Harbour Landing West Phase 1

Concept Plan Report

Prepared for:
Dream Development
City of Regina

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Stantec
# TABLE OF CONTENTS

EXECUTIVE SUMMARY ................................................................................................................................. iii

1.0 INTRODUCTION ................................................................................................................................ 1

1.1 BACKGROUND .................................................................................................................................. 1

1.2 SITE CONTEXT .................................................................................................................................. 2
  1.2.1 Integration ............................................................................................................................... 2

1.3 PROJECT VISION AND GUIDING PRINCIPLES ............................................................................ 6
  1.3.1 Complete Community ........................................................................................................... 6
  1.3.2 Compact, Walkable, and Connected ................................................................................ 6
  1.3.3 A Sense of Place ..................................................................................................................... 7
  1.3.4 Climate Conscious Design ..................................................................................................... 7

1.4 DESIGN REGINA CONFORMANCE ............................................................................................ 7

2.0 SITE INVENTORY .............................................................................................................................. 12

2.1 TOPOGRAPHY .................................................................................................................................. 12

2.1.1 Current Land Use .................................................................................................................. 12

2.1.2 Ecoregion ............................................................................................................................... 12

2.1.3 Surface Hydrology ................................................................................................................ 12

2.1.4 Groundwater ......................................................................................................................... 12

2.1.5 Wetlands ................................................................................................................................ 14

2.1.6 Soils ......................................................................................................................................... 14

2.1.7 Wildlife .................................................................................................................................... 14

2.2 BUILT FEATURES ........................................................................................................................... 14

2.2.1 Rural Municipality of Sherwood .......................................................................................... 14

2.2.2 Pipeline Corridor .................................................................................................................... 14

2.2.3 Regina International Airport ................................................................................................ 15

2.3 HERITAGE RESOURCES .............................................................................................................. 16

2.4 ENVIRONMENTAL ANALYSIS ..................................................................................................... 16

2.5 GEOTECHNICAL ANALYSIS ....................................................................................................... 18

2.6 IMPLICATIONS FOR DEVELOPMENT ......................................................................................... 18

3.0 LAND USE STRATEGY ...................................................................................................................... 19

3.1 LAND USES COMMUNITY DESIGN STRATEGY .......................................................................... 19

3.2 LAND USES .................................................................................................................................. 20

3.3 NEIGHBOURHOOD DENSITY ...................................................................................................... 21

3.4 RESIDENTIAL ................................................................................................................................ 24
EXECUTIVE SUMMARY

This Concept Plan Report has been created to adhere to the requirements of the following City of Regina documents: Concept Plan Application, Guidelines for Preparing Secondary Plans & Concept Plans, Design Regina Official Community Plan (Design Regina), as well as additional requests from City of Regina Administration. It provides an overview of the planning area referred to as Harbour Landing West Phase 1 (HLW Ph 1), which is located in southwest Regina encompassing an area of approximately 86 ha. The report outlines the following: proposed land use and circulation plans; population and density; commercial and employment opportunities; educational institutions; open space; transportation; and servicing summarizes.

The aforementioned major components will contribute to the vision of HLW Ph 1 to provide existing and potential Regina residents a vibrant, healthy, sustainable, attractive, and interconnected neighbourhood in southwest Regina where residents who call the community home are presented with a diverse mix of housing types that will suite their needs through all stages of life, a community that is connected with its surroundings and from within through various transportation options, a variety of recreational opportunities to promote a healthy lifestyle, and commercial amenities and services to help meet daily needs.

The following four guiding principles were considered when designing and planning HLW Ph 1:

- Complete Community
- Compact, Walkable & Connected
- A Sense of Place
- Climate Conscious Design

Detailed information relating to transportation, water, wastewater, stormwater, and open space will be submitted as separate servicing reports as part of the HLW Ph 1 concept plan application.
1.0 INTRODUCTION

1.1 BACKGROUND

This report provides information to supplement the concept plan application for the area known as HLW Ph 1 in Southwest Regina.

The HLW Ph 1 concept plan area is being planned for as a result of demand for an additional elementary school and complimentary development in southwest Regina. At full build-out, HLW Ph 1 will encompass approximately 86 ha of land and accommodate approximately 3,600 residents.

HLW Ph 1 will embrace the elements of a “complete neighbourhood” and address the following elements:

- Relationship between the policies contained within HLW Ph 1 and Design Regina.
- Site features – topography, existing conditions, and integration into adjacent communities.
- Planning principles – overall objective, densities, zoning, and development standards.
- Design plan and land Use – residential, commercial, institutional, and open space.
- Serviceability – stormwater, wastewater, water, and shallow utilities.
- Transportation – pedestrian, cycling, transit, and vehicular networks.

Harbour Landing West is a natural extension to the west of the Harbour Landing subdivision. HLW Ph 1 will be incorporated into the City of Regina’s Growth Plan and shown as a New Mixed-Use Neighbourhood (300k).

This report has five sections. Section 1.0 provides a brief introduction to the proposed plan. Section 2.0 provides an analysis related to topography, natural features, built features, heritage resources, environmental and geotechnical analyses, and development implications. Section 3.0 provides an overview of the land use strategy. Section 4.0 summarizes the servicing strategies for transportation, water, wastewater, stormwater, and shallow utilities. The report concludes with Section 5.0, an implementation strategy.
1.2 SITE CONTEXT

The HLW Ph 1 lands are located in the southwest quadrant of the City of Regina as illustrated in Figure 1.1 Location Plan. This land is bounded on the north, west, and south by agricultural lands, and on the east by the existing Harbour Landing neighbourhood. Figure 1.2 Ownership Map and Figure 1.3 Ownership Map Detail show the current land ownership.

1.2.1 Integration

As HLW Ph 1 will be an extension of the existing Harbour Landing neighbourhood, it is critical that HLW Ph 1 knits seamlessly into its surroundings. The development of HLW Ph 1 has been planned in a manner whereby the roadway networks seamlessly connect to the adjacent development, and where land uses have been configured to complement and leverage the surrounding development.
Figure 1.1 Location Plan
Figure 1.2 Ownership Map
Figure 1.3 Ownership Map Detail
1.3 PROJECT VISION AND GUIDING PRINCIPLES

The **Vision** for HLW Ph 1 sets out a strategic direction for the growth and development of a community that will ultimately welcome and be home to approximately 3,600 residents through the provision of a variety of housing types, including, but not limited, to the following:

- Low density development in the form of single-detached, single-detached with secondary suites, and single-detached with accessory suites;
- Medium density development in the form of duplexes, triplexes, fourplexes, townhomes, and low-rise multi-unit residential buildings; and
- High density development in the form of larger scaled multi-unit residential buildings.

**VISION**

HLW Ph1 is a vibrant, healthy, sustainable, attractive, and interconnected neighbourhood in southwest Regina where residents who call the community home are presented with a diverse mix of housing type that will suit their needs through all stages of life, a community that is multi-modal and connected, a variety of recreational opportunities to promote a healthy lifestyle, and commercial amenities and services to meet daily needs.

