

Stewart Greens Neighbourhood Structure Plan

Office Consolidation June 2017

Prepared by:

*Planning and Policy Services Branch
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City of Edmonton*

Bylaw 14674, as amended, was adopted by Council in August 2007. In June 2017, this document was consolidated by virtue of the incorporation of the following bylaws:

- Bylaw 14674* Approved August 21, 2007 (to adopt the Stewart Greens NSP)
Bylaw 17025 Approved December 15, 2014 (to reconfigure and relocate a Medium Density Residential land use to the northern central area of the neighbourhood)
Bylaw 18047 Approved June 28, 2017 (to reconfigure land uses to accommodate the development of residential, institutional, park, and public utility uses)

Editor's Note:

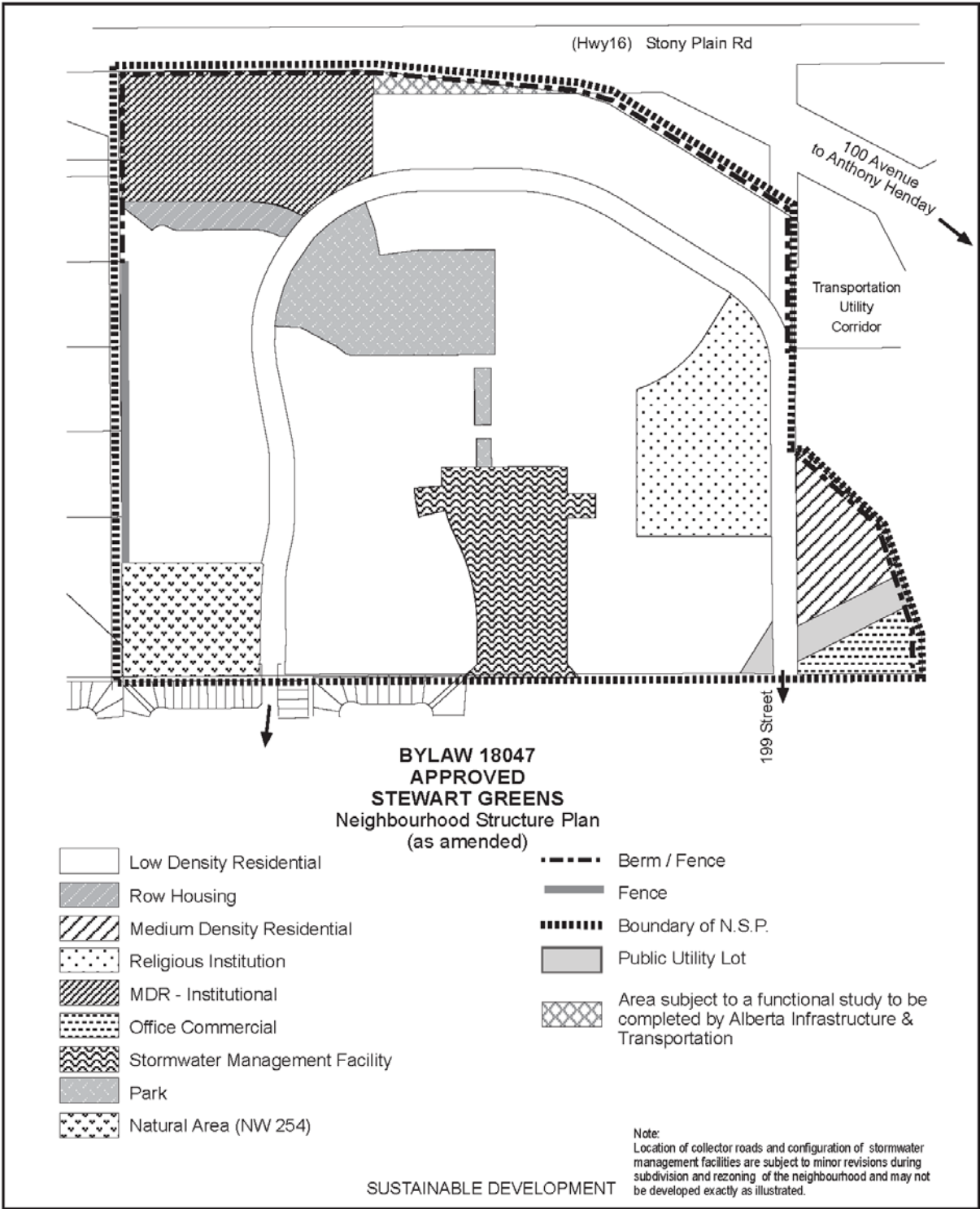
This is an office consolidation edition of the Lewis Farms Area Structure Plan, Bylaw 14674, as approved by City Council on August 21, 2007. This edition contains all amendments and additions to Bylaw 14674.

