be claimed by Strathcona County as reserves and/or for the conservation of environmentally significant areas during the subdivision process as provided under the Municipal Government Act and Municipal Development Plan.

9.6 The site assessment consisted of an onsite survey of vegetation communities, topographical features, and wildlife on the subject property. An assessment was needed to determine wetlands and watercourses subject to claim as Environmental Reserve. Other environmental features important for conservation, such as potential wildlife corridors, Species at Risk, unique landforms, etc., can be protected through the dedication of Municipal Reserves and/or other conservation mechanisms. An air photo evaluation and literature search were initially undertaken to identify potential areas of interest within the subject property and its relationship to adjacent properties. Wildlife trails, cleared areas, wetland margins and watercourses were traveled in order to assess and observe the subject property firsthand.

9.7 Landscape

Overall, the terrain was rolling with scattered shallow depressions supporting a relatively simple ephemeral drainage system. Two undisturbed upland forests remain on the subject property. No permanent creeks were observed on the site, however, ephemeral drainage swales were observed.

An ephemeral drainage swale extends from the developed property to the south to the east. This drainage swale and associated wet areas likely supports a small amount of standing water, but the vegetation indicates that it is not a permanent wetland in the landscape. These ephemeral drainage swales and wet areas are not important habitat features as they are routinely cultivated and do not support wetland vegetation. The remainder of the subject property has been under agricultural management for years and the drainage swales, while providing short term drainage, do not persist on the landscape throughout the season.

There is an apparent wetland in the south central area. This is a remnant peat area that was cleared of trees decades ago. There were no signs of standing water, in fact the area was quite dry and heavily impacted by livestock.

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9.8 Vegetation

Approximately 75% of the subject property has been cleared of forest vegetation and has been under agricultural management for decades. The priority habitat occurs along the north boundary and within the southeast portion.

The undisturbed and/or uncleared portions of the subject property are covered by a mature mixedwood stand of aspen, balsam poplar, birch, larch and black spruce. The well developed forest structure includes diverse herbaceous ground cover, low shrub and tall shrub layers. The age class of this forest is estimated to be between 50 and 80 years. Aspen dominate the upland areas while balsam poplar, birch and larch dominate the ecotone between the upland and the black spruce bog area. Overall, the upland forested areas are highly diverse due to structural variety (canopy tree differences), landscape variety (rolling terrain) and plant community variety (shrub layers below the canopy).

Black spruce dominate the bog island located in the southeast portion of the subject property. Birch and larch dominate the periphery of the bog island and Labrador tea dominates the understory. These areas typically have lower species diversity than poplar forests. It should be recognized that although this forest habitat is less diverse botanically, wildlife species diversity may be higher. Specifically, different types of birds prefer spruce bog areas. These bog areas are relatively unique across the moraine landscape which is typically dominated by freshwater wetlands and poplar forests. A large area within the southwest portion of the subject property appears to be a significant wetland (based on air photo interpretation). The site reconnaissance confirmed that this area was a previously cleared spruce bog. All that remains is a large area of peat and organic soils that have been heavily degraded by livestock. This area was dry at the time of site reconnaissance.

The small wetland areas range from isolated pocket wetlands (periphery of bog island) to a system of connected ephemeral freshwater marsh wetlands on adjacent properties to the south and east. From air photo interpretation (refer to following air photo) and site reconnaissance, it appears that natural drainage channels exist connecting the wetlands in the southern half of the subject property. Standing open water was not observed during the site reconnaissance. The vegetation and soils indicated that these areas are periodically inundated with water and do not have permanent open water. These wetlands provide important flood control functions and wildlife habitat. The grasses,

Sedges, rushes and willows provide significant wildlife habitat that differs from both the poplar upland and spruce bog lowlands.

The poplar forest along the northern boundary was relatively undisturbed and was characterized by a diverse shrub and herbaceous layer. Livestock had largely been prohibited from this area, which results in a large intact habitat block connected to surrounding habitat.

Overall, the diversity of landscape and plant communities across the subject property is a special feature to be conserved. Environmental and Municipal Reserves should be dedicated in such a way to conserve the remaining undisturbed habitat across the subject property.

