

2013

# McCoubrey Plateau Area Structure Plan



LAKE COUNTRY

Life. The Okanagan Way.

District of Lake Country

26/11/2013

**PAGE INTENTIONALLY LEFT BLANK.**

Table of Contents

1.0	Introduction .....	7
1.1	Background .....	7
1.2	Project Boundary .....	7
1.3	Purpose of Plan .....	7
2.0	Neighbourhood Concept.....	8
2.1	Introduction .....	8
2.2	Project Terrain .....	8
2.3	Environment.....	8
2.4	Community Values .....	9
2.5	Land Use Designations .....	11
2.6	Growth Management Plan.....	12
2.7	Area Plan Concept.....	12
2.7.1	Vision.....	12
2.7.2	Principles .....	12
2.7.3	Concept Description.....	13
2.7.4	Build-out Projections .....	14
2.8	Community Process and Input.....	16
3.0	Planning Policies .....	16
3.1	Introduction .....	16
3.2	Sustainability .....	16
3.3	Urban Residential.....	18
3.4	High Density Residential .....	19
3.5	Mixed Use / Village Commercial .....	21
3.6	Institutional .....	22
3.7	Parkland – Conservation (Parks, Trails and Open Space) .....	23
3.8	Environment.....	25
3.9	Transportation .....	29
3.10	Infrastructure / Servicing .....	31
3.10.1	Water Service.....	31

3.10.2 Sewer Service ..... 32

3.10.3 Stormwater Management ..... 33

4.0 Phasing ..... 34

5.0 Next Steps ..... 35

6.0 Sources and References ..... 35



## Executive Summary

The District of Lake Country (DLC) has been approached with development proposals for an extensive area of land in the McCoubrey Plateau, which is located in the southwestern part of the District of Lake Country (DLC), and is contiguous with the City of Kelowna's northern border (See Map 1: Context). Given the scope of the proposals, the District of Lake Country feels that the development would best be served by undertaking an Area Structure Plan that would address servicing, density, access, land use and various other criteria.

The DLC has a population of approximately 11,700, covers an area greater than 122 km<sup>2</sup>, and is comprised of four main neighbourhood districts, or 'wards' – Carr's Landing (6.1% of area), Oyama (16.9%), Okanagan Centre (20.8%), and Winfield (52%)<sup>1</sup>. McCoubrey Plateau encompasses an area of approximately 228 acres (92 ha), is located primarily within the Okanagan Centre community (approximately 60%). (See Map 2: Local Context - McCoubrey Plateau and Immediate Area).

The site covers varying terrain that rises up from (but is not contiguous with) Lake Okanagan (See Map 3: Air Photo). The site then peaks in the middle, and falls in elevation toward the east. Mostly forested, the land includes a pond, flat benches, and numerous rocky outcrops (See Map 4: McCoubrey Plateau Topography). According to the District of Lake Country Sensitive Ecosystem Inventory (SEI), three Sensitive Ecosystems are present within the study area: Coniferous Woodland, Grassland, and Riparian. (See Map 6: Sensitive Ecosystem Inventory, and Map 7: Sensitive Ecosystem Ranking).

This plan strives to reflect the community values inherent in various policy documents, including the Council Vision and the Official Community Plan. Inherent in these policies is the desire of the citizens of the District of Lake Country to protect their rural lifestyle while also designating strategic areas for future growth, such as the Town Centre and McCoubrey Plateau. For this strategy to work, it is critical that urban designated areas, such as McCoubrey Plateau, be planned to handle predicted growth projections for the foreseeable future. As such, it is strongly recommended that the McCoubrey Plateau area increase its potential build-out capacity substantially.

The vision for McCoubrey Plateau is to plan a well-designed compact neighbourhood where residents can choose to live, and play in close proximity, where a sense of community is fostered, and where the natural environment is respected and preserved.

The McCoubrey Plateau Area Structure Plan calls for allocating a mixture of i) integrated residential types with varying densities, and ii) a parks/open space/trail system in an area of the District where the land form allows for a true livable neighbourhood to evolve over time, and where a significant proportion of the future growth of this community may be accommodated (See Map 10: McCoubrey Proposed Land Use, and Map 11: McCoubrey Proposed Land Use - Detail). Specifically, a higher density, mixed use is envisioned to occupy the upper benches of the plateau area, surrounded by medium density residential and lower density residential to the west. Centered within the neighborhood is the proposed senior's complex, allowing for aging in place and diversity in the neighbourhood demographic. The core area itself, which is accessed and serviced by an inner spine road has been permeated and

---

<sup>1</sup> <http://lakecountry.civicweb.net/FileStorage/1C7AE3936A964F8EBA9F1BF38D541B05-Ward%20Information%20Sheet.pdf><sup>1</sup>

surrounded by a series of neighbourhood parks, linear parks, trails system, and open space features (including a pond) to provide for recreation opportunities and to protect the integrity of the natural environment and steep slopes. Walking and cycling trails are envisioned to interconnect all major land uses within the Plateau area (as well as those in the surrounding neighbourhoods) and to interconnect with other greenways, such as the Trans Canada Trail.

## Acknowledgments

The creation of the McCoubrey Plateau Area Structure Plan represents the envisioned development through comprehensive planning. Various consultation sessions were conducted with council members and staff, and with property owners both within and immediately adjacent to the study area. Their support, time, and valuable insight is greatly appreciated.

## Maps, Figures, Tables

### Maps

- Map 1: Context Map
- Map 2: Local Context - McCoubrey Plateau and Immediate Area
- Map 3: McCoubrey Plateau Aerial Photo Map
- Map 4: McCoubrey Plateau Topography
- Map 5: McCoubrey Plateau Slope Analysis
- Map 6: Sensitive Ecosystem Inventory Map
- Map 7: Sensitive Ecosystem Ranking Map
- Map 8: Current Zoning
- Map 9: OCP Identified Growth Areas
- Map 10: McCoubrey Proposed Land Use Map
- Map 11: McCoubrey Proposed Land Use Detail Map
- Map 12: Parks, Trails, and Open Space Map
- Map 13: Transportation Plan
- Map 14: Constraint Analysis
- Map 15: Existing Services
- Map 16: Phasing Plan

### Tables

- Table 1: Build-out Scenario

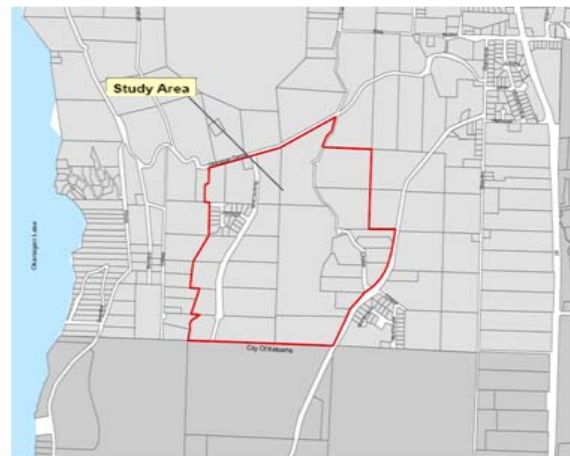
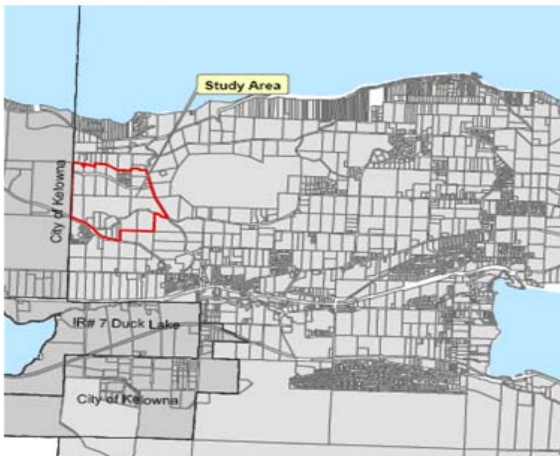
## 1.0 Introduction

### 1.1 Background

The District of Lake Country (DLC) has been approached with development proposals for an extensive area of land in the vicinity of McCoubrey Road just north of the City of Kelowna municipal boundary. The subject lands encompass approximately 230 acres (93 hectares) and their development will entail a mixture of housing densities, and parks/green space. The area will require servicing with water and sanitary sewer. Given the scale of the development proposal and its dependence on the development of adjoining properties, the DLC feels that the development is best served by undertaking an Area Structure Plan that addresses servicing, density, access, land use and various other criteria for development.

### 1.2 Project Boundary

McCoubrey Plateau is located in the southwestern part of the District of Lake Country and is contiguous with the City of Kelowna's northern border (See Map 1: Context). The DLC has a population of approximately 11,700, covers an area greater than 122 km<sup>2</sup>, and is comprised of four main neighbourhood districts, or 'wards' – Carr's Landing (6.1% of area), Oyama (16.9%), Okanagan Centre (20.8%), and Winfield (52%)<sup>2</sup>. McCoubrey Plateau encompasses an area located within the Okanagan Centre community (approximately 60%). (See Map 2: Local Context - McCoubrey Plateau and Immediate Area).



### 1.3 Purpose of Plan

The purpose of the McCoubrey Plateau Area Structure Plan is to provide a comprehensive land use plan for the plateau neighbourhood that will follow the principles outlined in the OCP and other related documents, but further elaborate on and, in the process, help guide development to realize a livable community in the area.

---

<sup>2</sup> <http://lakecountry.civicweb.net/FileStorage/1C7AE3936A964F8EBA9F1BF38D541B05-Ward%20Information%20Sheet.pdf>

Rezoning will not be permitted to occur until the DLC has adopted the Plan. Further, it is not the intent of this scope of work to achieve subdivision/layout or zoning; it is only for the formulation of a policy framework and future land use designations provided within the OCP.

## 2.0 Neighbourhood Concept

### 2.1 Introduction

The McCoubrey Plateau neighbourhood concept is closely connected to i) the biophysical opportunities and constraints of the site, ii) the stated social aspirations of the Okanagan Centre area, and iii) the stated social aspirations of the larger community. The neighbourhood concept is also connected to the implications of i) the predicted growth projections for the entire District, and ii) the limited remaining land available for development in the District.

### 2.2 Project Terrain

The site covers varying terrain that rises up from (but is not contiguous with) Lake Okanagan (See Map 3: McCoubrey Plateau Aerial Photo). The site then peaks in the middle, and falls in elevation toward the east. Mostly forested, the land includes a pond, flat benches, and numerous rocky outcrops (See Map 4: McCoubrey Plateau Topography). The site ranges in elevation between 480 m west of McCoubrey Road, 579 m (central outcrop and highpoint), 548 m (pond), and 466 m (northwest corner).

### 2.3 Environment

The Okanagan valley covers an area that has nearly unparalleled biological, ecological, and geological diversity within North America. The valley i) provides a vital north-south corridor connecting the Great Basin (to the south) with other dry interior valleys in British Columbia, ii) is an important corridor for migrating birds, and iii) is a point of entry for organisms entering into BC's dry interior from the Columbia Basin. The District of Lake Country lies within the Okanagan Very Dry Hot Ponderosa Pine (PPxh1) and within the Okanagan Very Dry Hot Interior Douglas-fir (IDFxh1), the Shuswap Moist Warm Interior Douglas-fir (DFmw1), and the Okanagan Dry Mild Montane Spruce (MSdm1) biogeoclimatic variants.

At present, the only environmental plan that has been undertaken in the plateau area is the Sensitive Ecosystem Inventory (SEI). The SEI was initiated by The District of Lake Country and the Ministry of Environment in 2004 to "develop an inventory information base and conservation analysis to support sound land management decisions and promote effective stewardship of sensitive ecosystems in the District of Lake Country ..."<sup>3</sup>. Sensitive ecosystems refer to ecosystem types that are "ecologically fragile or are rare in the provincial landscape and are relatively unmodified by human influences"<sup>4</sup>. According to the SEI, three Sensitive Ecosystems are present within the study area: Coniferous Woodland, Grassland, and Riparian.

---

<sup>3</sup> Sensitive Ecosystems Inventory: Lake Country 2005 (volume 1)

<sup>4</sup> Sensitive Ecosystems Inventory: Lake Country 2005 (volume 1): page 4

## **2.4 Community Values**

This plan strives to reflect the community values inherent in various policy documents, including the Council Vision, the Official Community Plan, the British Columbia Climate Action Charter, the Parks and Recreation Master Plan, and the District of Lake Country Transportation Plan. In particular, the Council Vision, Official Community Plan strongly influenced the direction of this Area Structure Plan. Applicable policy associated with each of these documents is listed below.

### **Council Vision**

Develop a strong sense of community. Promote a positive community image. Provide housing for all. Encourage responsible economic development. Build a comprehensive and integrated trail network. Create a vibrant social and commercial town centre. Protect and enhance our natural environment. Foster diverse agricultural opportunities. Encourage enjoyment of our unique lake resources. Promote environmental stewardship. Promote an active schedule of cultural and social events. Develop a sustainable financial plan for servicing and growth.

### **Official Community Plan**

The primary development principles of the OCP provide policy on Growth and Identified Growth Areas as well as Neighborhood Planning and the McCoubrey Plateau:

#### Identified Growth Areas

*By geographically overlaying the valued features constraining growth within Lake Country, it is apparent that about 24km<sup>2</sup> or 20% of the 122km<sup>2</sup> land base is currently developed or suitable to accommodate development. Overlaying these identified constraints focuses development to residual nodal areas in the community, which are shown as growth areas on Map 4.*

*Focusing most growth to identified growth areas is a key principle of the Lake Country growth management strategy, which seeks to balance providing suitable land for well planned growth while maintaining the integrity of the rural lands. The provision of predetermined growth areas prevents sprawl and encourages orderly urban development. In practice, clearly demarcating growth nodes creates increased certainty for developers by directing where new infrastructure investments occur and coupled with zoning and policy tools, channels growth into pre-existing neighbourhoods and areas where density should be maximized.*

*Establishing identified growth areas honours the Official Community Plan guiding principles by:*

- *Establishing the Town Centre and creating vibrant mixed use neighbourhoods.*
- *Maximizing the use of existing infrastructure and minimizing infrastructure cost.*
- *Protecting the environment and maintaining a permanent rural land base.*
- *Improving the viability of public transit by concentrating development.*
- *Minimizing air pollution and greenhouse gas emissions by supporting a mix of services near homes and employment, decreasing the need for automobile use.*

Properties within Identified Growth Areas

All properties located within an identified growth area maintain their Official Community Plan and zoning classification, with identification inside an identified growth area conveying no specific land use or development rights. Being shown within an identified growth area simply acknowledges that at some stage, the area could be suitable for future urban development. All proposed land use amendments for properties sited within an identified growth area should comply with the policy direction of this plan.

McCoubrey Plateau

The McCoubrey Plateau neighbourhood is the area south of Okanagan Centre Road along McCoubrey and Glenmore Roads. The area west of Glenmore Road has not been intensively developed to date and is expected to be home to future urban level development.

The District expects that the area will develop into an urban residential neighbourhood with a blend of single unit, duplex and multiple unit housing. As part of this urban residential expansion, the District would also like to increase the availability of affordable housing and seniors housing. Development should also be conducted in a sensitive and sustainable fashion using green building techniques.

There are several existing gravel pits in the northeast portion of the plateau. These pits will eventually be redeveloped into light industrial employment lands as they exhaust their supply of aggregate materials.

**Goals**

- Establish the McCoubrey Plateau area as a comprehensive residential neighbourhood with a mixture of complementary urban land uses and densities.
- Showcase McCoubrey Plateau as a leader in ecologically sensitive community design.

**Objective One**

- Ensure that development occurs in a coordinated manner.

**Policies**

- a) Require that the adoption of the McCoubrey Plateau Area Structure Plan occurs prior to approving any land use changes in the area.
- b) Ensure that development occurs in an orderly and phased fashion.
- c) Coordinate land clearance with infrastructure installation and phasing plan.

**Objective Two**

- Integrate a variety of housing types and tenures into the neighbourhood.

**Policies**

- a.) Require that at least 50% of all housing units be multiple unit dwellings.
- b.) Ensure that at least 10% of all dwellings in the area be affordable housing.
- c.) Support the inclusion of a senior's housing project within the overall concept.

**Objective Three**

- Integrate development sensitively with the natural setting.

