Harbour Landing West Phase 1

Concept Plan Report

Prepared for:
Dream Development
City of Regina

Prepared by:
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June 11, 2021

Stantec
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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.

COMPLETE NEIGHBOURHOOD: Safe, accessible, and connected modes of transportation; diversity of housing choices for all; areas for employment opportunities; community resources; services and amenities for daily needs; civic gathering areas; cultural resources; social opportunities; and important heritage features.

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, singled-detached with secondary suites, and duplexes;
- Medium density development in the form of 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 suite 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>
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<tbody>
<tr>
<td><strong>Section C: Growth Plan</strong></td>
<td><strong>Section C: Growth Plan</strong></td>
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<tr>
<td><strong>Goal 2.5:</strong> Develop compact and contiguous neighbourhoods.</td>
<td>HLW Ph 1 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 2.11.1:</strong> Require new neighbourhoods to be designed and planned as complete neighbourhoods.</td>
<td>HLW Ph 1 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>
</tr>
<tr>
<td><strong>Goal 2.11.2:</strong> Require new neighbourhoods to achieve a minimum gross population density of 50 persons per hectare.</td>
<td>HLW Ph 1 has an overall gross developable area population density of 52 persons per hectare.</td>
</tr>
<tr>
<td><strong>Section D1: Regional Context</strong></td>
<td><strong>Section D1: Regional Context</strong></td>
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<td><strong>Goal 3.1.2:</strong> Establish development forms that support the sustainable use of infrastructure.</td>
<td>HLW Ph 1 is a compact community that efficiently utilizes municipal infrastructure through the provision of density.</td>
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<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>
<tr>
<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>
<td></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 connects 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>
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<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 areas 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 Area 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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<tr>
<td>DESIGN REGINA</td>
<td>HLW PH 1 CONCEPT PLAN</td>
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<tr>
<td><strong>Section D5: Land Use and Built Environment</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Goal 7.1.5:</strong> 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.</td>
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</tr>
<tr>
<td><strong>Section D5: Land Use and Built Environment</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Goal 7.1.8:</strong> Require that new neighbourhoods are planned and developed to include a distinctive character, identity, and sense of place.</td>
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<tr>
<td><strong>Section D5: Land Use and Built Environment</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Goal 7.36.2:</strong> 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.</td>
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</table>
Section D6: Housing

Goal 8.11: Encourage developers to provide a greater mix of housing to accommodate households of different incomes, types, stages of life, and abilities in all neighbourhoods.

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.

Section D6: Housing

Goal 8.13: Expand areas where apartments and multi-unit buildings are permitted uses.

Medium density and high-density housing is permitted within HLW Ph 1.

1.4.1 Summary of OCP Phasing Designation

The HLW Ph 1 concept plan area is currently designated as a Special Study Area in the OCP, which is defined as “an area, determined by the City, which requires further, more detailed study to determine future land use and phasing or timing of development based on impact to the City.”

It is proposed that the HLW Ph 1 concept plan area be redesignated as a Phase 1 development area under the New Neighbourhoods (300k) designation in the OCP. According to the OCP Section C, Goal 4, Policy 2.14, the lands currently designated as a Special Study area will be permitted for development where it can be demonstrated that several policies can be achieved. Table 1.2 summarizes how the HLW Ph 1 concept plan area conforms to these policies in the OCP.

Table 1.2 HLW Ph 1 Concept Plan Conformity to OCP Policy 2.14

<table>
<thead>
<tr>
<th>OCP POLICY</th>
<th>HLW PH 1 CONCEPT PLAN CONFORMANCE</th>
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<tbody>
<tr>
<td>Policy 2.14.1: The extent to which development can proceed using capacity in existing infrastructure without significant upgrades being required.</td>
<td>HLW Ph 1 has access to existing infrastructure in the adjacent Harbour Landing neighbourhood.</td>
</tr>
<tr>
<td>• Capacity exists in the existing water network to service HLW Ph 1. No upgrades are required to service HLW Ph 1. Stormwater will be conveyed west away from the developed area of the city and will not require use of existing infrastructure. No upgrades are required to service HLW Ph 1. HLW Ph 1 will provide a recreational municipal reserve space which will provide recreational opportunities to residents in HLW Ph 1 and the adjacent Harbour Landing neighbourhood. A new joint-use elementary school site will be located in HLW Ph 1.</td>
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<tr>
<td>OCP POLICY</td>
<td>HLW PH 1 CONCEPT PLAN CONFORMITY</td>
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<td>which will provide for enrolment of HLW Ph 1 residents as well as Harbour Landing residents, alleviating current capacity constraints in the existing joint-use elementary school in Harbour Landing. No upgrades are required to any existing City of Regina open space.</td>
<td></td>
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</tbody>
</table>

**Policy 2.14.2:** Any proposed new infrastructure supports planned long-term growth and can be provided in the financial best interest of the City of Regina from a life cycle cost perspective.