For the sake of clarity, new maps and a standardized format were utilized in this Plan. All names of City departments have been standardized to reflect their present titles. Private owners' names have been removed in accordance with the Freedom of Information and Protection of Privacy Act. Furthermore, all reasonable attempts were made to accurately reflect the original Bylaws. All text changes are noted in the text and are italicized where applicable.

This office consolidation is intended for convenience only. In case of uncertainty, the reader is advised to consult the original Bylaws, available at the office of the City Clerk.

City of Edmonton
Planning and Development Department

Amendment to Stewart Greens Neighbourhood Structure Plan (Bylaw 18047, Approved June 28, 2017)



STEWART GREENS NEIGHBOURHOOD STRUCTURE PLAN

JUNE 2017

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this Neighbourhood Structure Plan (NSP) is to describe a land use framework for the development and servicing of the *Stewart Greens* NSP, located within the *Lewis Farms Area Structure Plan* (ASP) and approximating a gross area of 64.01 ha within the City of Edmonton. The NSP encompasses lands south of Stony Plain Road; west of the Anthony Henday Transportation Utility Corridor; east of Normandeau Gardens; and north of the Webber Greens Neighbourhood. **Exhibits 1 and 2** illustrate the local context and the approved Lewis Farms ASP respectively. The *Stewart Greens* NSP has been prepared on behalf of a *private property owner [amended by Editor]*, which will be the registered landowner of the majority of lands that are the subject of this NSP.

The viability of the subject lands to remain Business/Industrial has been affected by both City of Edmonton Council's decision to approve the re-designation of the Normandeau Gardens area to the immediate west from Business Industrial to Residential through Bylaw 13807, and the elimination of access from Stony Plain Road (Highway 16) to the subject lands. The intent of this NSP is to provide a range of housing types to accommodate various lifestyles, income levels, and age groups while creating a strong sense of neighbourhood identity and liveability. This is accomplished through the creation of well-designed subdivisions, site planning, and building designs that encourage quality, connectivity, neighbourhood cohesiveness, and inclusion.

Amendments to *Plan Edmonton*, Edmonton's *Municipal Development Plan* (MDP) to re-designate lands from Business and Employment Area to Suburban Area, and the *Lewis Farms Area Structure Plan* to re-designate from Business/Industrial to Residential, Commercial, Stormwater Lake and Institutional have been submitted concurrently with this application. Road closure applications for portions of 100 Avenue and 199 Street have also been submitted concurrently with this NSP. Final determination of the 100 Avenue closure will be dependent upon the findings of a Functional Planning Study associated with Stony Plain Road and Anthony Henday interchange to be commissioned by *the Provincial government [amended by Editor]*.

Stewart Greens is in general conformance with *Plan Edmonton*, Edmonton's MDP, the *Lewis Farms* ASP and other relevant municipal policies and guidelines set out in Section 7 of this report. This NSP will implement the overall development objectives set out in the *Lewis Farms* ASP to:

1. provide a land use framework for the detailed planning of a high quality residential area, including commercial office and institutional uses *[amended by Editor]* and associated complementary uses, comprised of open space, walkways and stormwater management facilities (SWMFs); and
2. allow for economically phased development at the earliest practical date consistent with municipal planning objectives, policies and legislation.