This community vision is further defined and embedded in the following **Guiding Principles**:

1.3.1 Complete Community

HLW Ph 1 will be a community that is comprised of a diverse mix of housing that will serve to meet its residents’ needs through their various stages of life. It will be comprised of a variety of neighbourhood-scaled services and commercial amenities, as well as educational opportunities, that will serve to meet the daily needs of its residents and provide for a multitude of recreational opportunities. It will also provide easy access and be connected to its surroundings, as well as connected from within, through the provision of an effective and multi-modal transportation network.

1.3.2 Compact, Walkable, and Connected

HLW Ph 1 will be a compact community as it is comprised of a variety of housing forms that contribute to its overall density. It will be developed with walkability and connectivity in mind, which will be illustrated through its seamless integration to the neighbouring Harbour Landing to the east, its integration of linear walkways throughout the community that serve as connectors to key destinations, and being developed on a modified grid roadway network that facilitates ease of multi-modal movement throughout the neighbourhood.
1.3.3  A Sense of Place

The implementation of HLW Ph 1 will be focused on a unique and exceptional community character, in both built form and the public realm. This includes an emphasis on street orientation and place making, high quality urban design of public spaces, a central focus with mixed uses, and a diversity of character.

1.3.4  Climate Conscious Design

The design of HLW Ph 1 will create a neighbourhood that incorporates several elements that contribute to creating a climate conscious neighbourhood. Its compact design enables for more efficient utilization of land, and its connectivity to services, amenities, and surrounding neighbourhoods will reduce having to rely on automobiles to meet daily needs.

1.4  DESIGN REGINA CONFORMANCE

Design Regina is intended to serve as the City of Regina’s long-term strategic plan to guide and manage the future growth and development of Regina to 300,000 residents. The suite of policies contained within Design Regina aim to create a sustainable city where social, environmental, and economic matters are addressed alongside the need and desire to create a place where people want to call home.

This plan has been prepared in accordance with the City of Regina Official Community Plan (OCP). Community priorities support the larger city-wide vision and have been incorporated into the OCP as the key directives to guide new growth. These priorities are as follows:

- Develop complete neighbourhoods;
- Embrace built heritage, and invest in arts, culture, sport, and recreation;
- Support the availability of diverse housing options;
- Create better, more active ways of getting around;
- Promote conservation, stewardship, and environmental sustainability;
- Achieve long-term financial viability;
- Foster economic prosperity; and
- Optimize regional cooperation.

One of the major goals of Design Regina is to facilitate the creation of complete neighbourhoods, whereby the residents’ daily needs can be met. More specifically, Design Regina defines a complete neighbourhood as the following:

“... places where residents enjoy their choices of lifestyles, food, housing options, employment services, retail and amenities, multi-model transportation, and educational and recreational facilities and programs. Most importantly, complete neighbourhoods provide easy access to the daily life necessities for people of all ages, abilities and backgrounds in an engaging and adaptable urban environment.”
The HLW Ph 1 concept plan aligns with specific components of Design Regina and the planning principle of developing complete neighbourhoods, as noted in Table 1.1.

Table 1.1 HLW Ph 1 Elements and OCP Alignment

<table>
<thead>
<tr>
<th>DESIGN REGINA</th>
<th>HLW PH 1 CONCEPT PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section C: Growth Plan</strong></td>
<td><strong>HLW Ph 1</strong> is comprised of a wide variety of housing typologies ranging from low density development to high density development, which contributes to the community achieving a dense and compact built form. Additionally, HLW Ph 1 is a contiguous and logical westward extension of the existing Harbour Landing neighbourhood to the east.</td>
</tr>
<tr>
<td><strong>Goal 2.5:</strong> Develop compact and contiguous neighbourhoods.</td>
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<tr>
<td><strong>Section C: Growth Plan</strong></td>
<td><strong>HLW Ph 1</strong> is a complete community at its core, as it provides for a wide variety of housing choices, potential commercial, recreational, and educational amenities, is connected from within the community and to broader Regina through multi-modal transportation options, and meets the daily needs of people of all ages, abilities, and backgrounds.</td>
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<tr>
<td><strong>Goal 2.11.1:</strong> Require new neighbourhoods to be designed and planned as complete neighbourhoods.</td>
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<tr>
<td><strong>Section C: Growth Plan</strong></td>
<td><strong>HLW Ph 1</strong> has an overall gross developable area population density of 52 persons per hectare.</td>
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<tr>
<td><strong>Goal 2.11.2:</strong> Require new neighbourhoods to achieve a minimum gross population density of 50 persons per hectare.</td>
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<tr>
<td><strong>Section D1: Regional Context</strong></td>
<td><strong>HLW Ph 1</strong> is a compact community that efficiently utilizes municipal infrastructure through the provision of density.</td>
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<tr>
<td><strong>Goal 3.1.2:</strong> Establish development forms that support the sustainable use of infrastructure.</td>
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<tr>
<td>DESIGN REGINA</td>
<td>HLW PH 1 CONCEPT PLAN</td>
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<tr>
<td><strong>Section D3: Transportation</strong></td>
<td>The roadway network and street pattern in HLW Ph 1 is planned on a modified grid that allows it to contiguously connect to the adjacent developed community of Harbour Landing to the east. Additionally, the modified grid allows for internal connectivity that is human scale in nature and facilitates a strong pedestrian environment.</td>
</tr>
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<td><strong>Goal 5.14:</strong> Ensure street patterns in new neighbourhoods provide both internal and external connectivity, pedestrian-scaled block sizes, and transportation choices.</td>
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<tr>
<td><strong>Section D5: Land Use and Built Environment</strong></td>
<td>The roadway network and street pattern in HLW Ph 1 is planned on a modified grid that allows it to seamlessly connect to the adjacent community of Harbour Landing to the east. The roadway network builds on and connects to the surrounding neighbourhood via arterial and collector roadways and is near Regina’s Ring Road, which facilitates broader movement and connectivity to the rest of Regina and the region.</td>
</tr>
<tr>
<td><strong>Goal 7.1.2:</strong> Require that new neighbourhoods are planned and developed to include integration and interconnectivity with all adjacent neighbourhoods, the city, and where appropriate, the region.</td>
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<tr>
<td><strong>Section D5: Land Use and Built Environment</strong></td>
<td>The collector roadway of Donald Street runs north to south down the centre of the plan area and is intersected by the arterial roadway of Gordon Road, which effectively creates four quadrants within HLW Ph 1. Located centrally within the community are flex zones where medium and high density residential is located, along with the opportunity for commercial and/or mixed-use development.</td>
</tr>
<tr>
<td><strong>Goal 7.1.3:</strong> Require that new neighbourhoods are planned and developed to include smaller neighbourhood districts and a centrally located neighbourhood hub.</td>
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<tr>
<td><strong>Section D5: Land Use and Built Environment</strong></td>
<td>Potential commercial opportunities that will provide for daily lifestyle needs such as services, convenience shopping, and recreation are provided for in HLW Ph 1 through the Flex Zone 2 land use designation, as well as the various open spaces and educational facility within the community.</td>
</tr>
<tr>
<td><strong>Goal 7.1.4:</strong> Require that new neighbourhoods are planned and developed to include opportunities for daily lifestyle needs such as services, convenience shopping, and recreation.</td>
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### Section D5: Land Use and Built Environment

#### Goal 7.1.5: Require that new neighbourhoods are planned and developed to include a diversity of housing types to support residents from a wide range of economic levels, backgrounds, and stages of life, including those with specific needs.