*Policies*

- a.) Protect areas of high ecological value and steep slopes from disturbance.*
- b.) Minimize site disturbance and tree removal while revegetating disturbed areas.*

*Objective Four*

- *Establish a high quality built environment in the McCoubrey Plateau area.*

*Policies*

- a.) Develop a transit friendly community layout.*
- b.) Explore innovative community energy solutions.*

Development Permit Areas

The District of Lake Country OCP Section 22 identifies eleven different Development Permit Areas which provide policy and guidance on building and development; seven of which are applicable to The McCoubrey Plateau Study Area. This includes the Agricultural, Erosion Hazard, Wildland Fire, Natural Environment, Hillside, Multiple Unit, Commercial and Greenhouse Gas Reduction and Resource Conservation Development Permit Areas.

Natural Environment and Hillside Development Permit Areas cover a large portion of the study area and will be required for a majority of the properties. In contrast, the Erosion Hazard and Wildland Fire Development Permit Areas are concentrated on the west side of McCoubrey Road and will only be required for those affected lots.

The remaining Development Permit Areas, Multiple Unit, Commercial and Greenhouse Gas Reduction and Resource Conservation, are general in coverage. Multiple Unit Development Permits are required for any development with a higher density than one duplex unit per lot and Commercial Development Permits are applied to any commercial development within the District. Greenhouse Gas Reduction and Resource Conservation Permits are required for all subdivision and development.

Development Permits will be required prior to subdivision or development as described in Section 22 of the District's OCP.

## **2.5 Land Use Designations**

Current OCP designation within the McCoubrey area is dominated by 'Urban Residential (yellow) with 'Parkland – Conservation' (green) areas centered within the study area as well as two neighborhood parks identified in the North West corner. A small sliver of Industrial exists in the north east corner however is identified for re-designation.

Current zoning designations vary throughout the site but are dominated by Rural Residential 2 (RR2), Rural Residential 1 (RR1), and Single Family Housing (RU1). Two large properties in the northeast corner of the study area are zoned Direct Control 3 (DC3) which allows including hotel, multi-family residential, two family residential, and single family residential. (See Map 8: Current Zoning)



## **2.6 Growth Management Plan**

As part of the ongoing long-range planning initiatives being undertaken in the DLC, staff has projected build-out capacities based on land designations identified in the existing Official Community Plan (See Map 9: OCP Identified Growth Areas).

The southwest Winfield/McCoubrey area can accommodate approximately 4200 units. Lakestone, the resort/residential property to the north of McCoubrey Plateau, is planned to accommodate 1400 units. Consequently, McCoubrey Plateau is projected to handle the remaining 2800 units.

Due, however to the desire of the District of Lake Country to protect their rural lifestyle it is critical that urban designated areas, such as McCoubrey Plateau, be planned to handle predicted growth projections for the foreseeable future. As such, it is strongly recommended that the McCoubrey Plateau area increase its potential build-out capacity substantially. (Note: This Plan has estimated an average build out of approximately 2800 units)

## **2.7 Area Plan Concept**

### **2.7.1 Vision**

To plan a well-designed compact neighbourhood where residents can choose to live, work, shop and play in close proximity, where a sense of community is fostered, where the natural environment is respected and preserved, and where people have the option of reducing their energy, water, and material consumption.

### **2.7.2 Principles**

**Land efficiency:** Greenfield development should maximize density in an intelligent manner, while still respecting sensitive and valued natural landscape features.

**Land Use:** Provide for a mixture of residential, commercial, recreational, and conservation opportunities.

**Transportation:** Provide a variety of attractive and safe transportation choices, including infrastructure for walking, cycling, transit, and driving. Strive to make the McCoubrey Plateau area easy to get around in safe and enjoyable ways, as outlined by the Integrated Transportation Framework.

**Attainable Housing:** Create diverse housing opportunities for people in different family types, life stages and income levels. Attainable housing is defined by the British Columbia Government as market housing that is affordable to households with a range of incomes, but most often at the low or moderate end of the scale; provided without ongoing senior government subsidy.

**Open space:** Preserve open spaces, natural beauty, and environmentally sensitive areas.

**Infrastructure:** Ensure investments in infrastructure (such as roads) are used efficiently by utilizing increased densities and intelligent standards.



**Identity:** Foster a unique neighbourhood identity that reflects diversity and inclusivity.

**Citizen Engagement / Capacity building:** Provide places that facilitate citizen engagement, thereby promoting a sense of community ownership, responsibility, and decision-making capabilities.

### 2.7.3 Concept Description

The McCoubrey Plateau Area Structure Plan land use concept calls for allocating a mixture of integrated residential types, and parks/open space in an area of the District where the land form allows for a true neighbourhood to evolve over time. Over 230 acres of land has generally been set aside for urban development to occur in this southern part of Lake Country. It is one area that will support a significant proportion of the future growth and economic base of this community. The Plan is expected to help ensure that this new neighbourhood will grow and become one of the most livable areas of the Central Okanagan (See Map 10: McCoubrey Proposed Land Use, and Map 11: McCoubrey Proposed Land Use - Detail).

The land use concept is enshrined in the following description:

The **McCoubrey Plateau** land form is undulating terrain with small to large contiguous benches and gentle slopes where housing can maximize views as well as be interspersed within the forest cover. Great views are provided in every direction but especially benefit from the visibility and proximity of lakes to the west (Lake Okanagan) and to the northeast (Wood Lake and Kalamalka Lake). To the west, the land drops more dramatically towards Okanagan Centre and Okanagan Lake.

The **residential component** is proposed to reflect market opportunities and demand for a cross section of high to medium and low density housing forms. It has been situated with a compact core on the upper benches and in pockets, surrounded by medium density and then large contiguous areas of low density single family residential.

The **high density** will include high density residential buildings (6 storey maximum) to accept growth in the distant future. Although this is an efficient use of the land base, opportunities for green space, protection of steep slopes or any critical natural areas have been addressed by careful siting of each building. Further justification for allocating some high density residential development is provided in the Policies under Section 3.4 of this Plan.

**Urban Residential density** residential (single family, duplex, row house and townhouses) will complement the compact central area, again with a significant allocation of parks and greenspace interspersed throughout the area. A small site area has been designated and will be protected for convenience commercial and a major senior's complex, allowing for aging in place and diversity in the neighbourhood demographic.

The central area has been surrounded and complemented by a series of neighbourhood parks, linear parks, trails system, and open space features to protect the integrity of the natural environment and steep slopes, and for recreation. The **Open Space system** includes most of the larger contiguous hillside areas beyond 20 and 30 percent but also respects a major natural feature (wetland/pond) that can be integrated into the local area park system and include interpretive value for the residents of Lake

Country. Such a feature will be integral to the high density core area where walking and cycling trails can prevail to link home and the out of doors.

The residential neighbourhood is conveniently bound by **collector roads** on three sides and not interrupted by any major roadways. An internal spine road will provide access from north to south and connect with Chase Road to form the framework for an **internal local road framework**. Any strata roads would be constructed within the standards of the District of Lake Country Subdivision Servicing Bylaw No. 97-139, as amended. Standards for **sidewalks, bike lanes and trails** would be defined in collaboration with the District and through further Traffic Impact Assessment or Road Network plans. The intent is to connect parks and residential areas through a series of trail networks and sidewalks along roadways where topography will support it.

#### 2.7.4 Build-out Projections

The McCoubrey Plateau Area Structure Plan designates a variety of land uses (using both general OCP categories, and detailed categories), uses OCP densities as a guide, and assumes corresponding densities specific to those land uses. The following table outlines the relationship between the OCP Land Use Categories and the Detailed Land Use Categories.

<b>Land Use Categories</b>		
<b>OCP Land Use Categories</b>	<b>OCP Density Ranges<sup>5</sup></b>	<b>Detailed Land Use Categories</b>
Urban Residential	12.5-25 units/ha (5-10 units/acre)	Single family, duplex, townhome
High Density Residential	25-120 units/ha (10-48.5 units/acre)	Townhome, apartments and condominiums

Map 11: McCoubrey Proposed Land Use - Detail, depicts how the entire Neighbourhood area has been divided into cells. Although each cell generally corresponds to a particular land use, some larger contiguous blocks may be covered by more than one cell. The build-out table provides detailed information for each cell, including:

- land use,
- area (acre, ha, %),
- units (number)

Based on the assumed density ranges for each land use category, the neighbourhood can accommodate approximately 2800 units, or 6,440 people, assuming 2.3 people per household. High Density lands account for 30.84 hectares, 33.1 percent and the majority of the total units. Urban Residential comprises of 28.03 hectares and 30.1 percent. Other land uses that will be contained in the Area Structure Plan area, including, parks, trails and open space or minor commercial have not been allocated any unit or space equivalencies for the purpose of this projection. In addition, previously built out lands within the study area, i.e. Heritage Drive, were included in the final predicted unit count.

---

<sup>5</sup> 1 ha = 2.47105 acres

**Table 1: McCOUBREY PLATEAU AREA STRUCTURE PLAN Build-out Table**

LAND USE	AREA			UNITS
	acre	ha	%	
Urban Residential	72.4	29.3	31.5	500
High Density Residential	76.2	30.8	33.1	2206
Seniors	3.2	1.3	1.4	94
Institutional	2.8	1.2	1.2	
Proposed Park	5.9	2.4	2.6	
Open Space	58.2	23.6	25.3	
Road-public	11.2	4.5	4.9	
<b>Total</b>	<b>230.0</b>	<b>93.1</b>	<b>100.0</b>	<b>2,800</b>
District of Lake Country				

\*Note: Final unit count given within the McCoubrey Plateau Area Structure Plan takes into account the build out area of Heritage Drive (approx. 4 ha/9ac)

### Basis of Projections and Allocating Build Out

Projecting build out for a large land mass and at a neighbourhood / sector scale of planning is conducted mainly to establish a best estimate for general municipal planning. The estimated build out assists in general growth management for the District over the long term, but should also be considered for infrastructure planning, transportation requirements, and financial and economic implications.

Using a realistic set of assumptions for development to occur in various cells of the Plan area, a range of density factors have been applied for the different types of residential land use. These assumptions have included the following:

- Development has not been allocated to large contiguous blocks of steep sloped land (30%+)
- Where some steeper sloped lands (20-30%) are interspersed with more level benches and gentle slopes (less than 20%), development may occur and some grading will be required to accommodate clusters of duplex, townhouse or apartment style buildings
- Hillside Development Permits will apply as identified in the OCP.
- Environmental Development Permit will apply as identified in the OCP.
- The central area component has had some detailed planning and design applied. Specific locations have been allocated for the high density residential development. It is assumed that

geotechnical conditions for the development and associated structures will not preclude development in these locations.

- Development and absorption of units would be over an unspecified period of time.

An appropriate build out to use for future planning purposes is the average of approximately **2,800 units**, not including any commercial space.

## **2.8 Community Process and Input**

Preliminary community input for the McCoubrey Plateau Area Structure Plan was obtained via in-person interviews and discussions with landowners immediately adjacent to the proposed village centre. The in-person interviews generated varied responses, but in general supported the proposed land use plan. Furthermore, the District of Lake Country held additional public consultation incorporating open house venues for the general public to provide input and comments.

## **3.0 Planning Policies**

### **3.1 Introduction**

The following section outlines planning policies for the McCoubrey Plateau Area. This plan utilizes the following framework:

- Sustainability
- Urban Residential (Single Family, Duplex, Townhomes)
- High Density Residential (Townhomes, Apartments)
- Mixed Use Commercial
- Institutional
- Parkland – Conservation (Parks, Trails, and Open Space)
- Environment
- Transportation
- Infrastructure

### **3.2 Sustainability**

The District of Lake Country is striving to become a leader in sustainable practices and act as a role model for communities throughout the Okanagan. In 2007, the District signed the Provincial Climate Action Charter, committing to becoming carbon neutral in their municipal operations. In August 2010, the District proceeded to adopt its OCP with policy and direction on sustainable development within the community. The following selected objectives, goals, and policies are incorporated into the McCoubrey Plan to achieve the level of sustainability in land use planning set out by Council objectives.

**Goals**

1. Preserve, protect and enhance the natural environment.
2. Reduce greenhouse gas emissions in Lake Country.
3. Minimize the environmental impacts of new development.
4. Be a leader in sustainable municipal practices.

**Objective**

- Protect identified upland and foreshore environmentally sensitive areas and habitats.

**Policies**

- a) Conduct a watershed assessment and develop protection measures and guidelines.
- b) Protect fish spawning habitat by directing development away from sensitive areas.
- c) Preserve ground water quality and habitat by avoiding clear cutting of trees.
- d) Use Sensitive Ecosystem Inventory data to identify and maintain environmentally sensitive areas, species at risk and habitat linkages.
- e) Encourage property owners to dedicate critical conservation lands to the District or land trust organizations.
- f) Ensure that development does not disrupt corridors between natural areas.
- g) Encourage voluntary placement of conservation covenants, dedication of land or zoning changes to protect sensitive ecosystems.

**Objective**

- Fulfill Climate Action Charter commitments by achieving carbon neutrality in all municipal operations by 2012.

**Policies**

- a) Inventory operational greenhouse gas emissions.
- b) Further develop and implement the greenhouse gas emissions reduction strategy.
- c) Investigate the feasibility of requiring major new District buildings to achieve a Leadership in Energy and Environmental Design (LEED) or equivalent green building standard.
- d) Reduce or offset operational greenhouse gas emissions.

**Objective**

- Promote sustainable development with minimal environmental impact.

**Policies**

- a) Provide a priority approvals process for certified green building projects.
- b) Minimize the use of impervious surfaces in new developments through a combination of limited site coverage and use of permeable paving materials.
- c) Require stormwater management plans for subdivision.
- d) Encourage development in centrally located areas to minimize transportation distances.
- e) Encourage the use of alternative energy sources in new developments.
- f) Support new development that integrates natural features of the site.
- g) Require natural viewscales to be protected and maintained.
- h) Seek the retention and replacement of trees during development.
- i) Allow developers who protect land through conservation covenants or land dedication to

- j) use the original site area to calculate density and floor area ratio for projects.

**Objective**

- Minimize risk to citizens and development from natural hazards.

**Policies**

- a) Regulate development on known unstable or erodible terrain to ensure site safety.
- b) Provide clear development guidelines for safe and environmentally sensitive development.
- c) Seek to identify potential floodplain areas within the District.
- d) Require disturbed sites to be revegetated to help prevent slope erosion and mitigate invasive plant species.

**3.3 Urban Residential**

**Introduction**

At present, the majority of residents in the District of Lake Country reside in a portion of the 620 hectares of land designated as Urban Residential. Unfortunately, these lands have a density that only averages 6 units/ha and are, therefore, less sustainable to service and offer severe impediments to long term transit viability. The District of Lake Country OCP recognizes this issue and recommends densifying these lands to a target of 12.5 to 25 units/ha (5.1 to 10.1 units/acre).

The McCoubrey Plateau Area Structure Plan has designated approximately 72.40 acres (29.30 hectares, 31.5%) of contiguous land for Urban Residential development within the McCoubrey Plateau area. Much of this land is situated adjacent to McCoubrey Road, to the northeast of the Chase/spine road intersection, and in areas incorporating existing urban residential development on Glenmore and Chase Roads. The intention of the urban designation is to provide a transition zone between the high density development of the Village and the lower density development of the rural residential areas. The McCoubrey Plateau Area Structure Plan proposes to include single family homes as well as duplex units and secondary suites within the same designated area. This slight increase in density can help accommodate the continued demand for detached homes in the DLC while providing affordability, increased choice to a wider demographic, and also protecting rural and agricultural land from urban encroachment.

**Goals**

1. Designate a contiguous area of urban residential neighbourhoods that will support a mixture of single family and duplex housing forms.
2. Provide for a variety of choices in low density urban residential housing forms.
3. Recognize the need to increase efficiencies in land use and avoid sprawl by increasing minimum densities in urban residential zones.

**Objectives**

1. To designate a contiguous land area on the western slope of the McCoubrey Road neighbourhood as urban residential.
2. To promote a mixture of high density single family and duplex residential forms in a comprehensively planned neighbourhood.

3. To allow rezoning of this area to accommodate density factors that will range from smaller single family lots to duplexes and secondary suites associated with single family homes.