Stewart Greens will be used as a tool to guide future rezoning, subdivision, and development of the lands in an orderly and effective manner. Over time, it is intended that the implementation of these objectives and principles will result in a healthy, sustainable neighbourhood.

2.0 DEVELOPMENT OBJECTIVES & PRINCIPLES

The following Objectives and Principles are illustrated in **Exhibit 3 - Principles Plan**.

NEIGHBOURHOOD FOCAL POINTS

Design a neighbourhood with key focal points and activity areas that act as centers for community activity and socialization.

- a. Provide a central amenity area with an interconnected system of pedestrian walkways to other amenity nodes in the other areas of the neighbourhood.
- b. Provide areas of intensification with medium density housing, with good access to vehicular and transit routes, and pedestrian connections to amenity areas.

RESIDENTIAL USE & DESIGN

Plan for a mixture of housing types to provide opportunity for a variety of lifestyles, create animated streetscapes and establish comfortable transitions of mass and scale.

- a. Provide a mixture of dwellings including low-density (single detached and semi detached) ground oriented multiple (semi detached and row housing) and medium/high density (stacked row housing and apartments).
- b. Orient larger parcels of apartment development toward the collector and/or arterial road system to provide easy access and, where appropriate, to provide a transitional land use between low-density residential development and commercial areas or major transportation facilities.
- c. Locate apartment housing close to activity centers.
- d. Locate residential development so as to take advantage of natural and man-made features such as storm water management facilities (SWMFs), walkways and open space.
- e. Integrate smaller parcels of ground oriented multiple development within the neighbourhood adjacent to low density residential development to provide alternative housing options within the community.
- f. Consider all City of Edmonton policies and programs pertaining to affordable housing at the zoning or development permit stage.
- g. Wherever possible, provide a consistent form of housing and zoning designation on either side of a street, so that streetscape elements create an attractive and harmonious pedestrian environment.
- h. Design apartment and ground oriented multiple family housing to have a strong street presence, and, where buildings front onto the street or other public areas such as a park, the

building frontage will include features (doors, windows, landscaped yards) that create animated street scapes, surveillance, and sense of occupancy.

COMMERCIAL SERVICES

Provide opportunity for a small commercial office development that will add to the neighbourhood's mix of uses.

- a. Create potential for a small commercial area that will provide opportunities for employment close to residential uses, allowing local residents to walk to work.
- b. Locate commercial sites along arterial and/or collector roadways to ensure high visibility and to provide convenient access opportunities for all modes of transportation, including transit, vehicles, and pedestrians.
- c. Ensure that the impact of commercial development on adjacent land uses is minimized through landscaping, site layout and building design.

TRANSIT SUPPORTIVE DEVELOPMENT

Provide a high level of public transit service at key activity nodes and in areas of concentrated population.

- a. Identify transit routes on collector roads.
- b. Where agreeable to all stakeholders, incorporate transit facilities into major public buildings or commercial developments.

WALKABILITY

Promote a neighbourhood design where the location of housing and recreational uses provides residents with the opportunity to meet local recreational needs by walking, and to connect with major focal points outside the neighbourhood.

- a. Design subdivisions that facilitate easy pedestrian access to key amenity areas and promote animated streetscapes.
- b. Locate medium density housing close to recreation sites.
- c. Provide a system of walkways and attractive streets that connect all major activity nodes.
- d. Ensure convenient pedestrian linkages to commercial areas and transit nodes are established through the use of multi-trails, local streets, and walkways.
- e. Incorporate local road linkages and walkways at strategic locations between residential development to enhance neighbourhood connectivity.

- f. Integrate existing and future transportation, utility and pipeline corridors into the NSP making use of potential multi-use corridors and pedestrian linkages while considering the safe, ongoing operation of these facilities.
- g. Integrate pedestrian access in high density areas within the overall subdivision design and at the development permit approval stages.

RECREATION AMENITIES & SCHOOLS

The requirement for a school and community league site will be met outside of this neighbourhood.