HLW Ph 1 is comprised of a wide variety of housing typologies ranging from low density development to high density development. This diverse mix of housing typologies will provide the opportunity for residents with differing ages, income levels, lifestyles, and physical abilities to find housing that suits their respective needs through all stages of life.

#### Goal 7.1.8: Require that new neighbourhoods are planned and developed to include a distinctive character, identity, and sense of place.

Residential and commercial development in HLW Ph 1 incorporates design elements and features that contribute to the overall sense of place of the community and high-quality public realm.

#### Goal 7.36.2: Consider the inclusion of strategies for providing a high-quality built environment and public realm, including but not limited to consistent built-form edge, appropriate transitioning of density, and active street frontages.

Residential and potential commercial development in HLW Ph 1 incorporates a high-quality public realm that contributes to the overall sense of place of the community. Additionally, the collector roadways and arterial roadway running through the community have been framed with medium density housing that will facilitate the creation of active street frontages and corridors with consistent built-form edges. Medium density also being located along collector and arterial roadways will serve as a transition from major roadways to the interior of the neighbourhood where low density residential is more prominent.
<table>
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<th>DESIGN REGINA</th>
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<tbody>
<tr>
<td><strong>Section D6: Housing</strong></td>
<td><strong>HLW Ph 1 is comprised of a wide variety of housing typologies ranging from low density development to high density development. This diverse mix of housing typologies will provide the opportunity for residents with differing ages, income levels, lifestyles, and physical abilities to find housing that suites their respective needs through all stages of life.</strong></td>
</tr>
<tr>
<td><strong>Goal 8.11:</strong> Encourage developers to provide a greater mix of housing to accommodate households of different incomes, types, stages of life, and abilities in all neighbourhoods.</td>
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<tr>
<td><strong>Section D6: Housing</strong></td>
<td><strong>Medium density and high-density housing is permitted within HLW Ph 1.</strong></td>
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<tr>
<td><strong>Goal 8.13:</strong> Expand areas where apartments and multi-unit buildings are permitted uses.</td>
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2.0 SITE INVENTORY

2.1 TOPOGRAPHY

Figure 2.1 Existing Topography illustrates the existing contours of the plan area. The land is relatively flat, sloping gently from east to west. The total relief is approximately 1 m over a distance of approximately 850 m. The topography generally runs from a geodetic elevation of 574 m in the east to 573 m in the west. A geotechnical and hydrotechnical analysis has been completed and found the area suitable for development, similar to other areas of Regina.

2.1 NATURAL FEATURES

2.1.1 Current Land Use

The concept plan area is dominated largely by cultivated land, used for the production of crops. The surrounding land use is existing residential development to the east, and agricultural development to the north, west, and south. The Rural Municipality (RM) of Sherwood administration office is located within the plan area on the eastern boundary along Campbell Street.

2.1.2 Ecoregion

HLW Ph 1, along with the rest of the City of Regina, is located in the Moist Mixed Grassland ecoregion. In its natural state, this ecoregion contains predominantly native grasses such as wheatgrasses and spear grass, along with blue grama grass, Junegrass, sedges, and pasture sage. Riparian or streamsie native vegetation in this ecoregion generally consists of rose, snowberry, willow, wolf-willow, Saskatoon berry, and chokecherry. In general, the current agricultural land use has removed most of the natural vegetation in the area, however, some native riparian species may surround wetlands.

2.1.3 Surface Hydrology

During wet seasons, there are a few small depressions or sloughs which may hold water for a few weeks in the spring and are connected, at times, by ephemeral overland flow. There are no permanent water bodies within the concept plan area.

2.1.4 Groundwater

Development of the project may hinder the ability of surface water to percolate into the water table. A geotechnical investigation was conducted on section 3-17-20 W2. The drilling information suggested that the Condie and Regina aquifers are not present at the site. Surface water is currently not recharging the aquifers in the project area, therefore, development of the project is not expected to affect the aquifers.
Figure 2.1 Existing Topography
2.1.5 Wetlands

The project is predominantly located on cultivated land, however, construction activities may cause a loss or alteration of rare species or sensitive plant communities that may be present. Wetland and riparian areas will be altered or lost. Conversations with the Saskatchewan Water Security Agency (WSA) have determined that an Aquatic Habitat Protection Permit (AHPP) is not required to alter or destroy wetlands within the project area.

2.1.6 Soils

Soils in and around the City of Regina are part of the Regina soil association consisting of dominantly Orthic Dark Brown Chernozemic soils. The heavy clay texture of these soils creates vertic soil properties which are caused by the clay soil shrinking when dry and swelling when wet. The shrink-swell process forms cracks in the soil surface which are filled by soil and thus mixing of soil horizons occurs. As a result, these soils often appear similarly coloured deep into the soil profile and have weak soil horizons. The A horizon (most often considered the topsoil) is often only distinguished by the relative organic carbon content compared to lower in the soil profile. These expansive soils often cause difficulty with shifting building structures.

Soils in the HLW Ph 1 area are already at risk for erosion and degradation through wind and water process because the area is currently under agricultural production. The Canada Land Inventory Soil Capability for Agriculture map indicates that soils in the concept plan area have moderate limitations that restrict the range of crops or require moderate conservation practices. Limitations may include undesirable structure, low permeability, and a restricted rooting zone because of soil characteristics, low natural fertility, and low moisture-holding capacity or salinity concerns.

2.1.7 Wildlife

No species at risk were identified during field studies. If species at risk are identified during construction activities, the appropriate regulatory bodies will be notified, and the recommended mitigation measures will be employed.

2.2 BUILT FEATURES

2.2.1 Rural Municipality of Sherwood

The RM of Sherwood administration office is located within the plan area on the eastern boundary along Campbell Street. The RM office has been incorporated into the HLW Ph 1 concept plan.

2.2.2 Pipeline Corridor

One pipeline corridor traverses east/west across the southern boundary of the plan area and is currently cultivated. The pipeline corridor is operated by TransGas and is 33 m wide. A detailed risk analysis was completed to identify permissible land uses adjacent to the pipeline corridor. The risk analysis is summarized in Analysis of Risks to Proposed Harbour Landing West Development from Existing Oil and Gas Pipelines, Bercha Group Limited, May 2013. Figure 2.2 Allowable Land Uses
Based on IRI Contours shows the permissible land uses based on the individual risk intensity (IRI) contours.