Proposed infrastructure for HLW Ph 1 will accommodate planned growth to the north, south, and west of the HLW Ph 1 concept plan area. No major upgrades to any existing infrastructure are necessary to service HLW Ph 1.

**Policy 2.14.3:** Any interim servicing will be fully the responsibility of the developer until infrastructure supporting long-term growth is in place.

HLW Ph 1 will utilize a temporary private stormwater detention facility, pump station, and drainage ditch to service HLW Ph 1 until a permanent storm channel is constructed to East Cottonwood Creek to the west. These temporary facilities will be located on land owned by Dream Development. The temporary facilities will be owned, operated, and maintained by Dream Development. Dream Development will bear the costs of decommissioning the temporary facilities and of connecting the system to the permanent system.

**Policy 2.14.4:** The area can be developed in such a way so as to permit ready integration with future planned development and, where applicable, existing neighbourhoods.

HLW Ph 1 will integrate seamlessly with the existing Harbour Landing neighbourhood to the east. Existing roadways will extend from Harbour Landing into HLW Ph 1. A potential 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. Proposed infrastructure for HLW Ph 1 will accommodate future adjacent development to the north, south, and west.
<table>
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<tr>
<th>OCP POLICY</th>
<th>HLW PH 1 CONCEPT PLAN CONFORMITY</th>
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<tbody>
<tr>
<td><strong>Policy 2.14.5:</strong> Impacts on the existing community, BUILT OR APPROVED NEIGHBOURHOODS, or other recommended development associated with the 300,000 population are minimal.</td>
<td>HLW Ph 1 is a natural extension of the existing Harbour Landing neighbourhood and provides opportunity to meet demand for growth in the southwest area of the city. There are no other new neighbourhoods in the OCP 300k population horizon in the southwest area of the city. A new joint-use elementary school site in HLW Ph 1 will alleviate current capacity constraints in the existing joint-use elementary school in Harbour Landing, causing a positive impact on the surrounding community.</td>
</tr>
<tr>
<td><strong>Policy 2.14.6:</strong> The proposed development conforms to the policies of this Plan.</td>
<td>HLW Ph 1 conforms to the policies of the OCP, as summarized in Table 1.1 of this HLW Ph 1 Concept Plan Report.</td>
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</table>
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 streamside 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.
Legend
- Concept Plan Boundary
- Contour Elevation
- Flow Direction

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 Existing Shallow Utilities

Known existing shallow utilities include overhead power lines running north-south in the Campbell Street right of way west ditch, outside the HLW Ph 1 concept plan area. Other buried shallow utilities that exist in the vicinity will be confirmed during detailed design of the subdivision.

2.2.2 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.
2.2.3 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 approximately 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, and Addendum Report #1 Analysis of Risks to Proposed Harbour Landing West Development from Existing Oil and Gas Pipelines, Bercha Group Limited, October 2014.

**Figure 2.2 Allowable Land Uses Based on IRI Contours** shows the permissible land uses based on the individual risk intensity (IRI) contours derived from the noted risk analysis reports. **Figure 2.3 Individual Risk Intensity Contours** shows the IRI contours on the HLW Ph 1 concept plan area. Based on the risk analysis reports, the 1 in a million (1x10^{-6}), 0.3 in a million (0.3x10^{-6}), and 1 in 10 million (1x10^{-7}) IRI contours are 127 m, 257 m, and 307 m from the TransGas pipeline corridor, respectively.

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 (0.3x10^{-6}) IRI contour.
Figure 2.3 Individual Risk Intensity Contours

Legend
- Concept Plan Boundary
- Low Density Residential
- Low Density/Medium Density Residential
- Medium Density Residential
- Flex Area 1 (Medium, High Density Residential)
- Flex Area 2 (Commercial, Residential, Mixed Use)
- RM of Sherwood
- Municipal Reserve
- Municipal Walkway
- Pipeline Corridor
- Municipal Utility
- Stormwater Detention Facility (private)
- Individual Risk Intensity (IRI) Contour

U:\111000289\planning\drawing\report Figures\fig_2.3_iri_contours.dwg
2.2.4 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.