- a. Locate neighbourhood park sites to include natural areas, and provide a system of distributed amenity areas in the neighbourhood to be interconnected with pedestrian walkways and greenways.

NATURAL AREAS

Preserve and connect key natural areas where possible, determine what is required to sustain these areas, and provide the appropriate level of recreational development.

- a. Preserve key portions of natural areas through development of storm ponds, city land acquisition, or using MR dedication after all school park space has been accommodated.
- b. Determine what is required to sustain a preserved natural area and provide the appropriate level of recreational development.
- c. Provide a pedestrian and bicycle network to connect all parks and storm ponds throughout the neighbourhood using pipeline right of ways, construction of walkways around the storm pond, dedication of walkways through subdivision, and local roadways.

CPTED

Adhere to CPTED principals through subdivision and building design, avoiding where possible entrapment areas, dead end walkways and streets, and creating a sense of occupancy and surveillance wherever there is an interface of public and private space.

- a. Locate activity areas such as parks, stormwater management facilities, commercial development where there is optimal street frontage and where residential development can provide surveillance for these activity areas.
- b. Walkways should be visible, well lit, and offer frequent escape opportunities.

CONNECTIVITY

Design a system of local streets that provide simple, direct and obvious connections throughout the neighbourhood.

- a. Subdivision design will adhere to City Standards with respect to length of cul-de-sacs.

- b. Where the street system does not offer residents direct access to a public amenity, the subdivision design will include walkways to provide this connection where appropriate.

MOBILITY

Design a system of arterial/collector roads that connect major neighbourhood focal points, maximize access to transit for the greatest number of residents, and can be easily accessed from all parts of the neighbourhood.

INTERFACE WITH MAJOR ARTERIALS

Provide criteria for berming and landscaping where residential development will back on to a major arterial.

- a. The required berming and landscaping will adhere to established City of Edmonton standards.

Cost Effective Infrastructure & Services

- a. All development shall be serviced with storm, sanitary and water that follows best practices in engineering and meets municipal standards.
- b. Provide opportunities for compact land use patterns such as residential zones that allow relatively small lots, for example RSL Zones, to help share infrastructure, reduce servicing costs, and improve servicing efficiency.
- c. Utility right-of-ways, easements and other instruments will be provided to accommodate services and shallow utilities, as determined by utility agencies and City Departments.

OIL & GAS WELLS & PIPELINES

Respect the requirements and guidelines of the *ERCB* and City of Edmonton Policy regarding the interface of urban development and oil and gas operations *[amended by Editor]*.

- a. Respect the minimum set back requirements for operating oil and gas wellhead sites.
- b. Plan subdivisions to facilitate temporary emergency access while oil and gas wells are still operating within the neighbourhood.
- c. Consider opportunities to involve the City of Edmonton in the preparation of Emergency Planning documents outlining procedures and responsibilities in the event of an emergency situation.
- d. Plan to accommodate abandoned oil and gas wells into the development concept as part of roads, pedestrian and bicycle networks, and open space linkages where feasible, while maintaining access to the abandoned site.
- e. Pursue and secure the necessary regulatory approvals for the proper abandonment of any contaminated oil leases onsite.

Protect Historical/Cultural Sites

- a. Protect and recognize historical and cultural sites to enable future mitigation and study of these sites.

3.0 CONCEPT HIGHLIGHTS

The Development Concept designed for the *Stewart Greens NSP* is illustrated in **Exhibit 4**. It incorporates the Development Objectives and Principles outlined within Section 2 of this document and creates an attractive, accessible community with direct linkages for residents to local amenities and services. The Development Concept is designed to be compatible with the technical studies and cognizant of the recommendations in the Neighbourhood Design Report, the Transportation Impact Assessment, Geotechnical studies, Natural Site Assessment, Phase 1 & 2 Environmental Site Assessments and other companion studies.

The Development Concept establishes key focal points that offer various opportunities and appeal to different interests and users. A commercial area in the southeast provides a local employment destination. The stormwater management facilities offer natural aesthetic environments for the neighbourhood and a destination along a linkage of greenways while integrating elements of existing natural/environmental features. Park sites create a neighbourhood focal point and venue for active recreation while dispersed parks provide access to the natural environment on passive open space.