![Figure 2.2 Allowable Land Uses Based on IRI Contours](image)

The concept plan land uses have been developed with these risk intensity contours in mind, similar to land uses in Harbour Landing to the east. The school site proposed in the municipal reserve parcel north of Gordon Road places it outside the 0.3 in a million (0.3×10^-6) IRI contour.

2.2.3 Regina International Airport

The Regina International Airport is north of the concept plan area. Transport Canada TP1247E: Aviation Land Use in the Vicinity of Aerodromes identifies land use considerations around airports. For Harbour Landing West, TP1247E highlights four areas requiring further attention.

- Aerodrome surface protection;
- Bird hazards;
- Telecommunications and electronic systems; and
- Aircraft noise.

2.2.3.1 Aerodrome Surface Protection

Aerodrome surface protection is achieved by limiting the height of structures or objects on the ground. The three surfaces requiring protection are the outer surface, takeoff/approach slope surface, and the transitional surface. Transport Canada’s TP312: Aerodrome Standards and Recommended Practices were used to develop height restriction contours for Harbour Landing West. Buildings in Harbour Landing West will be restricted to an elevation of 622 m or around 45 to 50 m in height.
2.2.3.2 Bird Hazards

Site drainage will be achieved with a drainage channel and a temporary private detention facility. Bird strike hazards will be mitigated by utilizing a dry bottom detention pond instead of wet bottom retention pond.

2.2.3.3 Telecommunications and Electronic Systems

The airport has a number of telecommunication and electronic systems on site. There were two facilities identified in the Regina International Airport Master Plan that require attention:

- NAV Canada RAMP radar (primary surveillance radar); and
- Communication transmitter site (communications systems).

TP1247E recommends building height restrictions within 1 km of primary surveillance radar systems and additional consultation with the airport if planning to construct with metal building materials within 300 m of a communications system site. The HLW Ph 1 concept plan area is approximately 1.6 km from the airport property, so there is no concern with the airport’s telecommunication and electronic systems.

2.2.3.4 Aircraft Noise

Aircraft flying in and out of the airport create noise that could restrict land uses. Noise Exposure Forecast (NEF) contours are produced to ensure compatible land uses in the vicinity of aerodromes. TP1247E recommends limiting residential development below a NEF contour of 30.

In 2005, a study undertaken by the Regina Airport Authority determined the NEF contours to aid land use planning adjacent to the airport. According to these NEF contours, the concept plan area is not located in any NEF contours, so aircraft noise is not a concern.

2.3 HERITAGE RESOURCES

The Saskatchewan Ministry of Parks, Culture and Sport Heritage Conservation Branch was contacted to provide a Heritage Resource Review. The Heritage Conservation Branch has no concerns with the development proceeding as planned.

2.4 ENVIRONMENTAL ANALYSIS

An environmental self-assessment for the concept plan area was completed in June 2013, with field programs and addenda completed in January 2014. Findings and recommendations made as a result of the environmental self-assessment include the following:

- Atmospheric Environment: Construction activities may cause increased noise levels and potential air quality issues in and around the project area. The project should be graded in sub-parcels and dust suppressants should be used to reduce dust in the environment. Construction should also be limited to reasonable daytime hours.
• **Soils:** Concerns include rutting and compaction as well as wind and water erosion as a result of exposed soil. Soils which are unsuitable for foundations or road structures should be stripped from the surface and salvaged for use in easement grading, sound attenuation berms, and other suitable uses.

• **Surface Hydrology:** Construction activities may cause a loss or alteration of local flows, drainage patterns, and drainage areas. It was recommended that a stormwater drainage channel should carry surface runoff from the project area to Cottonwood Creek.

• **Groundwater:** Development of the project may hinder the ability of surface water to percolate into the water table.

• **Vegetation and Wetlands:** The project is predominantly located on cultivated land, however, construction activities may cause a loss or alteration of rare species or sensitive plant communities that may be present. Wetland and riparian areas will be altered or lost. Surveys were completed for northern leopard frogs and will be completed for any wetland habitat. Conversations with WSA have determined that an AHPP is not required to alter or destroy wetlands within the project area, however, it would be advisable to obtain the AHPPs in order to document construction plans and obtain approval with the appropriate regulatory body. A weed management plan should also be implemented. In the event rare species are found, the appropriate regulator must be contacted to discuss mitigation options.

• **Wildlife:** Wildlife may come into direct contact with construction equipment, resulting in direct mortality. Wildlife habitat may also be lost through loss of vegetation. Construction should be timed to avoid sensitive wildlife periods. In addition, wildlife monitoring and nest sweeps should be completed during construction, if necessary, depending on construction timing.

• **Socioeconomics:** The project will have a positive impact on the community by providing employment opportunities for construction crews and providing revenue to the local service industry. The project is consistent with the City of Regina’s long-term objectives.

• **Land Use:** The project will result in the loss of opportunity for agricultural activities in the project area.

A Phase I environmental site assessment (ESA) has been completed for NE 3-17-20 W2. The recommendation made as a result of the Phase I ESA is highlighted below:

• An above ground fuel tank may have been historically located at the boundary between NE 3-17-20-W2 and SE 3-17-20-W2. Given the historical and current land use, it is possible that various agricultural chemicals may have been used or stored on site. However, the current landowner was unable to confirm potential historical storage locations. The soil will be monitored for impacts during future rough grading activities. Soil and groundwater sampling will be completed if evidence of contamination is observed.
2.5 GEOTECHNICAL ANALYSIS

A geotechnical investigation was conducted on section 3-17-20 W2. The drilling information suggested that the Condie and Regina aquifers are not present at the site. Surface water is currently not recharging the aquifers in the project area, therefore, development of the project is not expected to affect the aquifers.

2.6 IMPlications FOR DEVELOPMENT

The topography, natural features, built features, heritage resources, environmental analysis, and geotechnical analysis were reviewed to identify potential development constraints. The analysis found no significant constraints to the development of the concept plan area. The review and analysis provided several recommendations and requirements for development. These recommendations and requirements will be considered at the time of implementation and development.
3.0 LAND USE STRATEGY

3.1 LAND USES COMMUNITY DESIGN STRATEGY

The HLW Ph 1 concept plan has been developed in a manner whereby future residents will be able to live in a vibrant, attractive, sustainable, healthy, and connected neighbourhood that will be able to meet the majority of the residents’ needs on a daily basis.

The following principles have played a large role in determining the layout of the land uses.

Engage

- In the design of the public realm, formal and informal social spaces should be readily available for community members to connect, converse, and engage with one another.

Get Around

- Skeletal road network is based on a modified grid pattern to provide a coherent pattern of connectedness for all modes of transportation.
- Priority of connectedness has been given to active transportation modes such as walking and cycling primarily through pathways, and connection points via roadways.

Environment

- Integrate natural features of the area for aesthetic and functional purposes.
- Design of the public realm considers the local climate – winter and summer weather.

Structure

- Buildings shall be designed and oriented in a manner that enhances the public realm and provides an enjoyable, safe, attractive, and vibrant experience.