**Policies**

- Use the urban residential zone as a buffer between higher and lower density development.
- Target a density between 12.5 and 25 units per hectare.
- Landscaping and site development requirements should respect the local topography and ecosystems.
- Protect site lines through use of staggered lots and varied building site placements, while still respecting setbacks and zoning regulations.
- Permit small scale cluster type development to preserve open space.
- Urban development shall include sidewalks, pathways, and bike lanes.
- Allow the use of common drives to access multiple lots to preserve open space.
- Permit secondary suites in urban residential zones.
- Target increased allowable density ranges to include duplexes and secondary suites.
- Larger lots with increased setback should be encouraged when properties are adjacent to open space and farmland.

Subject to zoning, appropriate uses within the urban residential designation include:

- Single dwelling homes
- Two unit dwelling homes
- Townhomes
- Care Centres (minor)
- Bed and breakfast homes
- Secondary suites
- Home occupations

### **3.4 High Density Residential**

**Introduction**

The McCoubrey neighborhood will have a very important role in Lake Country over the next two decades, as it will support much of the anticipated supply of housing and especially offer opportunities for a range of multiple family residential forms. The higher density forms of housing will complement the traditional low density (single family and duplex) housing with townhouses and apartment structures. Ground-oriented townhouses will be strategically located to respect land form but also as transition between the apartment condo housing. All of these high density areas will be complemented by an extensive open space, parks and trail system, that will in turn serve for connectivity within and

beyond the neighbourhood. It is the expressed intent for this form of residential use to create a compact neighborhood. The transportation network will be further strengthened by pedestrian connections and bicycle paths, as well as an efficient roadway system, and ultimately, integrated with transit.

It is also the intent of this designation to accommodate opportunities with a range of attainable housing, including but not limited to examples such as rental homes, smaller unit sizes, mixed residential, studio apartments and special housing. Seniors, congregate care and other forms of housing and facilities for the aging population should also be considered so that the entire demographic cross-section is included.

The high density residential designation is instrumental in achieving a very sustainable new neighbourhood for Lake Country.

Lake Country's long term management of land use and urban development must recognize the relative scarcity of developable land in the District and the need to protect the integrity of agricultural land. The higher densities will help ensure options are protected for the future.

### **Goals**

1. Provide for a range of residential forms while allowing for a compact and sustainable neighbourhood.
2. Provide high density housing to respect the need for efficient land use and development in new areas of the District
3. Respect highest and best use principles of allocating land use in the new neighbourhood.
4. Create a mixed use neighbourhood that will help form a very livable, economically efficient and sustainable community.

### **Objectives**

1. To encourage a mix of high density residential forms ranging from townhouses to apartment condominiums.
2. To encourage attainable housing that will allow a cross section of demographic groups to reside in the neighbourhood.
3. To provide for parks, trails and green space to complement an otherwise high density living environment.
4. To require a high degree of design control through design guidelines and municipal zoning.

### **Policies**

- Create a high density and compact but efficient neighbourhood where residents are able to access various commercial, institutional, and recreational opportunities.
- Design high density residential areas to facilitate transit
- Require that new high density residential development include sidewalks and bicycle lanes, connecting the neighbourhood
- Ensure that usable green space, park and amenity areas are provided in high density residential areas.
- Require buffering between high density residential and adjacent agricultural areas.
- Encourage the provision of community amenities through density bonusing.



- Locate high density residential in such a way as to respect existing viewscales.
- Target a density of between 25 and 120 units per hectare within High Density residential areas.
- Review the relationship of new high density residential developments with surrounding land uses to ensure that the mix and intensity of land uses, and scale and character of adjacent structures remains compatible.
- All high density residential designations will be subject to Development Permit Area Guidelines as identified in the OCP. Subject to zoning, appropriate uses in this designation include:
  - Townhouses, and apartments.
  - Limited amount of neighbourhood or convenience commercial, where appropriate and to allow for access by area residents. Convenience commercial retail or service may be included in mixed use buildings or in strategically located independent sites.

### **3.5 Mixed Use / Village Commercial**

#### **Introduction**

Approximately 12 acres has been identified for a mixed use commercial centre which will be integrated with High Density Residential, a senior's complex and commercial use. The mixed use area, along with adjacent park, natural areas and the higher density buildings would form the focal point of the neighbourhood. The commercial uses could contain a range of retail and general commercial uses and potentially medical/professional offices/clinic to complement the seniors complex. This area is envisioned to be a special place that would call for extra design treatment, pedestrian paths, water features and public art that would also help set the tone for neighbourhood image. Transit connections/bus stops would be accommodated along the main road in the vicinity of the McCoubrey centre.

#### **Goals**

1. Create a mixture of uses with the center of the for the McCoubrey neighbourhood.
2. Focus the centre around a seniors/retirement complex that may have some associated medical and professional offices, with minor convenience commercial.
3. Promote quality urban design to help set the tone for the remainder of the neighbourhood.

#### **Objectives**

1. To designate an area of land of approximately 12 acres that will form the centre of the McCoubrey neighbourhood as High Density Residential with a commercial component to complement a senior's complex and associated medical/professional offices. This centre is envisioned as part of, and integral to, the high density residential area.
2. To ensure a quality design in the overall development through the use of strict design guidelines.
3. To limit the amount and type of commercial use and activity to minor convenience retail, and professional offices related to seniors care, medical/health practices or other related to provision of services to the seniors complex.
4. To encourage opportunities for mixed use buildings where residential is still the prominent use in relatively low profile buildings.

5. To implement appropriate zoning to permit integration of this use in the Plan area.

#### **Policies**

- Development will be in low profile buildings (6 storey max).
- A Seniors complex may entail full service and congregate care, health centre along with associated services, or simply retirement housing catering to residents in the 55 plus age demographic.
- Convenience commercial (minor retail, minor services-professional/medical) and mixed use (predominantly residential above commercial) can complement the residential but shall not be predominant.
- Connections through to adjacent and proximate parks are encouraged; sidewalks, natural and hard edged paths, pedestrian street crossings should be prominent features throughout this central node.
- The Centre will be subject to Commercial Development Permit Guidelines as identified in the OCP.
- Public art, landscape treatment, yards/outdoor facilities such as gazebos, etc. should respect the goal of creating a special character for this central area.
- Natural features such as the pond that is located just beyond the centre should be respected with regard to natural landscape integration for the entire central area.
- Special streetscape treatment along the main collector and on adjacent roads is encouraged to benefit both aesthetics and traffic calming in the vicinity of the Centre.
- Building design should blend with and not compete with adjacent higher profile buildings, while still allowing for a special character to be created in this central node.

### **3.6 Institutional**

#### **Introduction**

The District of Lake Country is home to a variety of institutional land uses, including educational and emergency services, several care facilities, government buildings, community amenities, public works, places of worship, and other recreational facilities. The McCoubrey Plateau study boundary presently includes two parcels designated as institutional; one at the corner of Okanagan Centre Road West and McCoubrey Road, and one just south of the intersection of Glenmore Road and Chase Road. Due to the potential build-out of the area and the subsequent demand on the existing facilities within School District #23, there is a need for an additional elementary school.

#### **Goals**

1. Respect the institutional uses that have been located in this plan area as integral to the evolution of the neighbourhood.
2. Allow for a future elementary school to support the ultimate growth of the neighbourhood.
3. Target appropriate institutional uses and community amenities that will help create a complete and very livable neighbourhood.

### **Objectives**

1. To ensure that both areas designated for institutional uses are protected.
2. To work with School District #23 officials to determine details of future school needs and school location to serve the growing local area population.
3. To work with various community agencies and non-profit organizations to determine program needs for a growing population in the neighbourhood.

### **Policies**

- Ensure that new school sites be located close to the target population with safe pedestrian and vehicle access.
- Support community based approaches to crime prevention through the Citizens on Patrol and Crime Stoppers programs.
- Partner with schools servicing the McCoubrey Plateau regarding joint use facilities and parks for community programs.
- Work with School District #23 to ensure that schools servicing McCoubrey Plateau are designated to facilitate after hours community use through joint use agreements.

## **3.7 Parkland – Conservation (Parks, Trails and Open Space)**

### **Introduction**

Parks and conservation areas play a critical role in the community by contributing to physical, social, leisure, educational, creative, ecological, and economic development. The District of Lake Country has a total of approximately one hundred parks and recreational facilities within its boundaries, both publicly and privately owned, and is committed to providing a range of recreational facilities, parks, and conservation areas that:

- Provide a variety of activities
- Are accessible to all members of the community
- Protect and connect sensitive ecosystems
- Are linked to allow for the movement of people and wildlife

The McCoubrey Plateau area has been the subject of various past studies identifying park locations and trail connections. The McCoubrey Plateau Area Structure Plan respects these designations, but also considers topographical constraints and proposed land use activities when developing a modified parks, trails, and open space system specific to the proposed land use plan. As such, designations have been increased in size and new areas have been designated as sites for proposed parks. Conservation areas focus on the eastern slopes of the plateau, where environmental protection designations are ‘high’ and slopes tend to be relatively steep. Trails link all of these areas together in a ‘green matrix’ (See Map 12: Parks, Trails, and Open Space) and, in particular, strive to connect residential, open space, and park space together in a manner that augments the natural characteristics and sensitivities of the site.

Specifically, the core area has been surrounded and complemented by a series of neighbourhood parks, linear parks, a trails system, and open space features (including a wetland/pond) to i) provide recreation opportunities and ii) protect the integrity of the natural environment and steep slopes. In the larger

context, three trails, including a major linear park, extend from the core to the west, where they will eventually connect with the north/south-oriented. Similarly, three trails extend to the north and connect with the Lakestone Resort trail network system. The parks network will be monitored through the development process, with the potential existing to require even further parks and open space as the project progresses through the rezoning and subdivision process.

### **Goals**

1. Parks, conservation areas and open spaces will be integral to this new neighbourhood.
2. Natural features, special areas, environmentally sensitive areas and steep sloped terrain will help form a system of parks and conservation areas throughout the plan area.
3. The parks and conservation areas system from the McCoubrey Plateau will connect with a greater community and regional system of trails/linear parks and open space.
4. Work with developers to facilitate the actual construction of trails and parks in the McCoubrey Plateau area.
5. Establish a community park facility in conjunction with the future school site.

### **Objectives**

1. To designate a combination of lands that have special natural features, large and contiguous steep sloped terrain and high environmental sensitivity as parks and conservation areas, protected from urban development and associated disturbances.
2. To integrate opportunities for pedestrian linkages within and between the parks, connections between residential areas, and between residential areas and employment or commercial uses in the community.
3. To carefully plan and integrate trail systems so that their use (e.g. by people, bikes, horses or All Terrain Vehicles) does not compromise or create problems for the land base (e.g. loss of major trees and vegetation, erosion, critical natural features, etc.)

### **Policies**

- Pedestrian mobility shall be maximized between streets, sidewalks, trails, and greenways where feasible and in accordance to other plans and standards of the District of Lake Country.
- Large contiguous areas of land with steep sloped terrain of 30 % or greater will be protected as conservation areas; smaller areas of steep sloped terrain interspersed with more gentle and flat terrain may be permitted for development but will be subject to hillside development guidelines.
- Opportunities for linear parks/conservation areas running north to south and east to west will be protected to allow for ecological connectivity.
- The integrity of the pond/wetland area near the core area shall be protected as park and interpretive feature.
- The detailed planning and design of new parks and trails should respect the greater Parks and Recreation Master Plan for the region.
- Bicycle routes/commuter accessibility must be connected to the overall District Integrated Transportation Framework wherever feasible.
- Trail and sidewalk connectivity shall be provided between the Pond/natural features/interpretive centre, the core area, and the major north/south and east/west trails.

- Trails shall be designed carefully, by i) monitoring for noxious and invasive plants, ii) ensuring they do not affect the root systems of large trees, iii) ensuring they will not create soil erosion problems, and iv) discouraging use by vehicles (ATV's), horses, and mountain bikes.
- Trails in urban areas must be constructed in a 3.0m right-of-way and hard surfaced.
- Trails in rural areas must be constructed along 3.0m rights-of-ways.

### **3.8 Environment**

#### **Introduction**

At present, the only environmental plan that influences the plateau area is the Sensitive Ecosystem Inventory (SEI). The SEI was initiated by The District of Lake Country and the Ministry of Environment in 2004 to “develop an inventory information base and conservation analysis to support sound land management decisions and promote effective stewardship of sensitive ecosystems in the District of Lake Country...”<sup>6</sup>. Sensitive ecosystems refer to ecosystem types that are “ecologically fragile or are rare in the provincial landscape and are relatively unmodified by human influences”<sup>7</sup>. According to the SEI, three Sensitive Ecosystems are present within the study area: Coniferous Woodland, Grassland, and Riparian. The category “Not Sensitive” also covers a significant portion of the site (particularly the gravel operation in the northeast corner and the agricultural land in the east) (See Map 6: Sensitive Ecosystem Inventory, and Map7: Sensitive Ecosystem Ranking).

The majority of the Plan area is covered by the Coniferous Woodlands ecosystem. This ecosystem is in turn categorized by open stands of Douglas-fir or Ponderosa pine, often shallow soils, with typically grassy understories. Grassland or Riparian ecosystem areas are very limited in the Plan area, but have nevertheless largely been protected from development by Park and Conservation Area Designations.

The SEI for the Plan area has further segmented the overall ecosystem into a High, Medium and Low Environmental Sensitivity Ranking, with conservation values mapping applied into the three levels as follows:

- Low = Conservation Value of 0 to 2.999
- Medium = Conservation Value of 2.9999 to 6.999
- High = Conservation Value of 6.9999 to 10

Conservation values of 0-2.999 (low) are assumed to have little or no inherent ecological value or importance as wildlife habitat; values of 3-6.999 (medium) have moderate ecological importance based on ecosystem rarity and sensitivity and/or value to rare wildlife. In some cases, non-sensitive ecosystems may have moderate conservation values because of importance to wildlife, such as agricultural areas that may be significant foraging areas or corridors, depending on location; conservation values of 7-10 (high) are locally and provincially significant ecosystems, and are considered critically important to rare wildlife species.

---

<sup>6</sup> Sensitive Ecosystems Inventory: Lake Country 2005 (volume 1)

<sup>7</sup> Sensitive Ecosystems Inventory: Lake Country 2005 (volume 1): page 4

The proposed Plan has allocated some development on lands with each of these of values. In each case, and especially on lands ranked as medium or high, development should only occur with more environmental assessment and ground truthing to confirm that development will not compromise the otherwise important values that have been based on rarity, fragility/sensitivity, habitat suitability for certain species at risk, quality and condition of that ecosystem.

The more definitive environmental assessment is expected to further refine SEI mapping that was prepared at 1:20,000 scale. This implies that with careful siting of development and other mitigation techniques recommended by qualified environmental professionals, some of the medium and high ranked lands will be permitted for development. Furthermore, large contiguous areas of steep slopes and environmentally sensitive land have been designated for parks and conservation. These areas will be linked to spaces within these development nodes to maintain the integrity of an intact ecosystem and wildlife corridors throughout the Plan area.

Specific policies that relate to how to potentially off-set any impacts on medium or high ranked lands are noted below, but details should be provided as conditions of approval contained within environmental impact reports prepared by the qualified environmental professionals as required by the Natural Environment Development Permit Guidelines as outlined in the OCP.

The baseline objectives of the SEI most applicable to the McCoubrey Plateau area are as follows:

#### *Coniferous Woodlands*

- Require an environmental impact assessment conducted by a qualified professional on any land proposed for development.
- Wherever possible, natural vegetated buffers should be retained or established with native vegetation around coniferous woodland systems.
- Minimize impacts by protecting mature and old trees, and native vegetation.
- Minimize impacts by protecting large diameter (>30cm) dead and declining trees.
- Minimize impacts by protecting the root systems of trees.
- Minimize impacts by protecting soils by avoiding activities that cause erosion or compaction.
- Minimize impacts by restoring native vegetation where it has been disturbed.
- Design trails carefully, by i) monitoring for noxious and invasive plants, ii) ensuring they do not affect the root systems of large trees, iii) ensuring they will not create soil erosion problems, and iv) discouraging use by vehicles (ATV's), horses, and mountain bikes.
- Avoid disturbance to sites with rare plants and/or rare ecological communities.
- Maintain habitat structures such as trees with cavities, large old trees, and snags.
- If trees must be cut due to dangerous conditions, cut them to a safe level and retain the trunk.