A statistical summary of the proposed land uses is shown in **Exhibit 5**.

3.1 Distribution of Land Uses

Bylaw 18047
June 28, 2017

The Stewart Greens NSP is planned as a residential area of approximately 62 ha, of which approximately 34 ha, or 55% of the gross area, is designated as residential. The balance of lands are designated as commercial, stormwater management facilities, public parks and open space, institutional services, and circulation. When fully developed, the neighbourhood will accommodate approximately 3,000 people at forecasted densities.

Bylaw 18047
June 28, 2017

3.2 Residential Land Use

Bylaw 18047
June 28, 2017

Residential land use for Stewart Greens is designed for medium and low-density housing. Of the approximately 38 ha of residential land, approximately 7 ha will be medium density housing in the form of low-rise apartments, stacked town housing, and ground oriented medium-density housing. Low-density residential development will occupy approximately 27 ha of land mostly in the form of single-detached housing with a variety of lot sizes. The ratio of low density residential to medium density residential will be approximately 52% to 48%.

3.2.1 LOW-DENSITY RESIDENTIAL

Low-density residential land uses are distributed in portions of the neighbourhood as shown in **Exhibit 4**. The residential environment is designed to take advantage of neighbourhood amenities and focal points such as the existing golf course to the south and the preservation of much of the natural area (NW 254) along the west boundary of the property common with the Normandeau Gardens area.

The planning and design of the low-density areas will use a variety of subdivision design, site planning, architectural and landscaping techniques to create safe, attractive streetscapes, and an integrated residential environment. The residential design and street pattern will take advantage of and enhance views and vistas created by parks, SWMFs and other amenities.

3.2.2 MEDIUM-DENSITY RESIDENTIAL

Bylaw 17025
December 15, 2014

Two Medium Density Residential (MDR) sites, including a Row Housing site and an MDR - Institutional site, are located within the northwest portion of the Stewart Greens NSP along the collector road with easy access to amenities as shown in Exhibit 4. A third MDR site is located in the southeast portion of the Plan area abutting the collector loop. The MDR sites total approximately 7 ha.

Bylaw 18047
June 28, 2017

The Row Housing site will be developed at 45 units per net residential hectare (upnrha) and will provide a transition between low density residential and MDR – Institutional developments along the collector road.

The MDR – Institutional site will be developed at a density target of 90 upnrha. The MDR-Institutional land use will also allow for residential long term care and supporting uses. To allow for the development of senior's housing, the site will need to be rezoned to a Direct Control land use district. Non-residential uses will primarily service the residential long term care and visitors of the area and will be regulated through the Direct Control process.

The MDR site in the southeast portion of Stewart Greens will also be developed at 90 upnrha.

3.3 Functional Planning Study Area

A Functional Planning Study will be undertaken *by the Provincial government [amended by Editor]* over the next 8 to 10 months to confirm the requirements for the interchange at Anthony Henday Drive and Stony Plain Road/100 Avenue. *The Provincial government* has recommended that the City retain 100 Avenue along the south boundary of Stony Plain Road until the study is completed and the road right-of-way requirements associated with the interchange are determined *[amended by Editor]*. Should these lands not be required by *the Provincial government*, they will be incorporated into the Plan as low density residential *[amended by Editor]*.

The area of 100 Avenue subject to the Study is shown on **Exhibits 3, 4 and 6**.

3.4 Berm & Buffers

Bylaw 18047
June 28, 2017

Buffering is required along the interface with Stony Plain Road (Highway 16) to the north, and along the interface with the Transportation Utility Corridor (TUC) where residential lands adjoin an arterial road. These landscaping and berm/fence requirements are to be in compliance with City regulations. A berm is planned to straddle the NSP boundary where residential uses adjoin an arterial, on either side of the NSP boundary (Exhibit 4). At a minimum, the City of Edmonton requires a combination of a berm and fence to serve as buffer. A Noise Attenuation Study has been completed and its recommendations will be incorporated at the time of subdivision.