2.2.4.1 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.

2.2.4.2 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.

2.2.4.3 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.

2.2.4.4 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 duplexes, 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, has 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 Area 1**

Flex Area 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 Area 2.
Flex Area 1 accounts for 2.09 ha, or 4.77%, of the net residential area.

**Flex Area 2**

Flex Area 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 Area 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 Area 1, as well as the broader community.

Flex Area 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 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.

**Elementary School**

A joint-use elementary school site is located within the HLW Ph 1 municipal reserve parcel adjacent to Donald Street, as shown in Figure 3.1 Land Use Plan and Appendix A. It is anticipated that the proposed school will service the HLW Ph 1 and Harbour Landing neighbourhoods and will have an estimated enrollment of approximately 650 students. The school is expected to be open for the 2024-2025 school year.

**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>GROSS AREA (GA)</td>
<td>85.70</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<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>
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<td></td>
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<td></td>
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<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>Total Non-Developable Land</td>
<td>16.88</td>
<td>19.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROSS DEVELOPABLE AREA (GDA)</td>
<td>68.82</td>
<td>80.3%</td>
<td>100%</td>
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<td>Transportation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial Roadways</td>
<td>2.66</td>
<td>3.87%</td>
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<td>Collector Roadways</td>
<td>3.78</td>
<td>5.49%</td>
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<td></td>
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<tr>
<td>Local Roadways</td>
<td>12.62</td>
<td>18.34%</td>
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<td>Open Space</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Municipal Reserve</td>
<td>5.83</td>
<td>8.47%</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Municipal Walkway</td>
<td>0.04</td>
<td>0.06%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipal Utility – Walkway with Stormwater Infrastructure</td>
<td>0.03</td>
<td>0.04%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Non-Residential</td>
<td>24.96</td>
<td>36.27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Net Residential Area (NRA)</td>
<td>43.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>RESIDENTIAL LAND USE, DWELLING COUNT, AND POPULATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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 Area 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>
</tr>
<tr>
<td>Flex Area 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>Total Residential</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>Total Gross Developable Area</td>
<td>68.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3.1 Land Use Plan
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 Area 1 to facilitate the creation of a neighbourhood level community hub;

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

- There is potential for commercial, residential, and mixed-use development in Flex Area 2, which has been located adjacent to Flex Area 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 suits 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 Area 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 Area 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 Spaces. 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 (MU) Parcel – Stormwater Channel
- **Proposed Recreation Elements:** paved and crusher dust pathways.

#### 2.0 – West Central
- **Size:** 2.23 ha
- **Definition:** Recreational Municipal Reserve (MR)
- **Proposed Recreation Elements:** standard multi-purpose athletic field, standard passive park space, standard neighbourhood park class playground, standard outdoor basketball court space.

#### 3.0 – Central
• **Size:** 3.60 ha  
  ▪ **Definition:** Educational Municipal Reserve (MR)  
  ▪ **Proposed Elements:** joint-use elementary school.

### 4.0 – South

- **Size:** 2.54 ha  
  ▪ **Definition:** Pipeline Corridor  
  ▪ **Potential Recreation Elements:** potential crusher dust pathway.

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>Recreational Municipal Reserve Dedicated</td>
<td>2.23</td>
</tr>
<tr>
<td>Educational Municipal Reserve Dedicated</td>
<td>3.60</td>
</tr>
<tr>
<td>Total 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 Spaces
3.6.2 Walkability

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.

According to the City of Regina Recreation Master Plan, the base level of service is to provide a
public recreation opportunity within 800 m of every resident. The City of Regina Open Space
Management Strategy (OSMS) provides a guideline for a reasonable walking distance to a
neighbourhood park of 400 m to 800 m.

Using these guidelines, two service areas were created at 400 m and 800 m in the plan area using
ESRI ArcGIS Network Analyst software. 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”).

**Figure 3.3 Walkability Analysis** provides an overview of the walkability between parks, open
spaces, trails, residences, road networks, and commercial / flex areas for the HLW Ph 1 concept
plan area. As can be seen in the figure, all residents in the HLW Ph 1 concept plan area are within
800 m of a public open space, and the majority are within 400 m. Many residents in Harbour
Landing will also have access to an open space in HLW Ph 1 within 800 m.
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.