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9.9 Wildlife

Direct observations of wildlife in the area were typical of the timing of the assessment. Ungulates dominated the landscape and their presence was noted through indirect observations, such as browse, scat and trails. Several songbird species were observed throughout the upland forest areas. Protecting the connection to the surrounding forested lands will allow for wildlife use of a large habitat block.

9.10 Conservation Recommendation

a) Environmental Reserve (ER) should be dedicated for the lake shoreline to the full extent described under the Municipal Government Act. It is recommended that a minimum 7.5 m buffer adjacent to all ER areas be taken for access purposes.

Environmental Reserve (ER) should be dedicated for the wetlands around the periphery of the black spruce bog island to the full extent described under the Municipal Government Act. It is recommended that a minimum 7.5 m buffer adjacent to all ER areas to be taken for access purposes.

b) Municipal Reserve (MR) be dedicated to the full extent owing for the maintenance of upland habitat, based on 10% of the land area less that area owing as ER and claimed by the Province and based on the bonus lot clause within the Conceptual Scheme Policy. MR should be a combination of mixedwood forest upland in order to conserve a representative sample of the diversity inherent on this subject property.

Municipal Reserve (MR) should be dedicated to the full extent owing for the maintenance of the two blocks of forested habitat, as they are distinct from each in origin and potential recreational uses. Therefore a conservation of both forest stands is recommended.

c) Drainage Easements between the landowner and Strathcona County would also be beneficial in conserving the ephemeral drainage swales to ensure that development does not negatively impact natural drainage.

d) The natural areas remaining along the north and east boundaries of the subject property were previously identified in the Prioritized Landscape Ecology Assessment as priority wildlife units. This was confirmed during the site reconnaissance.

The mosaic of forest upland and wetland habitats on the subject property, the hydrology, the connectivity, abundant natural vegetation and recreation potential, all result in productive, diverse, well connected, currently sustainable vegetation and wildlife communities. The most valuable natural areas are the two block of forested areas (both polar and black spruce) and associated wetlands on the subject property. Together, these habitats could be conserved intact, through a combination of ER and MR. Overall, this quarter section is a unique area, in that disturbance has been relatively minor and localized in nature resulting in an intact large block of habitat adjacent to an unnamed lake.

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10. TRANSPORTATION

10.1 A 5 meter road widening will be required adjacent to Range Road 224 and along Township Road 514 at the time of future subdivision.

10.2 At the time of future subdivision, all existing and proposed access locations and proposed internal roadways will be identified and must be to the satisfaction of Strathcona County's Engineering Servicing Standards.

10.3 A 6m corner cut will be taken at the intersection of Range Road 224 and Township Road 514 at the time of future subdivision.

11. SERVICING

11.1 The appropriate servicing for water and sewer will be determined at the time of subdivision to the satisfaction of Strathcona County.

12. DEVELOPMENT CRITERIA

To assist in the preparation of future redistricting and subdivision applications the following list of Development Criteria have been developed for reference. The criteria was developed from policies, standards and regulations within the various applicable bylaws and statutory plans and from information gathered at meetings with landowners within the NW 21-51-22-W4 and the surrounding area. Additional development criteria may be identified at a more detailed subdivision stage.

12.1 The proposed Conceptual Scheme is presented in two (2) phases. **Phase I (Figure 2)** illustrates the proposed land use bylaw amendment that has been applied for and the future proposed subdivision of proposed Lot 4. **Phase II (Figure 3)** identifies the potential developable areas on the balance of the quarter section, taking into consideration undevelopable areas such as environmental reserve, municipal reserve and conservation easement locations and an internal roadway location from Range Road 224.

12.2 The developer (applicant) will, through the subdivision application process for **Phase I & Phase II**, be required to address servicing for water and sewer, access locations, internal road layout, municipal reserve, environmental reserve, environmental reserve easements and potential conservation easement requirements, geo-technical considerations/constraints, approval fees, rural road levies and any other requirements deemed appropriate by Strathcona County at that time

12.3 Upon implementation of **Phase I and Phase II** technical considerations including a biophysical assessment or stormwater management report and any other studies deemed appropriate by Strathcona County to be addressed, if required, to the satisfaction of Strathcona County at the time of subdivision. At all times County standards shall be maintained.