Play

- Opportunities for active and passive play and interpretive activities.
- Design that considers all ages, genders, cultural backgrounds, and physical mobility levels.
- Provision of goods, services, and amenities within the plan area to a level that the local market can support.

Community design of buildings, public realm, parks, open spaces, utility parcels, drainage channels, and services all contribute to the ability to provide an enjoyable, safe, attractive, and vibrant neighbourhood to call home.
3.2 LAND USES

The HLW Ph 1 concept plan contains the following major planning components and design strategies:

**Low Density Residential**

Low density residential housing, which is comprised of housing typologies such as single-detached, single-detached with secondary suites, and single-detached with accessory suites has primarily been placed in strategic areas that are interior to the neighbourhood along local roadways and the various open space elements, as opposed to being adjacent to major roadways running throughout the plan area.

Low density residential accounts for 23.09 ha, or 52.64%, of the net residential area. The density for this land use designation is approximately 25 units / hectare.

**Medium Density Residential**

Medium density housing, which will be comprised of housing typologies such as triplexes, fourplexes, townhomes, and low-rise multi-unit residential buildings, have been strategically located along major roadways throughout the plan area such as Gordon Road, Jim Cairns Boulevard, and Donald Street. This has been done for the following reasons:

- Locates a larger proportion of residents in closer proximity to transportation and transit routes within the community, which will connect more residents to destinations within the community and to the surrounding community;
- Creates and frames distinct corridors throughout the community that will facilitate the development of vibrant and active streets; and
- Provides for a transition of density from major roadways running throughout the community to lower density residential areas interior to the community.

Medium density residential accounts for 3.07 ha, or 7.00%, of the net residential area. The density for this land use designation is approximately 50 units / hectare.

**Low Density / Medium Density Residential**

This land use category provides for flexibility between low density and medium density residential. Low density / medium density residential accounts for 15.01 ha, or 34.22%, of the net residential area.

**Flex Zone 1**

Flex Zone 1 permits medium density and high-density residential housing. It has been located centrally within the concept plan area at the northeast corner of the intersection between Gordon Road and Donald Street. Its location will serve as a highly visible focal point for the
neighbourhood and it will serve to support the potential commercial development located adjacent to it in Flex Zone 2.

Flex Zone 1 accounts for 2.09 ha, or 4.77%, of the net residential area.

**Flex Zone 2**

Flex Zone 2 permits medium density and potential commercial land uses that can either be standalone or as part of a mixed-use development. Similar to Flex Zone 1, it has been located centrally within the concept plan area at the southeast corner of the intersection between Gordon Road and Donald Street. Its location will serve as a highly visible focal point for the neighbourhood and will serve to support the medium to high-density development located adjacent to it in Flex Zone 1, as well as the broader community.

Flex Zone 2 accounts for 0.60 ha, or 1.37%, of the net residential area.

**Open Space**

HLW Ph 1 incorporates 12.91 ha of open space within the plan area. These areas are provided through a municipal utility parcel (pipeline corridor) running east-west along the south boundary of the plan area and a municipal utility parcel (stormwater channel) along the western edge of the plan area, as well as a central municipal reserve parcel that will be home to a future school and recreational amenities.

**Connectivity**

HLW Ph 1 is a neighbourhood that has excellent connectivity to destinations within the community, to neighbouring communities, and to the broader community of Regina.

The design of HLW Ph 1 incorporates elements that facilitate connectivity and circulation by active modes to potential commercial, educational, and recreational destinations within the community through the provision of open spaces and walkways that serve to support the modified grid pattern of the roadways.

The roadway network and street pattern in HLW Ph 1 is planned on a modified grid that allows it to seamlessly connects to the adjacent community of Harbour Landing to the east. The roadway network builds on and connects to the surrounding neighbourhood via arterial, collector, and local roadways and is near Regina’s Ring Road which facilitates broader movement and connectivity to the rest of Regina and the region.

### 3.3 NEIGHBOURHOOD DENSITY

A breakdown of the anticipated population densities for the concept plan area can be found in Table 3.1. **Figure 3.1 Land Use Plan** illustrates the planned land use for the concept plan.
## Table 3.1 HLW Ph 1 Land Use and Density Statistics

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (ha)</th>
<th>% of GA</th>
<th>% of GDA</th>
<th>Units / ha</th>
<th>Units</th>
<th>People / Unit</th>
<th>Population</th>
<th>People / ha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROSS AREA (GA)</strong></td>
<td>85.70</td>
<td>100%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline Corridor</td>
<td>2.54</td>
<td>3.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipal Utility Parcel - Stormwater Channel</td>
<td>4.54</td>
<td>5.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stormwater Detention Facility (private)</td>
<td>9.17</td>
<td>10.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RM of Sherwood</td>
<td>0.63</td>
<td>0.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Non-Developable Land</strong></td>
<td>16.88</td>
<td>19.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROSS DEVELOPABLE AREA (GDA)</strong></td>
<td>68.82</td>
<td>80.3%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial Roadways</td>
<td>2.66</td>
<td></td>
<td>3.87%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Collector Roadways</td>
<td>3.78</td>
<td></td>
<td>5.49%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Roadways</td>
<td>12.62</td>
<td></td>
<td>18.34%</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Open Space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipal Reserve</td>
<td>5.83</td>
<td></td>
<td>8.47%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipal Walkway</td>
<td>0.07</td>
<td></td>
<td>0.10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Non-Residential</strong></td>
<td>24.96</td>
<td></td>
<td>36.27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net Residential Area (NRA)</strong></td>
<td>43.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Residential Land Use, Dwelling Count, and Population

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (ha)</th>
<th>% of NRA</th>
<th>% of GDA</th>
<th>Units / ha</th>
<th>Units</th>
<th>People / Unit</th>
<th>Population</th>
<th>People / ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Density Residential</td>
<td>23.09</td>
<td>52.64%</td>
<td>33.55%</td>
<td>25</td>
<td>577</td>
<td>3</td>
<td>1,732</td>
<td>75</td>
</tr>
<tr>
<td>Low Density / Medium Density Residential</td>
<td>15.01</td>
<td>34.22%</td>
<td>21.81%</td>
<td>25</td>
<td>375</td>
<td>3</td>
<td>1,126</td>
<td>75</td>
</tr>
<tr>
<td>Medium Density Residential</td>
<td>3.07</td>
<td>7.00%</td>
<td>4.46%</td>
<td>50</td>
<td>154</td>
<td>2.1</td>
<td>322</td>
<td>105</td>
</tr>
<tr>
<td>Flex Zone 1 (Medium, High Density Residential)</td>
<td>2.09</td>
<td>4.77%</td>
<td>3.04%</td>
<td>100</td>
<td>209</td>
<td>1.7</td>
<td>355</td>
<td>170</td>
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<tr>
<td>Flex Zone 2 (Commercial, Residential, Mixed Use)</td>
<td>0.60</td>
<td>1.37%</td>
<td>0.87%</td>
<td>75</td>
<td>45</td>
<td>1.7</td>
<td>77</td>
<td>128</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td>43.86</td>
<td>100.00%</td>
<td>63.73%</td>
<td>1,360</td>
<td></td>
<td></td>
<td>3,612</td>
<td>82</td>
</tr>
<tr>
<td><strong>Total Gross Developable Area</strong></td>
<td>68.82</td>
<td>100.00%</td>
<td>63.73%</td>
<td>1,360</td>
<td></td>
<td></td>
<td>3,612</td>
<td>82</td>
</tr>
</tbody>
</table>
Figure 3.1 Land Use Plan