Currently, Regina Transit provides service to Harbour Landing via Route #18 and #40, which are located adjacent to the proposed development. Route #18 enters on Parliament Avenue, turns on James Hill Road before stopping at Grasslands Shopping Centre and travelling north on Harbour Landing Drive and exiting the community via Parliament Avenue. Route #18 connects Harbour Landing with the University of Regina and does not travel directly downtown. Route #40, called Albert South Express, serves residential neighbourhoods in the south and north areas of the city, using Albert Street as the waypoint between the south and north neighbourhoods.

It is expected that transit service to HLW Ph 1 will be an extension of present day Route #40. The proposed transit service will enter HLW Ph 1 via Jim Cairns Boulevard, travel south along Donald Street, and exit in an eastbound direction on Gordon Road to tie into the existing route. If there is a need for transit service prior to full buildout of HLW Ph 1, then a potential interim transit route could be provided. This interim route could run west along Jim Cairns Boulevard, south on Campbell Street, west on Albulet Drive, and south on Donald Street to tie into Gordon Road. In the event that the interim transit route is required before the permanent transit route is constructed, Albulet Drive will be constructed to transit standards. The proposed and interim transit routes with potential transit stops are shown in Figure 4.1 Transit Route.

A potential 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 4.2 Circulation Plan* provides an overview of the proposed transportation network.
Legend

- Concept Plan Boundary
- Proposed Transit Route
- Potential Interim Transit Route
- Potential Transit Stop

Figure 4.1 Transit Route
Legend

- Concept Plan Boundary
- 33 m Arterial Roadway
- 22 m Collector Roadway
- 18 m Local Roadway
- 15 m Local Roadway
- Future Arterial Roadway
- Required Rear Lane
- Potential Rear Lane (Required if Medium Density)
- Walkway
- Pathway
- Potential Pathway

Figure 4.2 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 4.3 Water Servicing* illustrates the proposed water distribution network for HLW Ph 1.
Legend
- Concept Plan Boundary
- Connection Point
- Existing 200mm Ø Water Line
- Proposed 200mm Ø Water Line
- Existing 250mm Ø Water Line
- Proposed 250mm Ø Water Line
- Existing 600mm Ø Water Line
- Proposed 300mm Ø Water Line
- Proposed 600mm Ø Water Line

Figure 4.3 Water Servicing
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 is expected to 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 4.4 Wastewater Servicing illustrates the proposed wastewater collection system for HLW Ph 1.
Legend
- Green: 200Ø
- Blue: 450Ø
- Cyan: 250Ø
- Purple: 300Ø
- Orange: 375Ø
- Red: Manhole

Figure 4.4 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 Dream Development, and these temporary facilities will be owned, operated, and maintained by 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.

The total estimated post-development storage volume required for HLW Ph 1 is 37,800 m³ for a 1:5 year rainfall event and 77,000 m³ for a 1:100 year rainfall event.
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 4.5 Storm Minor System** illustrates the proposed storm minor system for HLW Ph 1.
Figure 4.5 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. It is not anticipated that any existing shallow utilities will be impacted by the HLW Ph 1 development. 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 initially 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 estimated timing for construction of each stage is not known at this time. 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.

As discussed in Section 4.1, transit service is expected to be an extension of present day Route #40. The proposed transit service will enter HLW Ph 1 via Jim Cairns Boulevard, travel south along Donald Street, and exit in an eastbound direction on Gordon Road to tie into the existing route. If there is a need for transit service prior to full buildout of HLW Ph 1, then a potential interim transit route could be provided. This interim route could run west along Jim Cairns Boulevard, south on Campbell Street, west on Albulet Drive, and south on Donald Street to tie into Gordon Road. In the event that the interim transit route is required before the permanent transit route is constructed, Albulet Drive will be constructed to transit standards.

As part of the first stage of development, school buses picking up and dropping off students at the proposed elementary school will have two loops to choose from. The crescent south of the proposed school site will provide access for school buses to loop back to Donald Street, as will the streets north of the proposed school site.

For the initial planned Stage 1, there is one access point from the east shown on Gordon Road. Although the remaining access points are shown in Stage 2, if a second access point is required for Stage 1 to meet City of Regina requirements, Dream Development will provide a second access point on Albulet Drive during development of Stage 1.
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 Area 1 (Medium, High Density Residential)
- Flex Area 2 (Commercial, Residential, Mixed Use)
- RM of Sherwood
- Municipal Reserve
- Municipal Walkway
- Pipeline Corridor
- Municipal Utility
- Stormwater Detention Facility (private)
- Arterial Roadway
- Collector Roadway
- Future Arterial Roadway

Proposed School Site

Legends:

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

Proposed School Site
Appendix B: Circulation Plan