- Protect significant denning and nesting sites identified in the environmental impact assessment.

### *Grasslands*

- Require an environmental impact assessment conducted by a qualified professional on any land proposed for development.
- Manage access by motorized vehicles to minimize impacts to the grassland areas, and restrict mountain bikes to carefully planned trails that are weed free and not subject to erosion.
- Minimize impacts by protecting native grasses, microbialistic crusts, and other native vegetation.
- Minimize impacts by protecting soils, and other significant terrain features such as bedrock.
- Minimize impact by restoring native vegetation where it has been disturbed.
- Encourage land owners and developers to maintain natural sites and create native plant gardening.
- Design trails carefully, by i) monitoring for noxious and invasive plants, ii) ensuring they do not affect the root systems of large trees, iii) ensuring they will not create soil erosion problems, and iv) discouraging use by vehicles (ATV's), horses, and mountain bikes.
- Avoid disturbance to sites with rare plants and/or rare ecological communities.
- Avoid use of insecticides in, or near, important foraging areas for wildlife.



### *Riparian*

- Require an environmental impact assessment conducted by a qualified professional on any land proposed for development.
- Minimize impacts by avoiding adversely affecting or disturbing ponds or other water features and the associated riparian vegetation.
- Minimize impacts by avoiding adversely affecting or disturbing threatened, endangered or special concern species or ecological communities.
- Minimize impacts by avoiding adversely affecting or disturbing



natural processes such as stream flow or flooding.

- Minimize impacts by avoiding adversely affecting or disturbing wildlife nesting or denning sites.
- Minimize impacts by avoiding adversely affecting or disturbing fringe riparian corridors and connectivity with upland communities.
- Roads should be narrow and setback from the riparian ecosystem to ensure that both the riparian vegetation and bank stability are maintained. Where roads encroach upon riparian ecosystems, narrow the width of the road and avoid side-casting material into the riparian area.
- Trails should provide a direct route to a viewing area or crossing, and should avoid sensitive vegetation, seepage areas and wetlands, and stream banks or gully sidewalls with easily eroded soils.
- Avoid disturbance to sites with rare plants and/or rare ecological communities.
- Maintain habitat structures such as trees with cavities, large old trees, and snags.
- If trees must be cut due to dangerous conditions, cut them to a safe level and retain the trunk.
- Prevent disturbance of nesting and breeding areas, including features such as dens, raptor nests/perch trees, woodpecker cavities, and bat roosts.
- Ensure adequate sediment and erosion control measures are implemented.

#### **Goals**

1. Respect the fact that much of the Plan area is covered by a coniferous woodlands ecosystem and has therefore been recognized as having some high and medium environmental sensitivity.
2. Most of the lands inventoried as being of either high or medium environmental sensitivity are to be protected from development or scrutinized in more detailed environmental studies to determine suitability for any development.
3. Control development on any environmentally sensitive lands through the use of guidelines that will address hazard conditions, steep slopes and wildfire, as well as environmental sensitivity.

#### **Objectives**

1. To use the SEI and the attendant Sensitive Environmental Ranking (SER) of High, Medium and Low categories to assist in designation of lands and protection from urban development and disturbance.
2. To use the development permit area process to protect environmental sensitivity against any hazard conditions while carefully integrating development where possible.
3. To ensure that where development may be considered for medium or high ranked ESAs, an environmental impact assessment must be carried out by a qualified environmental professional.
4. To consider mitigation of development impact when supported by a qualified environmental professional.

#### **Policies**

- All development in the McCoubrey Plateau area shall adhere to the policies outlined in the OCP with respect to the Sensitive Ecosystem Inventory.
- All proposed development will follow OCP guidelines in the applicable Development Permit Areas identified in Section 2.4 of this Plan.
- All proposed development shall consider general terrain and special features such as significant rocky outcroppings



- The District will work with residents to remove and replant dead trees on private property that are a hazard to life or property as a result of the pine beetle infestation.
- All proposed development shall follow the policy of the District of Lake Country regarding Pine Beetle management.
- Development on lands that have been ranked medium or high will only be permitted subsequent to proper environmental impact assessments and recommendations supporting development produced by qualified environmental professionals (QEP). Terms of reference for such studies and assessments may be set by the District to address development proposals on lands with medium or high values.
- The District may consider development on medium or high ranked environmentally sensitive lands where the QEP has recommended that the above noted “baseline” objectives can be adequately met, and in consideration of the following:
  - There is mitigation and compensation defined (eg. to benefit other habitat areas);
  - Restoration of disturbed areas;
  - Setting aside future areas for conservation;
  - Stipulating improvements to the site;
  - The conservation value can be lowered by ensuring thorough site specific analysis and detailed inventory ;
  - The diversity of the site allows for clustering of development so to not impact immediate sensitive areas or species;

### **3.9 Transportation**

#### **Introduction**

Transportation is essential to the life of a community and continues to play an important role in the development of the District of Lake Country. Reflecting its character as both an urban and rural community, the District is involved in an ongoing process to develop a transportation system with networks providing for a broad range of modal operations, including private vehicles, trucks, buses, bicycles, and pedestrians. The existing 192 km road system is based on a hierarchical Integrated Transportation Framework, which categorizes roads as ‘arterial’, ‘collector’, ‘local’, and ‘private’. Collector streets accept traffic from large areas serviced by local and private roads, and then distribute this traffic to the arterial system.

#### **Existing Roads**

The McCoubrey Plateau Neighbourhood plan continues the format of the road network concept and augments existing perimeter and access roads with a proposed internal road network (See Map 13: Transportation Plan). Existing perimeter roads include:

- Okanagan Centre Road West to the north (collector),
- Glenmore Road to the east (arterial), and

Existing access roads into the study area include:

- McCoubrey Road to the west (local),
- Heritage Drive to the centre-west (local),
- Chase Road to the centre-east (local), and

### **Proposed Internal Roads, Transit, Sidewalks, and Bicycle Lanes**

The internal road network strives to respect local topography and provide access to and from the proposed development in a safe and efficient manner. A ‘spine’ road (collector) progresses south from Okanagan Centre Road West along the general alignment of the existing Chase Road right-of-way for approximately 450 meters. The spine road then intersects with a proposed realignment off Chase Road, continues to climb in elevation, and curves toward the southwest corner of the upper plateau. The Chase Road realignment intersects with the spine road and continues to the west before turning to the south and accessing the lands immediately east of McCoubrey Road. Chase Road then reconnects with the spine road in the southern portion of the plateau. Local and private roads will be determined at subsequent development stages to service various land uses. The spine road will connect with McCoubrey at the sound end of the road creating a loop and an additional access point for the neighborhood.

The Plateau neighbourhood will utilize multiple modes of transportation, including walking, cycling, bus, and vehicle. The spine road shall accommodate cycling and walking and be connected to trails and other designated natural features in the village and beyond (business park, other parks, etc.).

### **Goals**

1. Create a safe and efficient roadway, pedestrian and cycling network for a very livable neighbourhood.
2. Provide for a transportation system that respects the need for connectivity to a regional system of roads, and local mobility within a relatively compact residential community.
3. Fully integrate multiple modes of transportation in developing a sustainable community and especially to lessen the dependence on the automobile throughout the neighbourhood.

### **Objectives**

1. To develop a system of roadways, sidewalks, paths and cycling trails that will support a compact community. Commuter accessibility between residential and employment areas is critical.
2. To ensure safe and efficient connections to the regional roadway system.
3. To impose roadway standards that are sustainable and suited for a new and relatively high density community.
4. To develop new roadways in a phased manner that will not compromise adjoining lands.
5. To encourage the use of public transit.

### **Policies**

- Roadways shall adhere to the District of Lake Country road network concept.
- Private and local roads within the plateau village shall connect to two collector roads (‘spine’ Road and Chase Road).

- The spine Road shall connect with the McCoubrey Road extension adjacent to the City of Kelowna -District of Lake Country border forming a loop and providing multiple access routes
- Transit corridors/routes and stops will service the entire Plateau neighbourhood.
- All infrastructure requirements shall be in accordance with the District of Lake Country Subdivision and Development and Servicing Bylaw 139, 1997, as amended.
- The design and arrangement of roads within a subdivision shall provide for the continuation or projection of existing streets in the surrounding area.
- In no case shall the arrangement of highways within a proposed subdivision make impractical the subdivision of adjoining lands.
- The design and arrangement of all roads shall be suited to the topography of the land.
- Local roads within a proposed subdivision shall be arranged so that their use by through traffic will be discouraged.
- Transit bays shall be provided where the District Engineer deems them necessary.

### **3.10 Infrastructure / Servicing**

#### **Background**

The McCoubrey Plateau area will require full municipal services and utilities, and ensure connections to the community systems for water and sewer. At full build out, the area will contain a mixture of single family and multiple family residential, commercial, and a minor amount of institutional development. Since the projected new development and population accounts for almost the equivalent of the current District population (approximately 11,700), more detailed studies will be required to establish full infrastructure needs both on site and off site. Detailed studies will also help confirm phasing of works and utilities.

#### **3.10.1 Water Service**

##### **Introduction**

There are currently two water systems that service the Plateau area: the Okanagan Lake system and the Beaver Lake/Vernon Creek system. It is proposed to service the McCoubrey Plateau area from the Okanagan Lake system. This system consists of an intake on Okanagan Lake, an 850mm watermain along Okanagan Centre Road and a reservoir located close to the intersection of Okanagan Centre Road and McCoubrey Road. Since the majority of the Plateau development area is located in Pressure Zone 600, a new upper reservoir is required to provide fire storage, domestic flows, and adequate pressure.

The proposed Lakestone reservoir (nearby) will have a volume of approximately 2,540m<sup>3</sup> and a high water level (HWL) of approximately 600m. There is space available for an expansion cell, but total volume of the Lakestone reservoir including the addition of the expansion cell is approximately 3,810m<sup>3</sup>.

It is likely that the construction of this reservoir will be needed prior to any further development within the McCoubrey Plateau area.

**Goals**

1. Upgrade the water system to fully service (in a phased manner) the McCoubrey Plateau area.
2. Develop a water system that will ultimately service the equivalent of approximately 8000 population.

**Objectives**

1. To conduct a full water study in accordance with terms of reference prepared by the District.
2. To work with area landowners to support the expansion of the District's water system that would ultimately service the Plateau area.

**Policies**

- Due to the size of the development proposed in this area, further study into the community's water system would be required to provide meaningful insight.
- Work with developers/landowners to support the expansion of the District's water system to ultimately service the entire McCoubrey Plateau.
- Continue to improve the water system; key items for consideration should include:
  - Upgrade proposed reservoir expansion to provide adequate domestic pressure and fire flows.
  - Make upgrades to the proposed booster station to pump water from an existing offsite reservoir to the new reservoir.
  - Construct a booster station to provide adequate pressure to the units located adjacent to an onsite (new) reservoir.
  - Include a pressure reducing valve to service lower areas and to tie into the existing offsite system where required.
  - Construct off-site water main upgrades to supply the new reservoir.
- Confirm fire flow demands for the multi-family buildings.

**3.10.2 Sewer Service**

**Introduction**

The McCoubrey Plateau is able to be serviced largely by gravity sewer. It is expected that a portion of the area will drain towards Okanagan Centre Road to an existing gravity sewer main. The remainder will drain to a future gravity sewer main on Glenmore Road. Currently there is an existing 300mm sanitary main along Okanagan Centre Road running from McCoubrey Road to Glenmore Road which connects to an existing 200mm sanitary main on Glenmore Road. There is an existing lift station and a 200mm forcemain along Okanagan Centre Road from the intersection of Okanagan Centre Road and Tyndall

Road which connects to the 300mm sanitary main noted above. The design capacity of the lift station is approximately 70 LPS.

**Goals**

1. The entire neighbourhood will be tied into the community sewer system.
2. A sustainable waste water system that will benefit the entire District.

**Objectives**

1. To ensure all new development is connected to the Sanitary Sewer system.
2. To promote best practices in achieving waste water efficiencies

**Policies**

1. Require new development to be connected to a community sewer system.
2. Identify potential DCC trunk mains to service the McCoubrey area.
3. Future requirements should consider:
  - A new lift station to service areas within the proposed development which cannot be serviced by gravity sewer.
  - Upgrades to existing lift station and forcemain.
  - Offsite sanitary sewer main upgrades to handle the increased flow due to development.
  - Upgrades to the DLC Waste Water Treatment Plant (WWTP).

**3.10.3 Stormwater Management**

**Introduction**

Due to the McCoubrey Plateau's topographic features, the stormwater management is expected to use a variety of solutions that are efficient and environmentally sustainable. Stormwater must be managed so to avoid any hazardous conditions both on site and off site during construction as well as afterwards upon completion. It is expected that management techniques will utilize ground recharge through the use of drywells, perforated pipe, and other Low Impact Development (LID) solutions. For larger storm events, flows will be directed to a series of detention ponds located throughout the area.

**Policies**

1. Ensure that new development does not produce higher flow runoff.
2. Provide an underground and overland flow routing.
3. Require new development to be designed to utilize ground recharge and other LID techniques wherever possible and economical.
4. Ensure that new development does not release more than the predevelopment flow rates.
5. Ponds should be designed to contain the 1 in 100 year flows with a control structure designed to release stormwater into existing drainage routes at predevelopment rates.

6. Incorporate stormwater detention ponds into the overall park and landscape or open space systems.

#### 3.10.4 Shallow Utilities

##### **Policies**

1. Hydro, telephone, and cable TV will be serviced underground to all new development to the specifications of the appropriate utility company. There may be some variation in standard between the low density rural areas and the urban high density areas.

#### **4.0 Phasing**

The Districts' Official Community Plan provides policy direction on the provision of orderly development. This includes identification of required infrastructure and servicing upgrades. In accordance with District policy a phasing plan has been developed to ensure that development occurs in an organized and economic manner.

Water servicing is a critical aspect to any future development within the McCoubrey Study Area. Provision of adequate water servicing will be the primary influence on build out of the study area. Water Servicing is anticipated to be made available through the Lakestone Reservoir as described in Section 3.10.1 and tied into the current system at Okanagan Centre West Road from the north. It is anticipated that the development of infrastructure and servicing will occur in five general phases listed below:

##### **Phase one**

The first phase is comprised of the low elevation lands adjacent to Okanagan Centre West and McCoubrey Road. The identified properties to the east of McCoubrey Road are designated for High Density Residential and properties to the west are slated for lower density Urban Residential use.

Access will be provided from existing roadways with paving and upgrading of McCoubrey Road south of the Heritage Drive subdivision required for development of the outlying properties. Sewer is available along Okanagan Centre West Road with gravity feed available east of McCoubrey and forcemain used for downslope properties using the Tyndall Road lift station. Further review of forcemain and lift station will be required to determine adequate servicing. Heritage Drive subdivision would also be required to tie into the community sewer system. Existing water servicing is available down Okanagan Centre West and McCoubrey with further review required determining potential upgrades.

##### **Phase two**

The second phase includes the realignment and construction Chase Road connecting to Okanagan Centre West. The spine road will be extended to provide access to the development node located in the central plateau. Water and sewer service will be extended along with road infrastructure from the anticipated connection at Okanagan Centre.

### **Phase three**

Phase three establishes a mix of high density and urban residential development in the remaining south west portion of the study area east of McCoubrey Road. The primary spine road will establish the loop in connection to McCoubrey Road with a smaller collect road forming an internal loop.

### **Phase four**

The final phase will place high density residential on lands along Glenmore Road and the south end of the Chase Road connection. Further review of servicing available from Glenmore Road will be required.

## **5.0 Next Steps**

The McCoubrey Plateau Area Structure Plan is designed specially to guide land use for future development within the Official Community Plan Identified Growth Area. The land use identified within the Plan will be used to amend the Future Land Use Designations of the OCP and allow development to proceed accordingly. It will also be used to amend the Future trails Network, Road Network Plan, and Parks and Conservation Areas Maps of the Official Community Plan concurrently.

Prior to development occurring with the McCoubrey Plateau Area Structure Plan area, zoning and subdivision applications will be submitted to the District subject to the current zoning and future land use designation of the subject property. Proposals will be reviewed in accordance with the McCoubrey Plateau Area Structure Plan, the amended Official Community Plan and will be required to meet servicing requirements outlined by District bylaws.