Legend
- Concept Plan Boundary
- Low Density Residential
- Low Density/Medium Density Residential
- Medium Density Residential
- Flex Zone 1 (Medium, High Density Residential)
- Flex Zone 2 (Commercial, Residential, Mixed Use)
- RM of Sherwood
- Municipal Reserve
- Municipal Walkway
- Pipeline Corridor
- Municipal Utility Parcel - Stormwater Channel
- Stormwater Detention Facility (private)
- Arterial Roadway
- Collector Roadway
- Future Arterial Roadway
3.4 RESIDENTIAL

3.4.1 Overview

HLW Ph 1 is anticipated to have a population of approximately 3,600 residents, with a residential component comprising 43.86 ha of the gross area of 85.70 ha. The overall density of HLW Ph 1 is 31 units per hectare and 82 people per hectare, based on net residential area. The overall density based on gross developable area is 20 units per hectare and 52 people per hectare.

This level of density is necessary to create a vibrant, efficient, and active community that has a strong sense of place. It also serves to facilitate the eventual development of community amenities such as services, recreation spaces, and commercial areas as increased density and its subsequent increase in population induces the need for neighbourhood amenities.

HLW Ph 1 will be comprised of a variety of housing typologies, which includes various built forms from low density single-detached housing to high density housing in the form of multi-storey buildings. The various housing types have strategically been located throughout the community in the following manner:

- Low density residential has primarily been located away from arterial and collector roadways, and is located along local roadways more interior to the neighbourhood and along the various open spaces throughout the community;

- Medium density residential has been located along arterial and collector roadways to serve as residential framing that creates activated corridors throughout the community. It has also been centrally located in Flex Zone 1 to facilitate the creation of a neighbourhood level community hub;

- High density residential has been located in Flex Zone 1 to facilitate the creation of a neighbourhood level community hub; and

- There is potential for commercial, residential, and mixed-use development in Flex Zone 2, which has been located adjacent to Flex Zone 1 to further bolster the development of a neighbourhood level community hub.

When viewed as a whole, the way in which residential development has been planned throughout HLW Ph 1 will help facilitate the successful creation of a complete neighbourhood.

3.4.2 Objectives

The following objectives apply to residential development in HLW Ph 1:

- Include a diverse mix of housing typologies that will provide the opportunity for residents with differing ages, income levels, lifestyles, and physical abilities to find housing that suites their respective needs through all stages of life;
• Housing designs that allow for flexibility and adaptability in function that accommodate the changing needs of households and housing for persons with specific needs;

• Incorporate high-quality design with interesting architectural features that contribute to the overall sense of place of the community;

• Where appropriate, provide the opportunity for secondary suites and laneway housing; and

• Establish an overall residential population density that effectively utilizes municipal infrastructure and positively contributes towards addressing climate change.

3.5 COMMERCIAL

3.5.1 Overview

Commercial use will be permitted within Flex Zone 2 as standalone establishments or as part of a mixed-use development. The potential commercial opportunities within HLW Ph 1 will provide residents and visitors with convenient access to a variety of goods, services, and amenities.

The types of retail and services that can locate within this area may include, but are not limited to, a grocery store, pharmacy, financial institutions, restaurants, and other services.

3.5.2 Objectives

The following objectives apply to commercial development in HLW Ph 1:

• Commercial uses should be located within Flex Zone 2, while still allowing for future flexibility as market demands evolve;

• Commercial uses should be located and oriented in a manner that provides an inviting experience and ensures maximum visibility and convenient access;

• Commercial uses should be located adjacent to compatible and complimentary uses including residential or institutional uses;

• Commercial development should be designed in a manner that contributes towards creating an engaging, attractive, and vibrant public realm;

• Commercial buildings should be designed in a manner that encourages pedestrian interaction and movement. This should include a continuous street wall, a high degree of fenestration, clear glazing, weather protection (i.e., canopies), identifiable entrances accessed via the adjacent streets, and appropriate signage;

• Commercial sites should be designed in a manner that encourages pedestrian interaction and movement;
• Be connected to the community and accessible by multi-modal transportation options; and
• Minimize the impact of commercial development on adjacent land uses by being oriented towards the abutting roadways and away from residential uses.

3.6 RECREATION, PARKS, AND OPEN SPACE

3.6.1 Overview

Parks and open spaces play a large role in providing recreation opportunities to community members. They allow socializing to take place, interaction with nature, are a source of community identification, and offer spaces and pathways that encourage physical activity.

The location, type, and elements contained within each park and open space have been determined based on metrics provided by the City of Regina, as well as the following City of Regina documents: Open Space Management Strategy (OSMS), 2019 Draft Design Standards, Recreation Master Plan, Urban Forest Management Strategy, Recreation Facilities Plan, Parks and Open Space Bylaw, and Design Regina.

The parks and open spaces have been located to maximize usage throughout the entire area as shown on Figure 3.2 Parks and Open Space Rationale. The variety of sizes and elements within the open spaces are meant to accommodate users with differing purposes / activities: formal, informal, scheduled, passive, active, leisure, recreation, and active transportation. The HLW Ph 1 concept plan area consists of 5.83 ha of municipal reserve, or 8.47% of the gross developable area.

In addition, the open spaces in HLW Ph 1 have been located to compliment and build upon the existing and potential future neighbourhoods and create a cohesive network of open space where possible.

An overview of the parks and open spaces in HLW Ph 1 is as follows:

1.0 – West
- **Size:** 4.54 ha
- **Definition:** Municipal Utility Parcel – Stormwater Channel
- **Potential Elements and Uses:** pathways (pavement / crusher dust) to accommodate recreational walking, running, hiking, cycling, inline skating, dog walking (on leash), interpretive features, community garden spaces, etc.

2.0 – West Central
- **Size:** 5.83 ha
- **Definition:** Municipal Reserve (MR)
- **Potential Elements and Uses:** elementary school, multi-purpose sports field for games and practices, basketball courts, looping pathway around park, fully accessible play structure, etc.
3.0 – South

- **Size:** 2.54 ha
- **Definition:** Pipeline Corridor
- **Potential Elements and Uses:** pathways (crusher dust) to accommodate recreational walking, running, hiking, cycling, inline skating, dog walking (on leash), interpretive features, community garden spaces, etc.