12.4 Development of **Phase II** shall only be allowed based on the provision of internal road access to individual parcels. A potential location for internal road access is shown on Figure 3.

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- 12.5** For development to proceed to the level outlined in **Phase I**, a 5 meter road widening will be required adjacent to Range Road 224 and Township Road 514, in addition a 6 meter corner cut will be required at the intersection of Range Road 224 and Township 514.
- 12.6** For **Phase II** development to proceed to the level outlined on Figure 3, a 30 metre road right of way must be dedicated at a location suitable to Strathcona County, and a road must be constructed, to County standards, to provide access.
- 12.7** Development within the quarter section will maintain a rural residential lifestyle on properties of approximately 8.1 hectares (20.0 acres) or larger
- 12.8** For development of **Phase I** to proceed to the level outlined on Figure 2, environmental reserves must be dedicated for wetland areas and watercourses to the full extent described under the Municipal Government Act at the time of subdivision.
- 12.9** For development of **Phase I** to proceed to the level outlined on Figure 2, municipal reserve must be dedicated to the full extent owing for the maintenance of upland habitat, based on 10% of the land area less that area owing as environmental reserve at the time of subdivision.
- 12.10** For development of **Phase I** to proceed to the level outlined on Figure 2 all existing accesses that do not meet Strathcona County standards must be removed and proposed access must be installed to the Satisfaction of Strathcona County.
- 12.11** Development adjacent to slopes, wetlands and water courses shall conform with environmental setbacks contained within the Land Use Bylaw 8-2001.
- 12.12** For future development of **Phase II** to proceed to the level outlined on Figure 3 a development agreement will be required to address the construction of an internal roadway and any offsite improvements required.
- 12.13** Prior to development, percolation and water table testing will be conducted on the proposed lots by a qualified professional so that suitable locations can be chosen for building sites and for on-site private sewage disposal systems.
- 12.14** At all times all lots shall comply with the requirements of the appropriate land use district.
- 12.15** The approximate base developable area is 64.75 hectares +/- (160.0 acres +/-). Based on the developable and undevelopable areas illustrated in Figure 2, 6 lots are proposed for the entire quarter section. **Please note that the development concept shown on Phase II - Figure 3 is conceptual and may change at the time of future subdivision. Further investigation of the quarter section may identify constraints to development on the quarter section.**
- 12.16** The approximate base developable area for **Phase I (Figure 2)** is 55.4 hectares (137.0 acres), while the approximate developable area for **Phase II (Figure 3)** is 25.3 hectares (62.3 acres). **Please note that the developable areas are approximate and may change at the subdivision stage.**

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13. SUBDIVISION APPROVAL

13.1 Notwithstanding any other issues that may arise through the subdivision review process, the following will be addressed as conditions of subdivision:

a) Final location of property lines and parcel areas may be adjusted at the time of subdivision, however, shall comply with the maximum density and minimum lot areas of the Land Use Bylaw District for the lands.