## **6.0 Sources and References**

BC Climate Action Charter  
Council Vision  
Official Community Plan Bylaw 750, 2010  
District of Lake Country Transportation Plan  
Parks and Recreational Master Plan  
Subdivision Servicing Bylaw 97-139  
Zoning Bylaw 561, 2007





Okanagan Lake

Study Area

City of Kelowna

IR# 7 Duck Lake

City of Kelowna

Wood Lake

Kalamalka Lake

Central Okanagan East E. A.


Central Okanagan East E. A.

**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country

MAP 1 - Context

December 2012

**LEGEND**

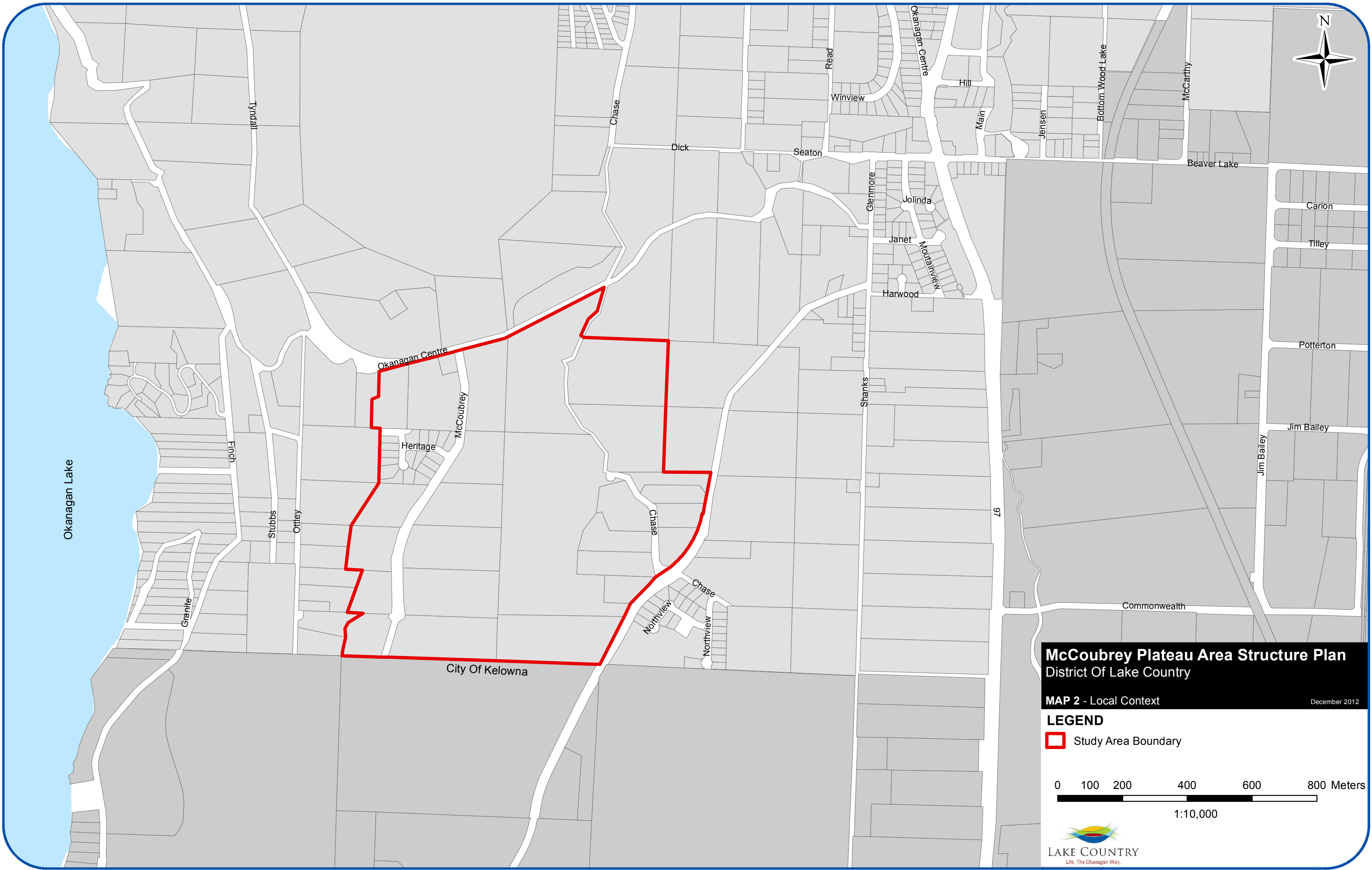
 Study Area Boundary

0 1,250 2,500 Meters

1:50,000







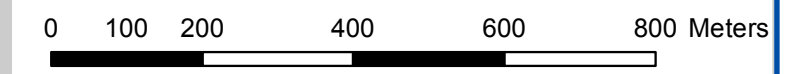
**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country

MAP 2 - Local Context

December 2012

**LEGEND**

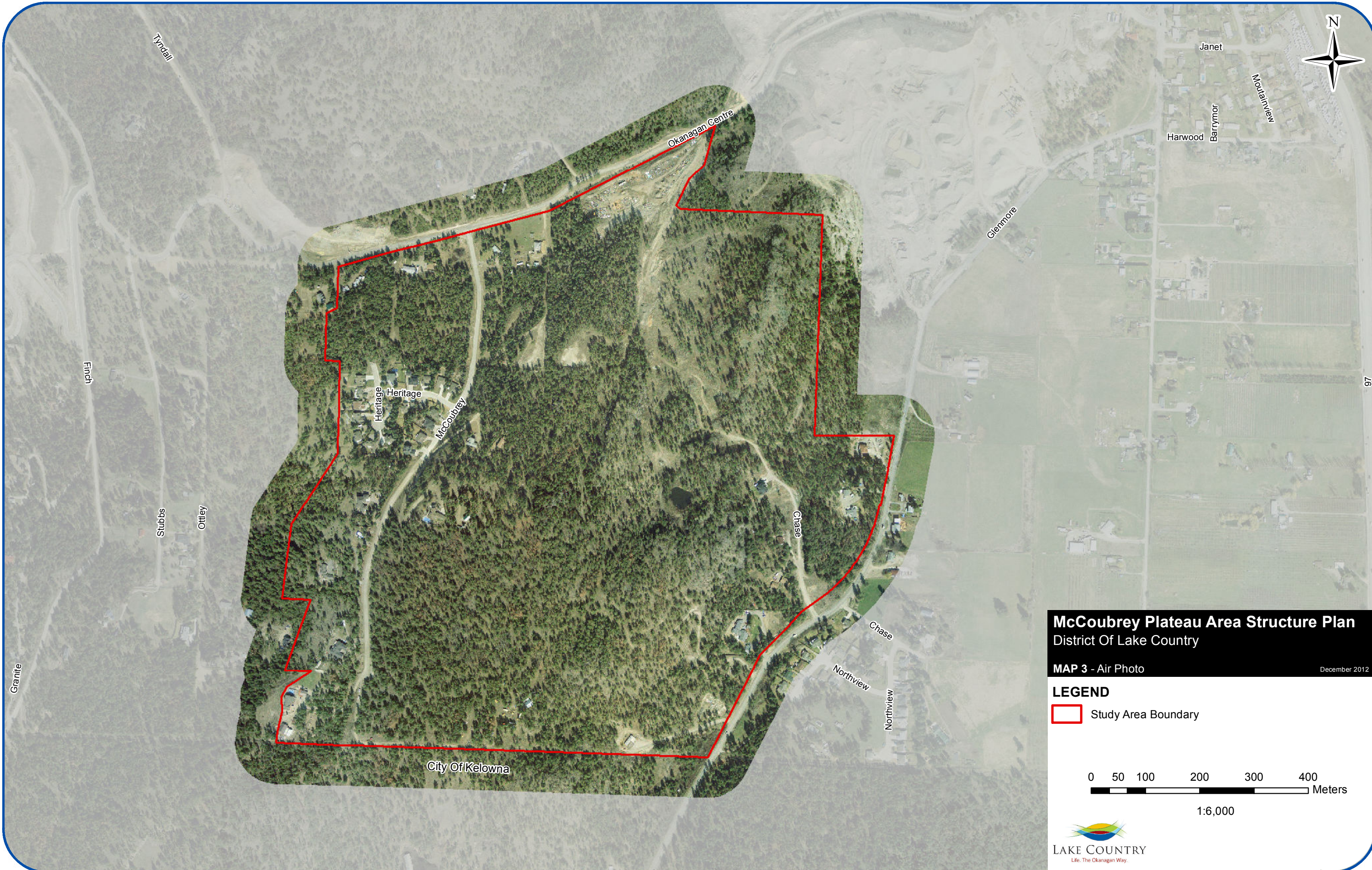
 Study Area Boundary



1:10,000








**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country

MAP 3 - Air Photo December 2012

**LEGEND**

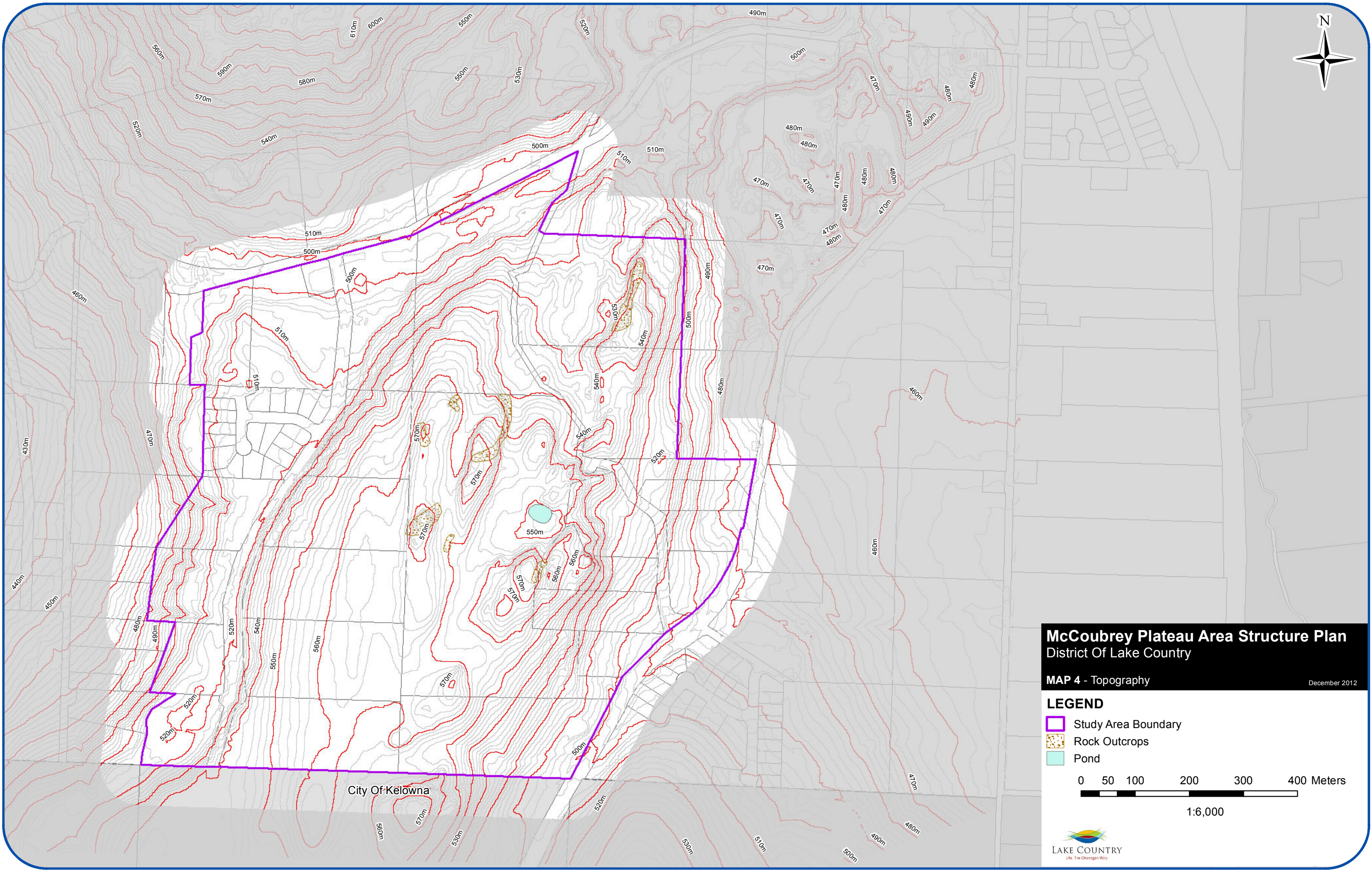
 Study Area Boundary



1:6,000










**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country

MAP 4 - Topography

December 2012

**LEGEND**

-  Study Area Boundary
-  Rock Outcrops
-  Pond

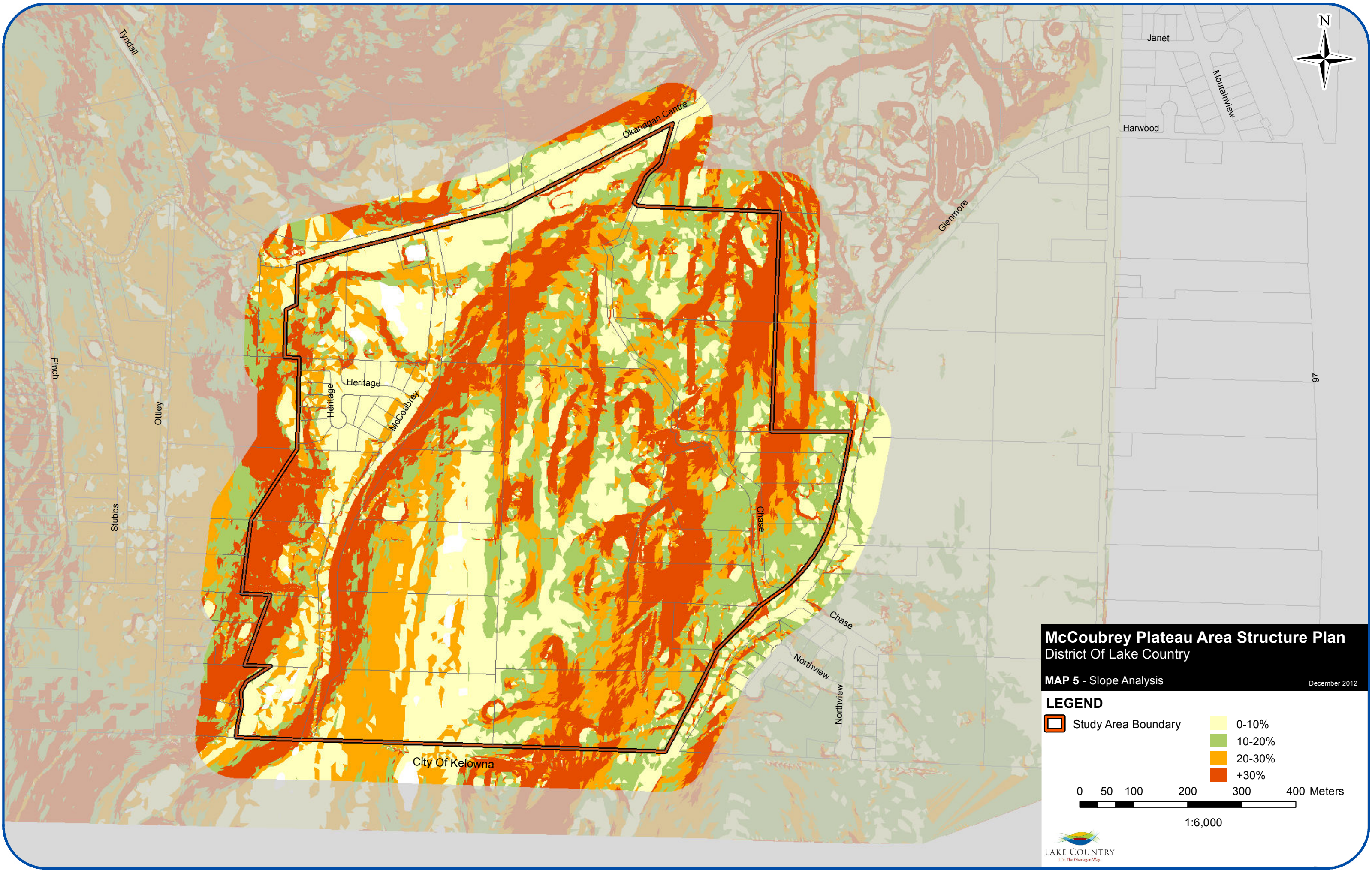


1:6,000



City Of Kelowna




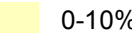
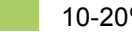