HLW Ph 1 will encompass 85.70 ha of land and accommodate approximately 3,600 residents at full build-out. The entire HLW Ph 1 plan area consists of 8.47% of MR space, based on gross developable area.

A breakdown of the total areas, MR required, MR dedicated, and deficiencies / overages for HLW Ph 1 are provided in Table 3.2.

**Table 3.2 Municipal Reserve Dedication Summary**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Total (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Area</td>
<td>85.70</td>
</tr>
<tr>
<td>Total Exemptions (pipeline corridor, storm channel, private storm detention facility, RM of Sherwood)</td>
<td>16.88</td>
</tr>
<tr>
<td>Total Developable Area</td>
<td>68.82</td>
</tr>
<tr>
<td>Municipal Reserve Required</td>
<td>6.88</td>
</tr>
<tr>
<td>Municipal Reserve Dedicated</td>
<td>5.83</td>
</tr>
<tr>
<td>Difference</td>
<td>-1.05</td>
</tr>
</tbody>
</table>
Figure 3.2 Parks and Open Space Rationale
Walkability is largely a function of both proximity and connectivity between destinations, or the degree to which we can travel directly between places where we live, work, and play. Though the term refers to walking specifically, the characteristics of walkable neighbourhoods also support other active forms of transportation. **Figure 3.3 Walkability Analysis** provides an overview of the walkability between parks, open spaces, trails, residences, road networks, and commercial / flex zones.

Using ESRI ArcGIS Network Analyst, two service areas were created at 400 m and 800 m in the plan area. Using the open space boundaries as walking starting points, the software generated polygons outward at the specified distances, along walkable corridors. This type of analysis allows a more accurate presentation of walkability as it takes into consideration the actual distances of corridors (not simply a “birds-eye-view”).

Walkability of the core is highly dependent upon the design and layout of buildings and pathways within and through the high and medium density buildings, commercial, and flex zones.
Figure 3.3 Walkability Analysis
4.0 SERVICING STRATEGY

This section outlines the plan for proposed services and road networks, and their relationship to existing and future developments. The following information outlines what is required to tie into the existing systems and future development.

4.1 TRANSPORTATION

The proposed transportation network includes a general block pattern based on a modified grid layout. There is one arterial roadway in the development, which is the continuation of Gordon Road further west from Harbour Landing to the east. Two collector roadways are proposed, including the continuation of Jim Cairns Boulevard further west from Harbour Landing to the east, and a new north-south collector roadway called Donald Street that bisects the development, connecting Gordon Road and Jim Cairns Boulevard, as well as extending south to the pipeline corridor. The remaining roadways will be local residential streets connecting to Gordon Road, Jim Cairns Boulevard, and Donald Street. Albulet Drive and Vedette Road, two local residential roadways in Harbour Landing, will also be extended further west into the development.

Future development to the north will be able to connect directly with Jim Cairns Boulevard at appropriate intersections. Donald Street and one local residential roadway will cross the pipeline corridor to the south, allowing connections for future development to the south. Gordon Road and Jim Cairns Boulevard will provide connections to a future north-south arterial roadway to the west, and also provide connections for future development to the west.

Transit service is anticipated along collector and arterial streets with transit stops next to parks and open spaces, services, amenities, and higher density residential.

A pathway system on the pipeline corridor and storm channel parcels will connect to the existing pathway system in Harbour Landing, providing pedestrian connectivity between Harbour Landing and the proposed school and park space in HLW Ph 1.

Overall, the transportation network provides connectivity, safety, and choice for all users. The increase in connectivity will create opportunities for people to move more freely and access goods, services, and amenities. The network provides choices in routes for all users, which has the potential to alleviate pressure on one roadway and distribute it more equitably throughout the community.

A comprehensive transportation study report will be provided under separate cover. It will describe the projected traffic volumes at each major access point and the anticipated impact on the overall roadway network.

Figure 4.1 Circulation Plan provides an overview of the proposed transportation network.
Legend
- Concept Plan Boundary
- 33 m Arterial Roadway
- 22 m Collector Roadway
- 18 m Local Roadway
- 15 m Local Roadway
- Required Rear Lane
- Potential Rear Lane
- Future Arterial Roadway
- Walkway
- Pathway

Figure 4.1 Circulation Plan
4.2 WATER

HLW Ph 1 will be serviced by extending existing water mains from Harbour Landing further west into the concept plan area. The following existing connection points will be utilized:

- 250 mm diameter water main on Jim Cairns Boulevard;
- 200 mm diameter water main on Albulet Drive; and
- 600 mm diameter water main on Gordon Road.

The proposed water network in the concept plan area will accommodate future adjacent development to the north, south, and west. There are no upgrades anticipated to existing City of Regina water network infrastructure as a result of HLW Ph 1 development.

Figure 4.2 Water Servicing illustrates the proposed water distribution network for HLW Ph 1.
Figure 4.2 Water Servicing

Legend
- Concept Plan
- Boundary
- Connection Point
- Proposed 200mm Ø Water Line
- Proposed 250mm Ø Water Line
- Proposed 300mm Ø Water Line
- Proposed 600mm Ø Water Line
- Existing 200mm Ø Water Line
- Existing 250mm Ø Water Line
- Existing 600mm Ø Water Line
4.3 WASTEWATER

All wastewater flows for HLW Ph 1 will be collected by new sanitary sewer mains and conveyed by gravity to the east to an existing 525 mm diameter sanitary sewer connection point on Gordon Road at Campbell Street in Harbour Landing. Flows will continue on by gravity to the existing Harbour Landing Pump Station.

The proposed wastewater network in the concept plan area will accommodate future adjacent development to the south, which is expected to also convey flows to the existing Harbour Landing Pump Station. Future adjacent development to the north and west of the concept plan area is planned to be serviced by a new wastewater pump station west of the concept plan area which will convey flows by force main north towards the City of Regina Wastewater Treatment Plant.

Development of HLW Ph 1 will incorporate wastewater storage if it is deemed necessary during detailed design. The City of Regina is currently undertaking plans to upgrade the South Trunk wastewater trunk in Southwest Regina. The upgrades will improve the capacity of the City of Regina’s wastewater collection system. The exact timing of the upgrades to the South Trunk and when HLW Ph 1 begins generating flows may negate the need for storage or reduce the amount of storage required.

Figure 4.3 Wastewater Servicing illustrates the proposed wastewater collection system for HLW Ph 1.
Figure 4.3 Wastewater Servicing
4.4 STORMWATER

Harbour Landing West is located within the East Cottonwood Creek watershed, at the upstream end of the drainage basin. The watershed is bounded by Highway 1 to the south, Campbell Street to the east, and the Regina International Airport to the north, which coincides with the south, east, and north boundaries of Harbour Landing West, respectively. Harbour Landing West has relatively flat topography with sloughs which are dry and cultivated in most years. Overland drainage generally runs north and west into the east tributary of Cottonwood Creek, which ultimately connects with the Qu’Appelle River system further downstream.