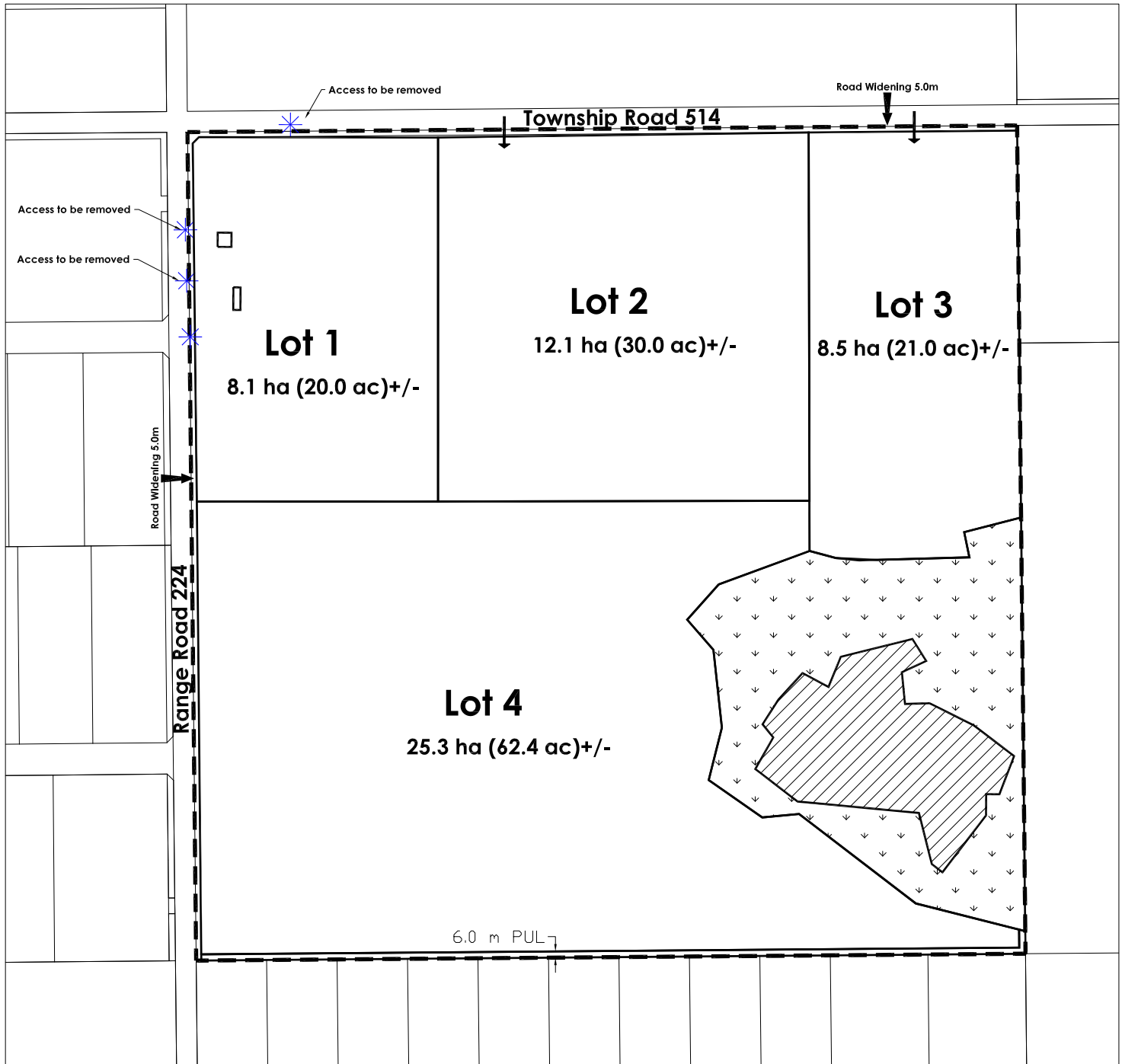
b) Any other conditions which may be applicable.

14. COMPLIANCE WITH OTHER LEGISLATION








14.1 Nothing in this Conceptual Scheme shall be interpreted as relieving a person from complying with Federal, Provincial or Municipal statutes or bylaws. In the event of a conflict between any of the provisions of this Conceptual Scheme and the provisions of any statute or bylaw, the provisions of the statute or bylaw shall prevail.

CONCEPTUAL SCHEME

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Legend

-  Proposed Subdivision = 64.75 ha (160 ac) ±
-  Developable Area = Approx. 55.4 ha (137.0 ac) ±
-  Municipal Reserve Area Approx. 6.4 ha (15.9 ac) ±
-  Environmental Reserve Area Approx. 2.9 ha (7.1 ac) ±
-  Potential Access Location
-  Existing Dwellings
-  Existing Access