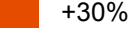


**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country

MAP 5 - Slope Analysis

December 2012

**LEGEND**

-  Study Area Boundary
-  0-10%
-  10-20%
-  20-30%
-  +30%



1:6,000







# McCoubrey Plateau Area Structure Plan District Of Lake Country

MAP 6 - Sensitive Ecosystem Inventory

December 2012

## LEGEND

Study Area Boundary

### Lake Country Sensitive Ecosystem Inventory

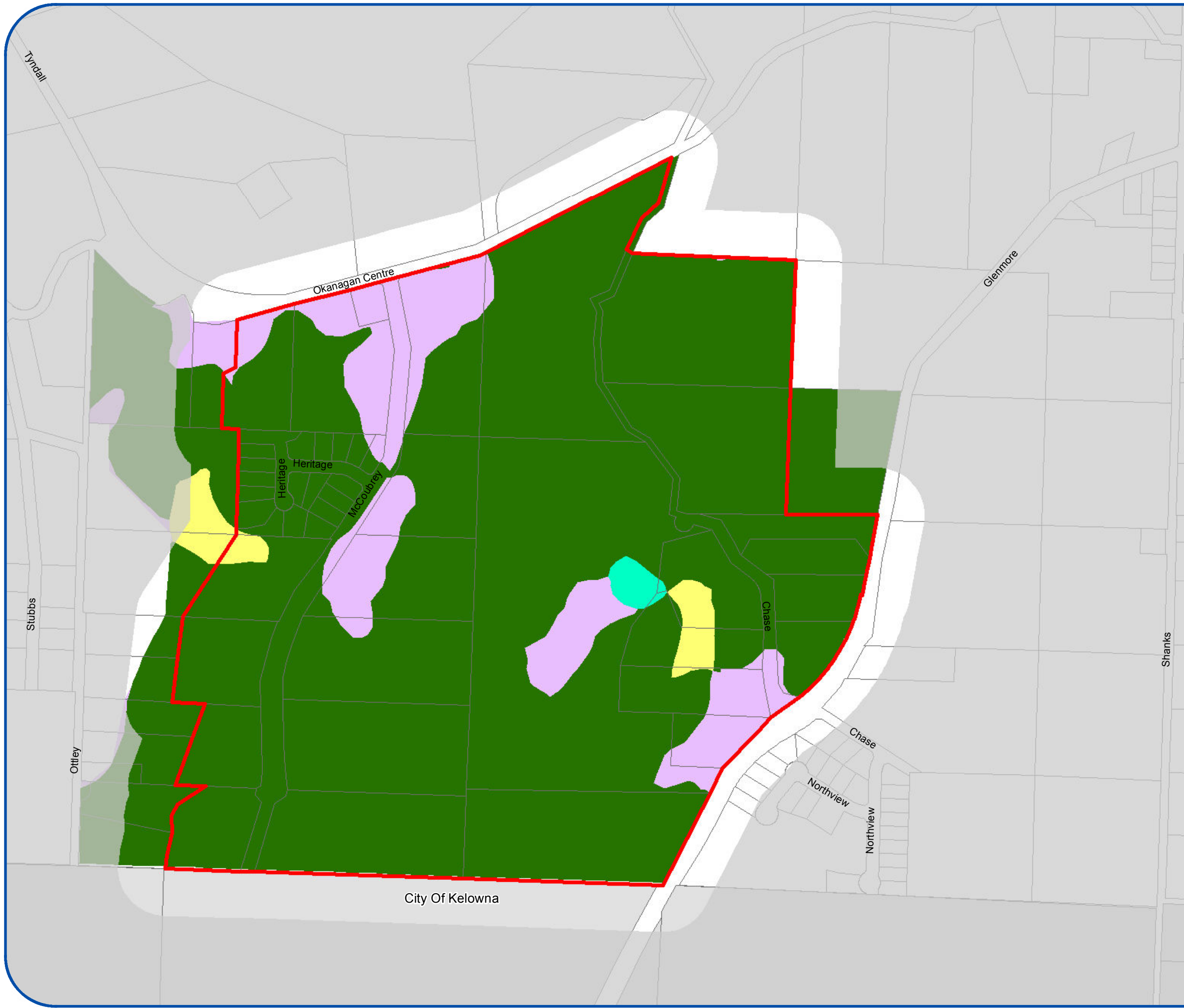
Sensitivity	Dominant Ecosystem
Sensitive Ecosystems	Broadleaf Woodland
	Grassland
	Old Forest
	Riparian
	Sparsely Vegetated
	Coniferous Woodland
	Wetlands
<b>Other Important Ecosystems</b>	Degraded Grassland
	Mature Forest
<b>Not Sensitive</b>	Not Sensitive

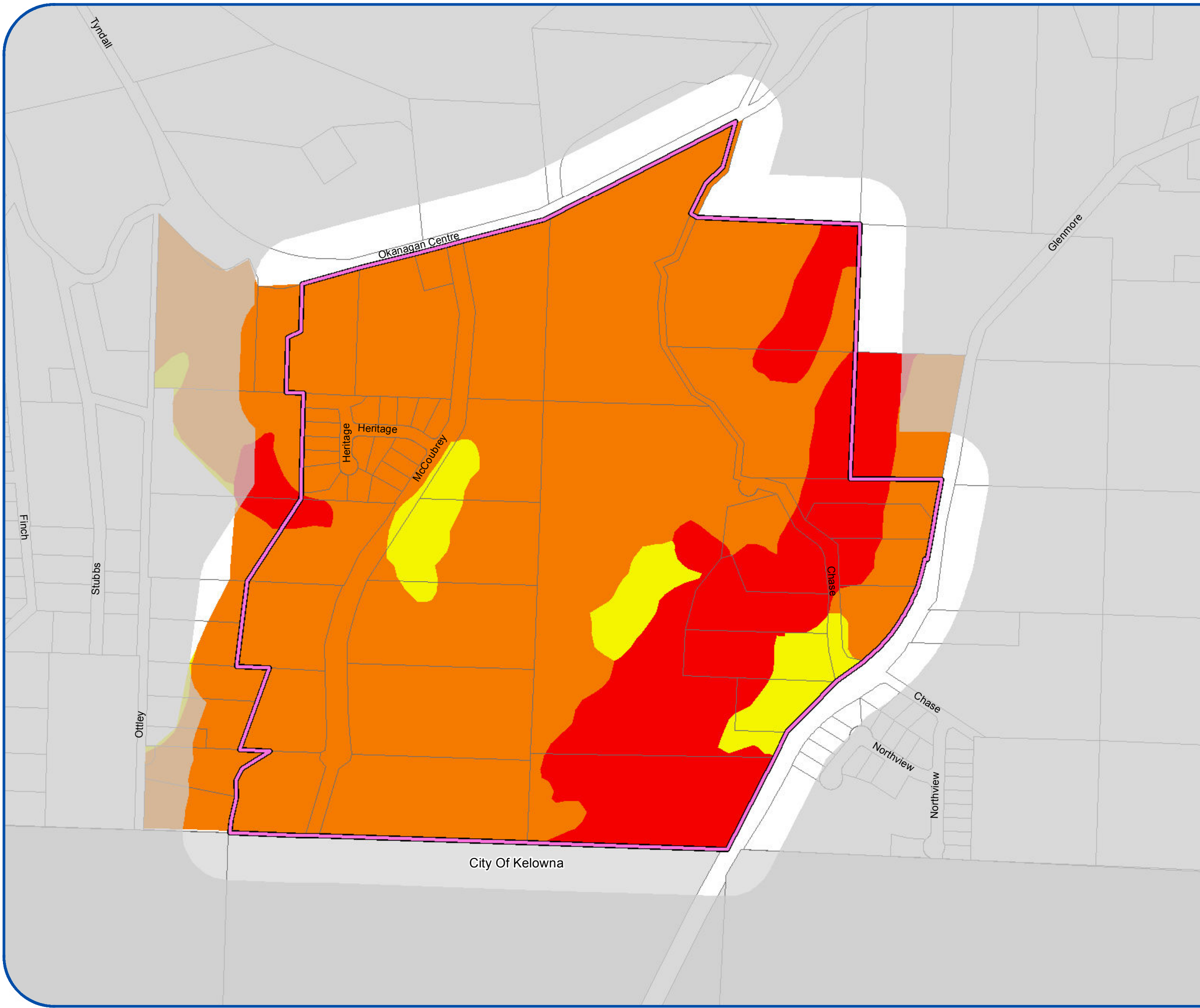
This map shows the dominant ecological communities within each Terrestrial Ecosystem Mapping (TEM) polygon. Please note that because up to three ecological communities are accounted for within each TEM polygon during the Sensitive Ecosystem Inventory (SEI), sensitive ecosystems may be present in areas which are dominantly "not sensitive".

\*Note: Information adapted from DLC SEI Report Volume 1 (Iverson 2008) see complete report for more details.



1:6,000





### McCoubrey Plateau Area Structure Plan District Of Lake Country

MAP 7 - Sensitive Ecosystem Ranking

December 2012

#### LEGEND

Study Area Boundary

#### Sensitive Ecosystem Ranking

- LOW
- MEDIUM
- HIGH

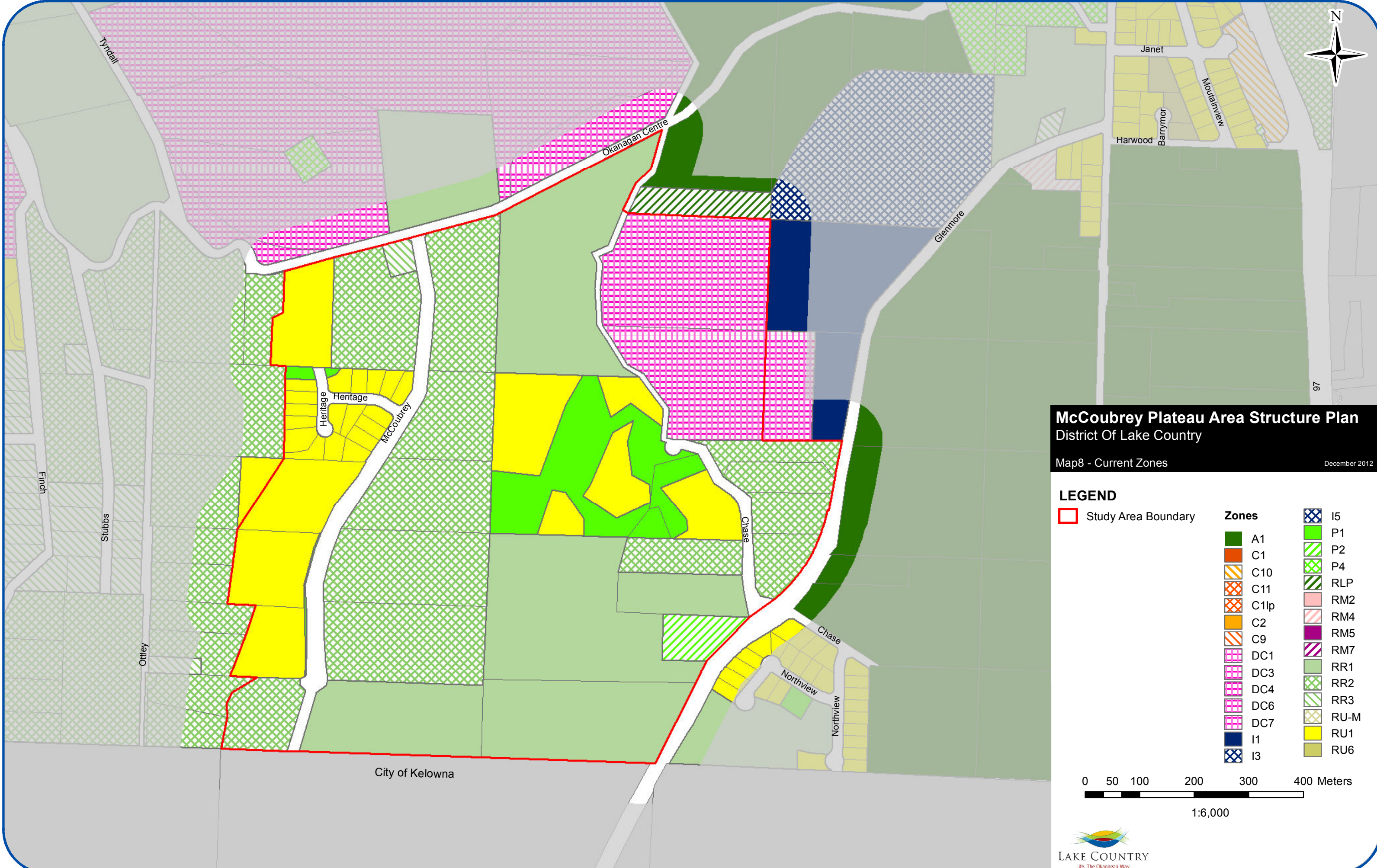
This map shows Sensitive Ecosystem Ranking (SER) values and ecological corridors for the Lake Country area. The SER incorporates Sensitive Ecosystem Inventory (SEI) data on the rarity and fragility of plant communities, as well as the suitability of the habitat to ten rare species. Corridors allow wildlife to move between core conservation areas. High SER areas are locally and provincially significant ecosystems with sensitive, and often rare native plant communities, and are of critical importance to rare wildlife species. Disturbance should be avoided in High SER areas. Medium SER areas often have value to species at risk as foraging habitat and as buffer areas to maintain ecological integrity. If Medium SER area are disturbed, compensation should be considered. Low SER areas are generally already developed, but may assist in buffering and linking more highly ranked habitat.

\*Note: Information adapted from DLC SEI Report Volume 1 (Iverson 2008) see complete report for more details.

