The long-term permanent stormwater servicing solution for Harbour Landing West includes conveying flows to East Cottonwood Creek via construction of an approximately 5 km long drainage channel. This channel will connect to a natural drainage run which conveys flows to a registered agricultural drainage right of way that outlets into one of the East Cottonwood Creek tributaries. A temporary private stormwater servicing solution will service HLW Ph 1 until the permanent channel can be constructed.

HLW Ph 1 will include underground storm sewers and overland drainage that will convey flows by gravity to a storm channel on the west side of the concept plan area. This storm channel will be part of the permanent stormwater servicing solution and will eventually connect to the future drainage channel that outlets to East Cottonwood Creek. In the interim, a temporary private dry bottom detention facility will be constructed west of the storm channel. Flows will be directed by gravity into this detention facility from the storm channel. The detention facility will provide peak flow attenuation by storing flows up to the 1:100 year storm event. A temporary private pump station will pump and discharge flows from the temporary detention facility into a temporary private drainage ditch that will convey flows by gravity southwest towards an existing slough in Harbour Landing West. This slough is located on land that is owned by the Dream Development. In addition, the land immediately downstream of the slough outside Harbour Landing West is also owned by the Dream Development.

Flows from the detention facility will be pumped and discharged after a peak storm event has subsided, limiting the impact to downstream properties. Pumping flow rates will be less than or equal to the pre-development flow rate, which will further limit impacts to downstream properties. The temporary private detention facility, pump station, and drainage ditch will be located on land owned by the Dream Development, and these temporary facilities will be owned, operated, and maintained by the Dream Development. Once the permanent drainage channel is constructed to convey flows to East Cottonwood Creek, the temporary facilities will be removed. A permanent dry bottom detention facility will be constructed to replace the temporary private detention facility. The permanent detention facility will be located downstream of the concept plan area storm channel, and will not require a pump station, as flows will be discharged by gravity. Once the permanent detention facility and drainage channel are constructed and commissioned, the temporary private detention facility, pump station, and drainage ditch will be decommissioned.

As no temporary or permanent stormwater infrastructure will connect directly to any existing City of Regina infrastructure, there are no upgrades required to any existing infrastructure. Figure 4.4 Storm Minor System illustrates the proposed storm minor system for HLW Ph 1.
Figure 4.4 Storm Minor System
4.5 SHALLOW UTILITIES

Shallow utilities, including power, natural gas, cable, telephone, and internet services, will be provided by local utility companies. Shallow utilities will be located within road right of ways and easements as required to service the concept plan area. Dream Development will work with the utility companies at the time of subdivision to provide all necessary shallow utility connections.
5.0 IMPLEMENTATION

5.1 STAGING

The HLW Ph 1 concept plan area will be developed in multiple stages. The stages have been determined according to the ease of providing services, policy regulations, and project specific sensitivities, such as:

- **Servicing**: the ability of new infrastructure to build upon and align with existing service connections;

- **School Priority**: providing servicing and connection to the proposed school site; and

- **Market Conditions**: determining the most cost-effective development pattern.

*Figure 5.1 Staging Plan* outlines the proposed staging plan. The first stage of development will occur along Gordon Road, continuing from Harbour Landing, as well as along Donald Street, providing access and servicing to the proposed school site. Additional stages will progress outward from Gordon Road and Donald Street.

The proposed staging plan is preliminary, and the actual pace and staging of development may vary and will be determined by market demand. Construction stages may differ from Figure 5.1 based on servicing requirements.

5.2 CAPITAL IMPROVEMENT PLAN

The specific details of infrastructure design to support a particular stage of development will form part of the detailed engineering design and will be prepared in support of subdivision approvals and form part of the future servicing agreements with the City of Regina.

The temporary private stormwater detention facility, pump station, and drainage ditch will be required to service the initial stage of development. Water, wastewater, and transportation infrastructure will be extended from Harbour Landing to service the initial stage, and additional stages will see similar extensions of this infrastructure.
Figure 5.1 Staging Plan
REFERENCES

Stantec Consulting Ltd. (2011). Phase I Environmental Site Assessment and Environmental Screening NW 03-17-20 W2M, NE 03-17-20 W2M and Block E, Plan 95R51272 West of Regina, Saskatchewan. Regina.
Stantec Consulting Ltd. (2014). Final - Phase I Environmental Site Assessment Update NW and NE 03-17-20 W2M, Block E Plan 95R51272, West of Regina, SK. Regina.
Appendix A: Land Use Plan
Harbour Landing West - Phase 1
Land Use Plan

Legend
- Concept Plan Boundary
- Low Density Residential
- Low Density/Medium Density Residential
- Medium Density Residential
- Flex Zone 1 (Medium, High Density Residential)
- Flex Zone 2 (Commercial, Residential, Mixed Use)
- RM of Sherwood
- Municipal Reserve
- Municipal Walkway
- Pipeline Corridor
- Municipal Utility Parcel - Stormwater
- Stormwater Detention Facility (private)
- Arterial Roadway
- Collector Roadway
- Future Arterial Roadway

Harbour Landing West Phase 1 Concept Plan Land Use Areas

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Acres</th>
<th>%</th>
</tr>
</thead>
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<tr>
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<td>23.1</td>
<td>26.3%</td>
</tr>
<tr>
<td>Low Density Residential</td>
<td>15.0</td>
<td>17.1%</td>
</tr>
<tr>
<td>Medium Density Residential</td>
<td>8.1</td>
<td>9.1%</td>
</tr>
<tr>
<td>Flex Zone 1 (Medium, High Density Residential)</td>
<td>2.1</td>
<td>2.4%</td>
</tr>
<tr>
<td>Flex Zone 2 (Commercial, Residential, Mixed Use)</td>
<td>1.5</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total Mixed Residential</td>
<td>45.9</td>
<td>51.7%</td>
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<tr>
<td>Arterial Reserve</td>
<td>3.0</td>
<td>3.3%</td>
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<tr>
<td>Arterial Utility Parcel</td>
<td>3.1</td>
<td>3.4%</td>
</tr>
<tr>
<td>Collector Roadway</td>
<td>19.1</td>
<td>22.2%</td>
</tr>
<tr>
<td>Pipeline Corridor</td>
<td>2.5</td>
<td>3.0%</td>
</tr>
<tr>
<td>Municipal Utility Parcel</td>
<td>4.5</td>
<td>5.1%</td>
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<tr>
<td>Stormwater Detention</td>
<td>9.2</td>
<td>10.4%</td>
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<tr>
<td>Pit of Sherwood</td>
<td>0.6</td>
<td>0.7%</td>
</tr>
<tr>
<td>Total Area</td>
<td>85.7</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Appendix B: Circulation Plan
Legend
- Concept Plan Boundary
- 33 m Arterial Roadway
- 22 m Collector Roadway
- 18 m Local Roadway
- 15 m Local Roadway
- Required Rear Lane
- Potential Rear Lane
- Future Arterial Roadway
- Walkway
- Pathway

Harbour Landing West - Phase 1
Circulation Plan