**FIGURE 2 - Phase I
CONCEPTUAL SCHEME NW-21-51-22-W4**

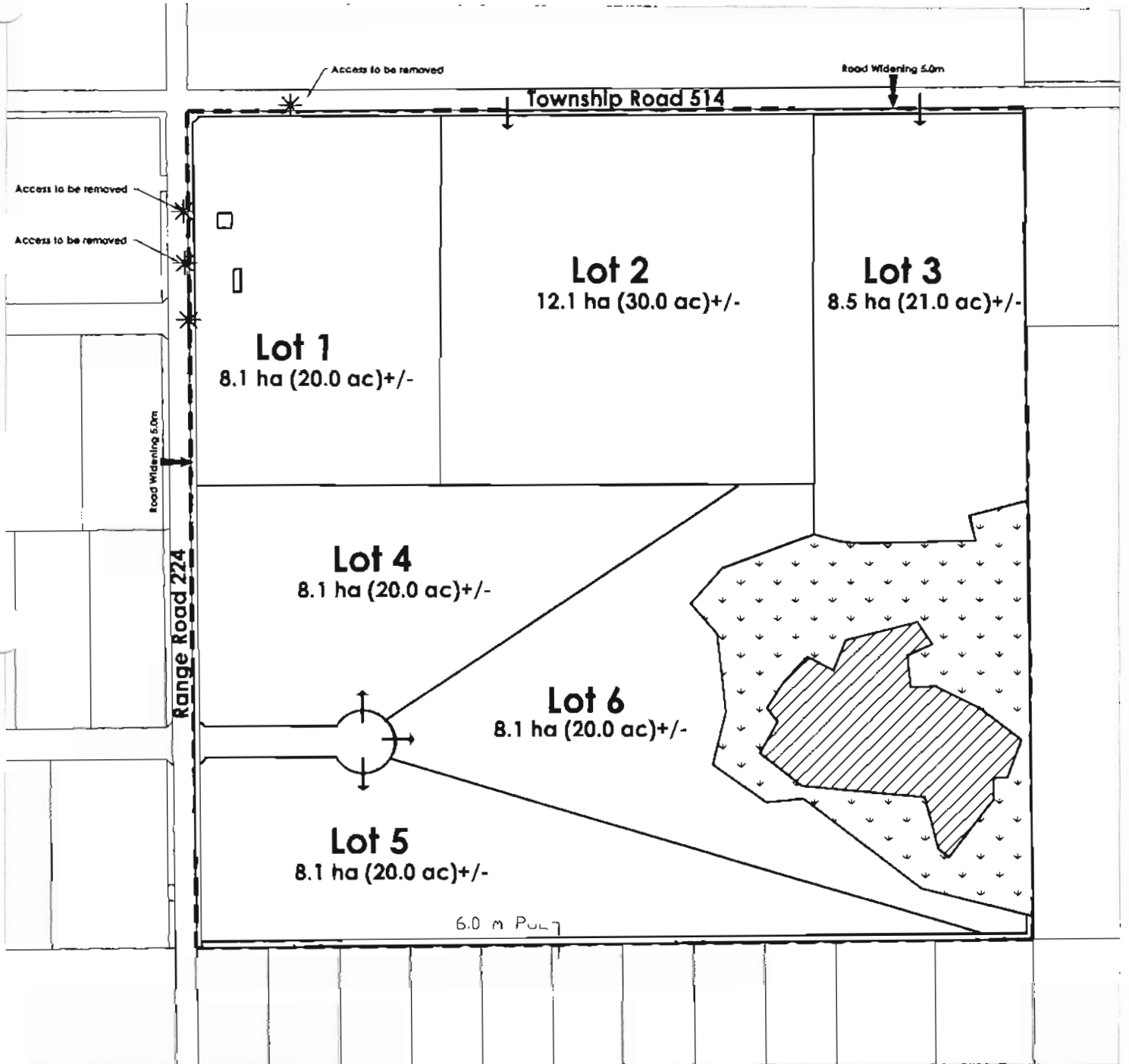
PLANNING & DEVELOPMENT SERVICES

Drawn by: Shannyn Ellett	Date Revised: 05/05/07	Dwg No.: P12M0004
Date Drawn: 10/07/06	Adopted: 03/10/06	Scale: NOT TO SCALE

Strathcona
County

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Legend

- Proposed Subdivision = 64.75 ha (160 ac) ±
- Developable Area = Approx. 55.4 ha (137.0 ac) ±
- Municipal Reserve Area Approx. 6.4 ha (15.9 ac) ±
- Environmental Reserve Area Approx. 2.9 ha (7.1 ac) ±
- Potential Access Location
- Existing Dwellings
- Existing Access

**FIGURE 3 - Phase II
CONCEPTUAL SCHEME NW-21-51-22-W4**

PLANNING & DEVELOPMENT SERVICES

Drawn by: Shannyn Ellis	Date Revised: 05/05/07	Dwg No.: P12M0004
Date Drawn: 10/07/08	Adopted: 03/10/08	Scale NOT TO SCALE

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