1:6,000

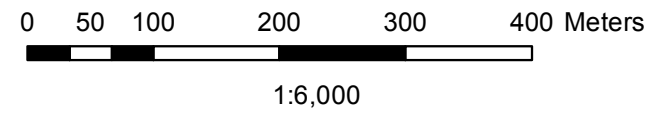




**McCoubrey Plateau Area Structure Plan**  
 District Of Lake Country  
 Map8 - Current Zones  
 December 2012

**LEGEND**

	Study Area Boundary	<b>Zones</b>		I5
	A1		P1	
	C1		P2	
	C10		P4	
	C11		RLP	
	C11p		RM2	
	C2		RM4	
	C9		RM5	
	DC1		RM7	
	DC3		RR1	
	DC4		RR2	
	DC6		RR3	
	DC7		RU-M	
	I1		RU1	
	I3		RU6	







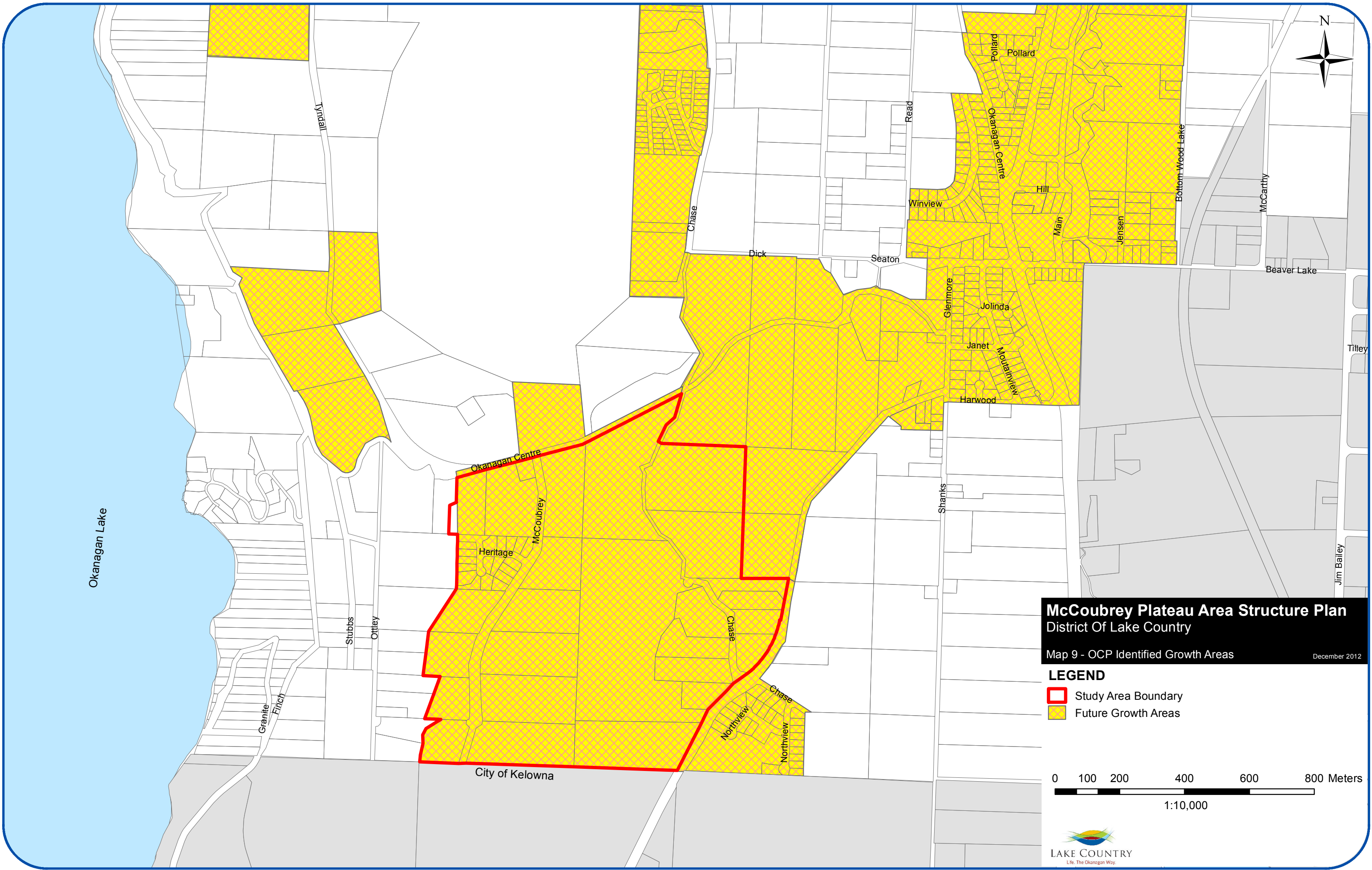
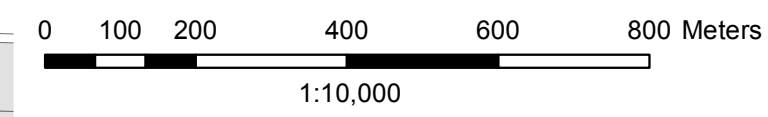


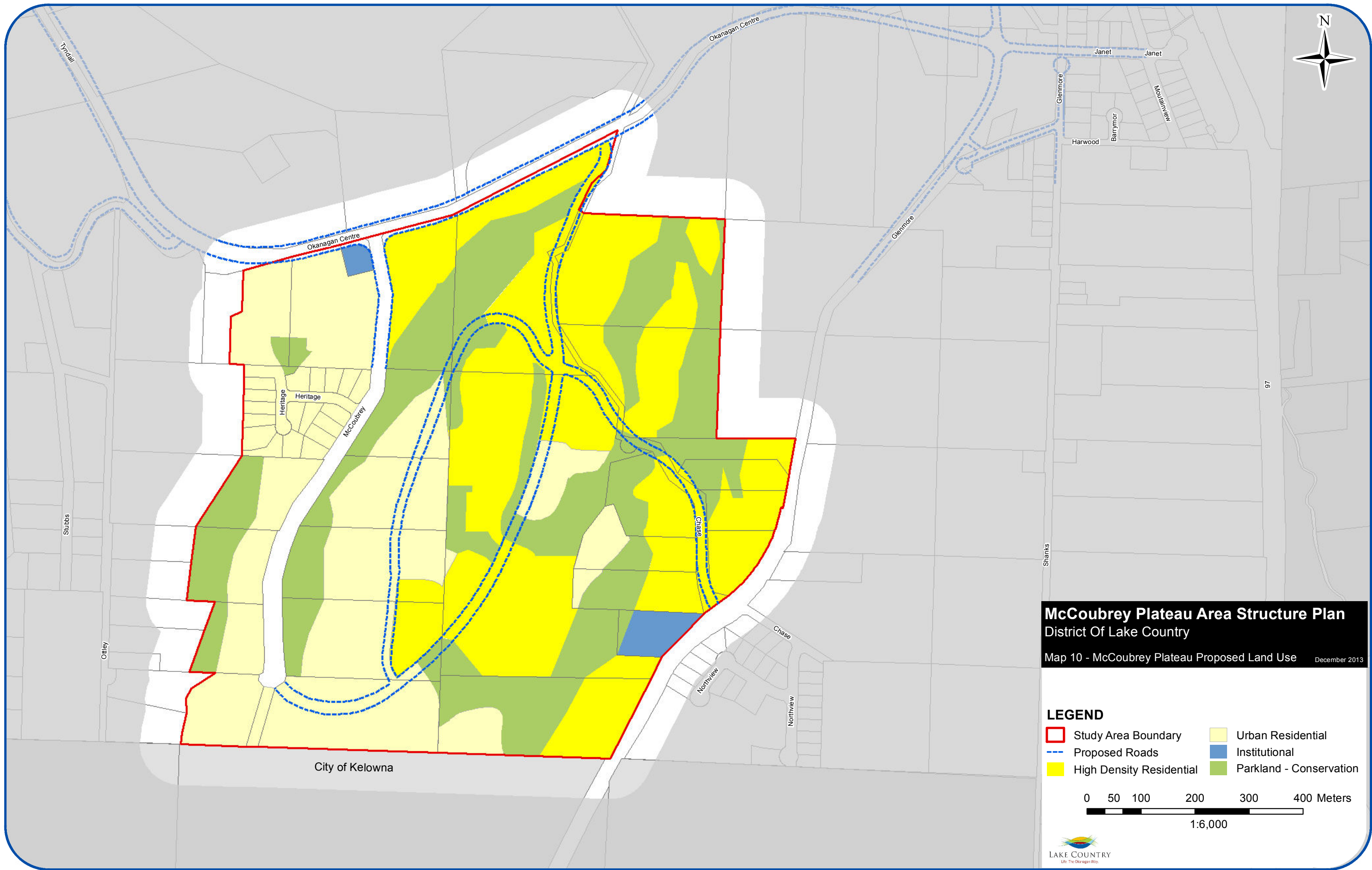
Okanagan Lake

**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country  
Map 9 - OCP Identified Growth Areas  
December 2012

**LEGEND**







-  Study Area Boundary
-  Future Growth Areas

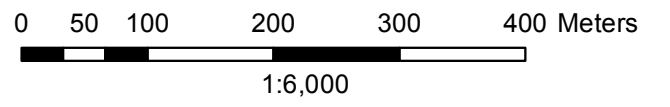




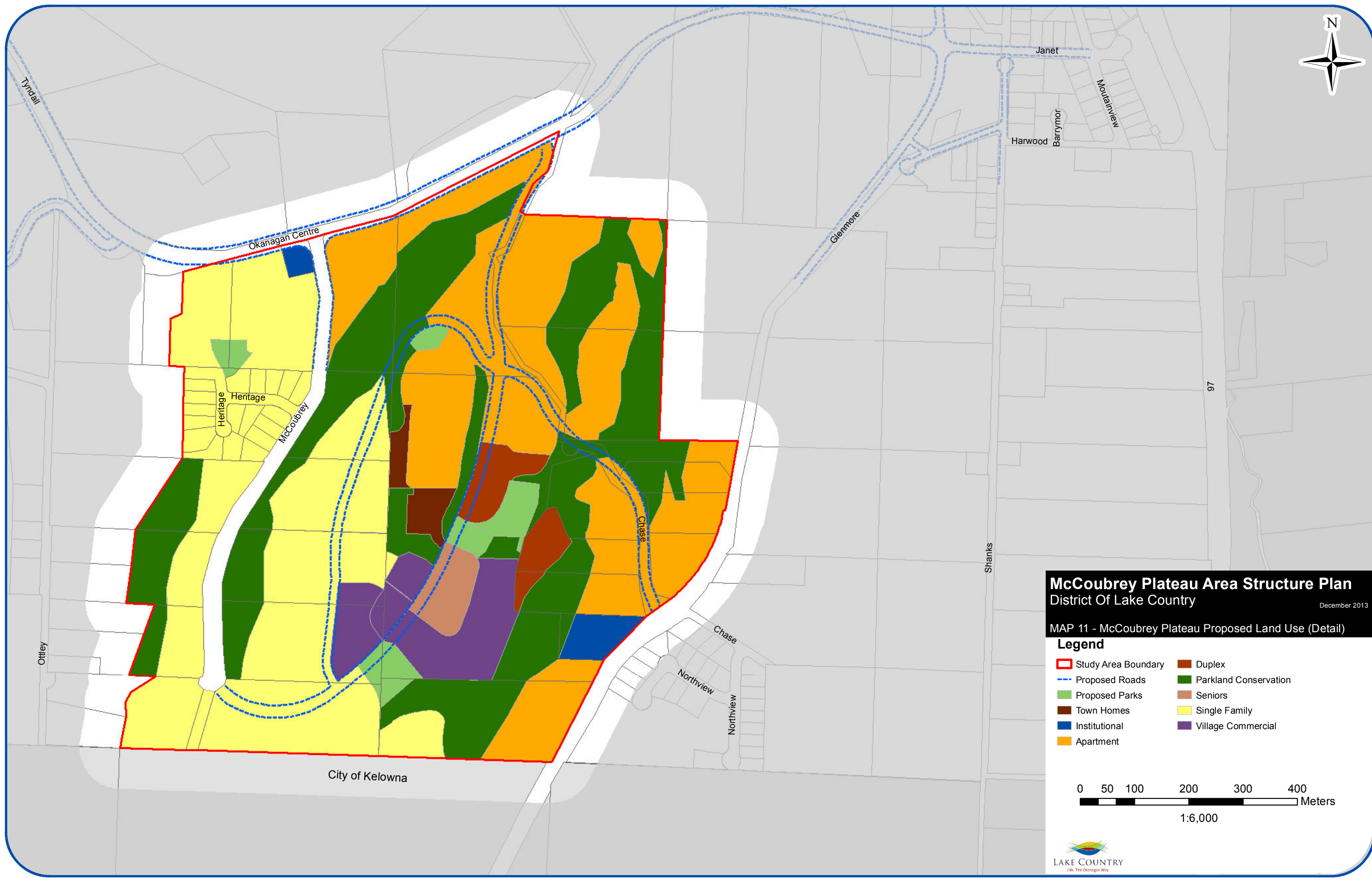
### McCoubrey Plateau Area Structure Plan District Of Lake Country

Map 10 - McCoubrey Plateau Proposed Land Use December 2013

LEGEND	
	Study Area Boundary
	Proposed Roads
	High Density Residential
	Parkland - Conservation
	Urban Residential
	Institutional





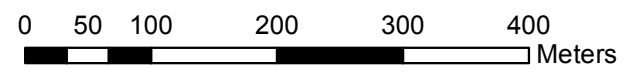


### McCoubrey Plateau Area Structure Plan District Of Lake Country

December 2013

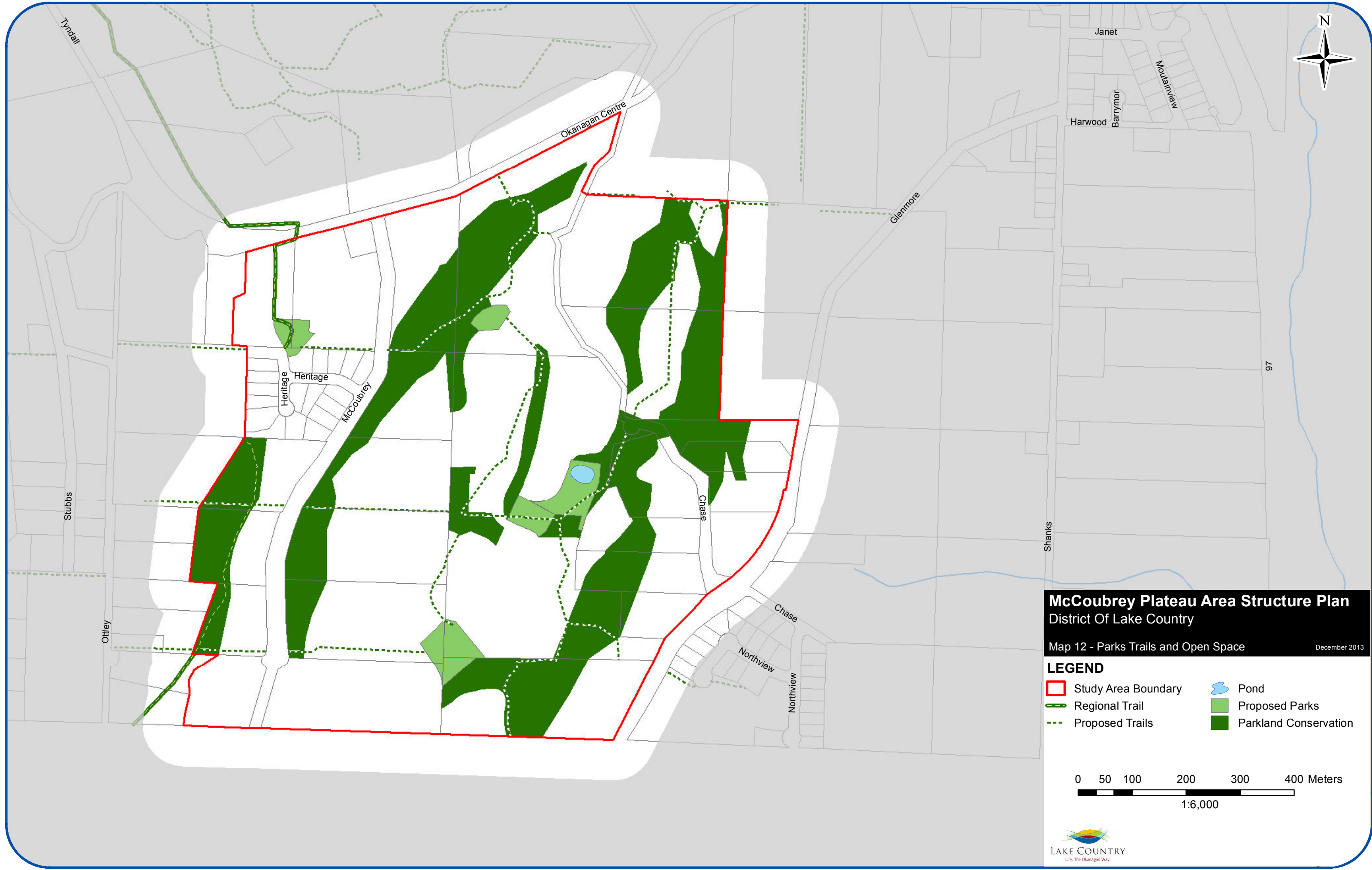
#### MAP 11 - McCoubrey Plateau Proposed Land Use (Detail)

- Legend**
- Study Area Boundary
  - Proposed Roads
  - Proposed Parks
  - Town Homes
  - Institutional
  - Apartment
  - Duplex
  - Parkland Conservation
  - Seniors
  - Single Family
  - Village Commercial



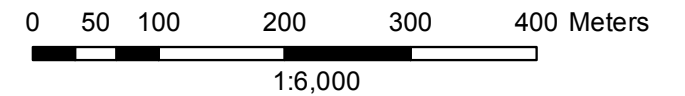
1:6,000



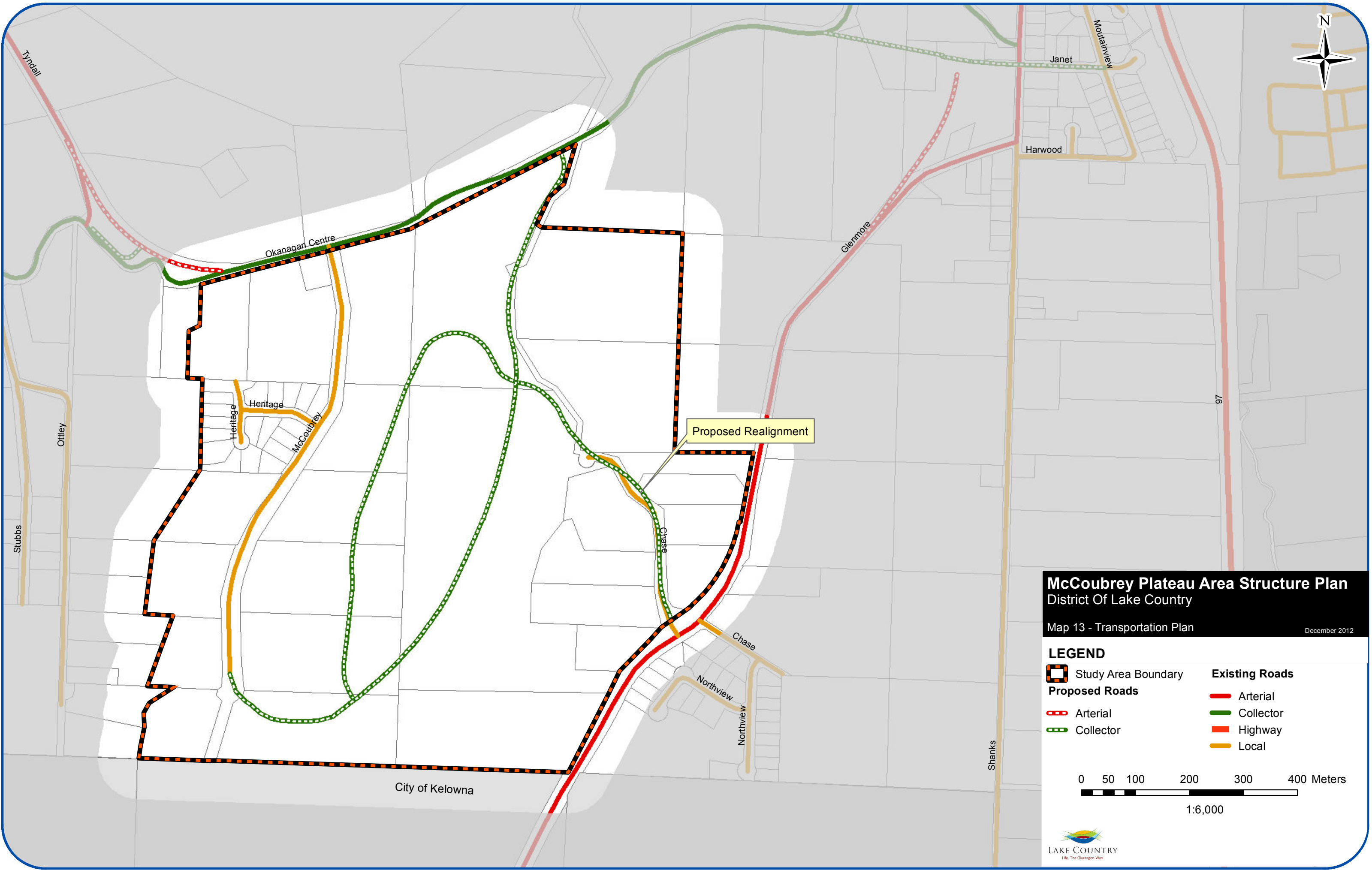


**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country  
Map 12 - Parks Trails and Open Space  
December 2013

- LEGEND**
- Study Area Boundary
  - Regional Trail
  - Proposed Trails
  - Pond
  - Proposed Parks
  - Parkland Conservation



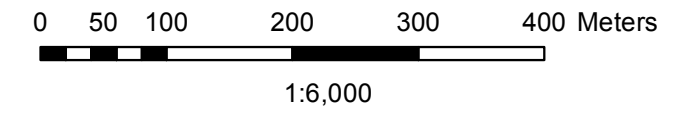




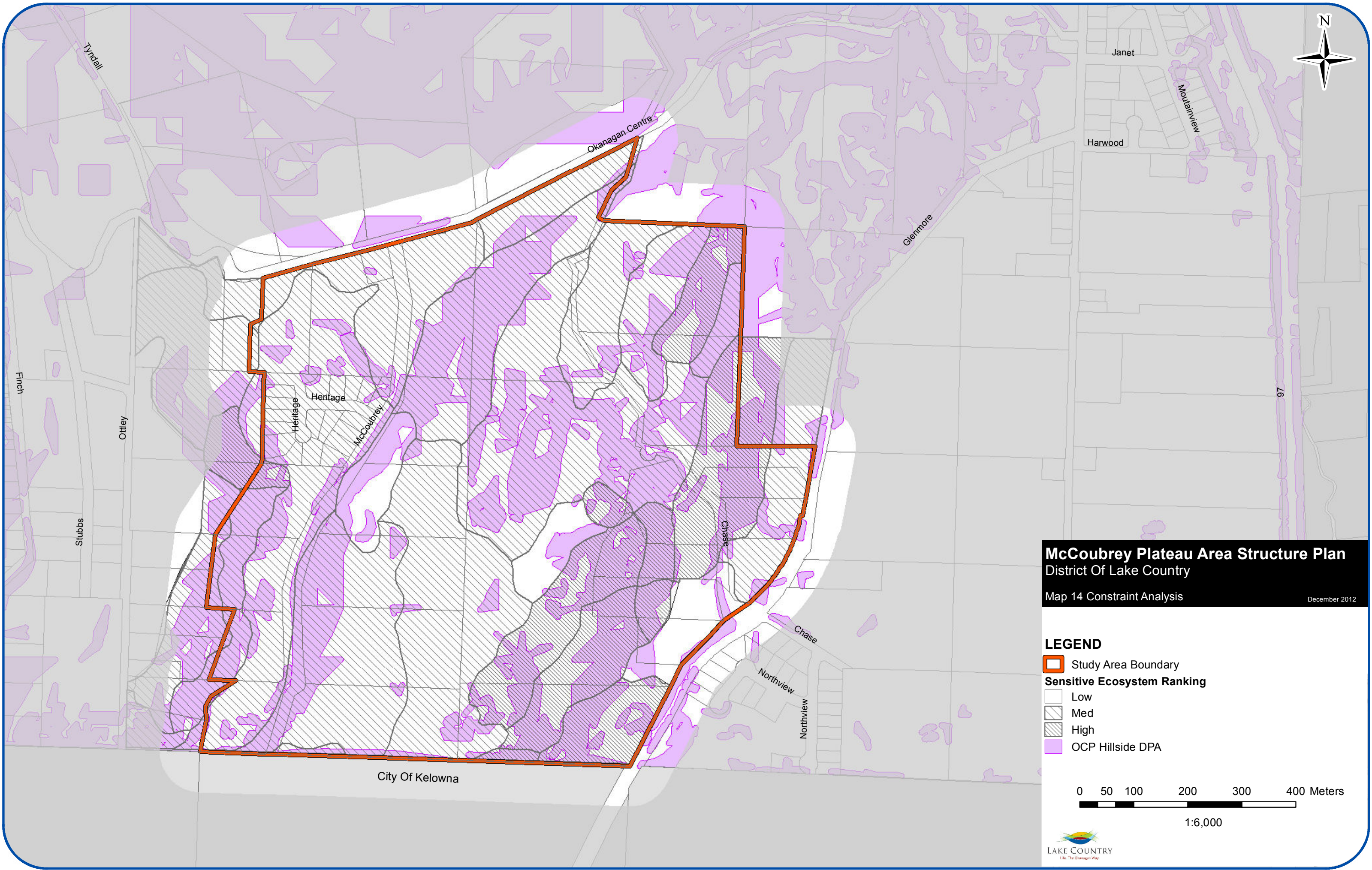
**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country  
Map 13 - Transportation Plan  
December 2012

**LEGEND**

Study Area Boundary	<b>Existing Roads</b>
Arterial	Arterial
Collector	Collector
	Highway
	Local












**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country  
Map 14 Constraint Analysis  
December 2012

**LEGEND**

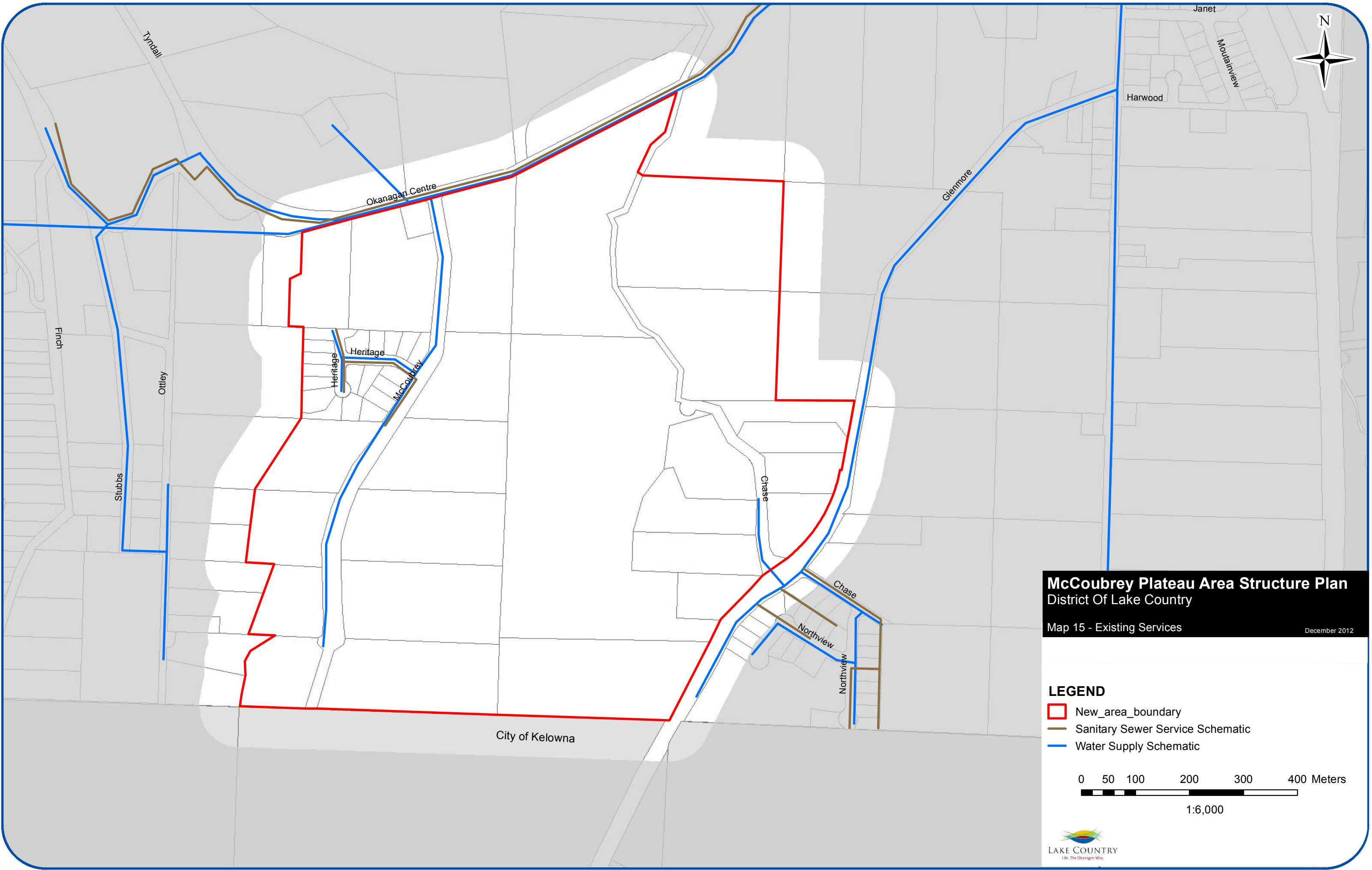
-  Study Area Boundary
- Sensitive Ecosystem Ranking**
-  Low
-  Med
-  High
-  OCP Hillside DPA



1:6,000







**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country  
Map 15 - Existing Services  
December 2012

**LEGEND**

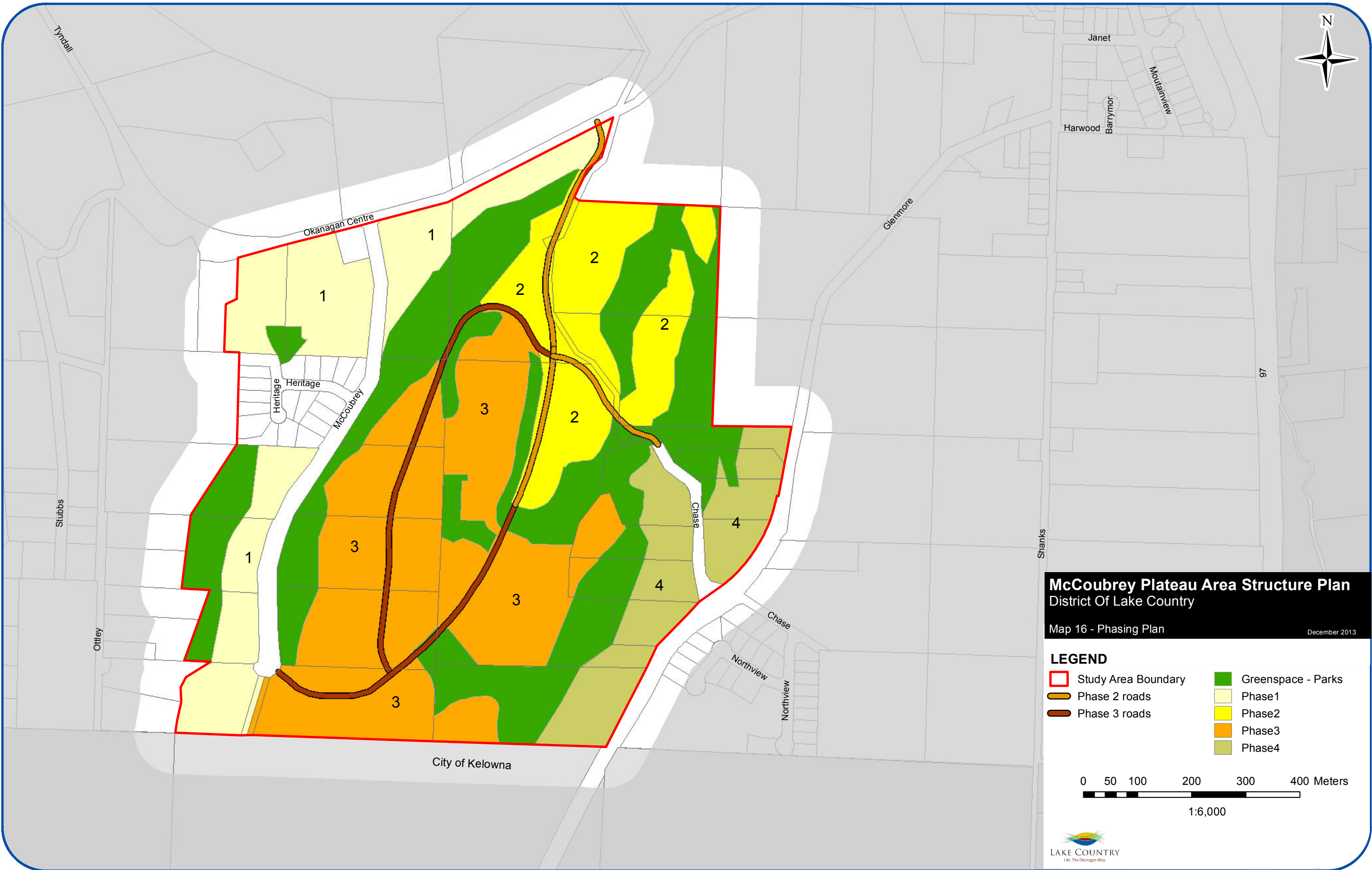
- New\_area\_boundary
- Sanitary Sewer Service Schematic
- Water Supply Schematic

0 50 100 200 300 400 Meters

1:6,000







**McCoubrey Plateau Area Structure Plan**  
District Of Lake Country  
Map 16 - Phasing Plan  
December 2013

**LEGEND**

Study Area Boundary	Greenspace - Parks
Phase 2 roads	Phase1
Phase 3 roads	Phase2
	Phase3
	Phase4