Buffering of residential uses to the existing Normandeau residential area to the west is retained through the partial preservation of the treed natural area, NW 254, which is located along the west boundary of this amendment area. In addition, a landscape buffer will be provided between the proposed residential area within this NSP and the adjacent industrial uses to the west within the Normandeau Community. Where not treed, buffering through berming and tree planting is proposed along the interface between the residential and industrial parcels to the northwest.

Buffering may also be required between the commercial and medium density residential uses in the south east of the neighbourhood; buffering requirements will adhere to established City of Edmonton standards.

3.5 Circulation

The circulation network creates opportunities to access community features within and surrounding the neighbourhood while also providing multi-modal transportation options such as walking and bicycling to residential and commercial uses, school sites and neighbourhood parks as illustrated in **Exhibit 6**. The network presents a logical extension northward of planned road and trail infrastructure in the south and utilization of the 199 Street corridor. A Traffic Impact Assessment has been submitted under separate cover.

3.5.1 VEHICULAR CIRCULATION

Major roadways border Stewart Greens including Stony Plain Road (Highway 16) to the north and Anthony Henday Drive to the east. No access will be available directly from the site to either Stony Plain Road or Anthony Henday Drive, forcing vehicular access to the Stewart Greens area from the existing designated residential lands to the south and from 199 Street (see **Exhibit 6**).

The roadway system is designed to provide efficient access to and from Stewart Greens while discouraging shortcutting through the Normandeau Gardens area to the west and the residual Business Industrial uses north of Normandeau Gardens, south of Stony Plain Road (Highway 16).

Access to developed areas within Stewart Greens will require an upgrading to 199 Street north from 87 Avenue. Details for the responsibility of the upgrade are currently being negotiated between *private landowners [amended by Editor]* in the area. The proposed development of this NSP also incorporates portions of 100 Avenue and 199 Street to be closed. Road closure applications have been submitted concurrently with this NSP. Final determination of the 100 Avenue closure will be dependent upon the findings of a Functional Planning Study associated with Stony Plain Road and Anthony Henday interchange to be commissioned by *the Provincial government [amended by Editor]*.

An emergency access is proposed in the northwest corner of Stewart Greens, providing non-vehicular access between this NSP and Normandeau Gardens. The emergency access is not planned to provide vehicular access between the two neighbourhoods.

3.5.2 NOISE ATTENUATION

If the *Provincial government [amended by Editor]* reconstructs Anthony Henday Drive along the eastern portion of the NSP, or constructs a proposed Stony Plain Drive and Anthony Henday Interchange near an existing residential development and their noise guideline thresholds of 65dBA are exceeded, the Province will then provide noise attenuation along Anthony Henday Drive in the eastern portion of the NSP in accordance with *the Provincial government's* TUC Program Policy document provisions in conjunction with the City of Edmonton's Urban Traffic Noise Policy *[amended by Editor]*. Should noise attenuation be required at the time of development adjacent to the existing Anthony Henday Drive, noise attenuation will be provided at the developer's expense. Refinements to Noise Attenuation will be based upon the recommendations of an Environmental Noise Impact Study, prepared by an engineering firm professionally qualified to undertake such studies.

Further noise level evaluations will be carried out during the design phase of the NSP to verify if these and other locations merit noise reduction measures. If the locations are confirmed to exceed the 65 dBA objective during the course of these further evaluations, noise attenuation will be provided at these locations at the expense of the developer.

Bylaw 18047
June 28, 2017

3.5.3 PEDESTRIAN & BICYCLE NETWORK

Stewart Greens proposes pedestrian and bicycle linkages between major attractions such as parks, SWMFs, a religious institution and residential uses. Subdivision design will implement the connection for pedestrian linkages throughout and beyond the community as illustrated in **Exhibit 6**. Pedestrian and bicycle circulation will be accommodated through sidewalks, trails, the local roadways and connector walkways within the amendment area.

Walkway widths and materials will be consistent with the City Standards. Multi-use trails will be 3.0 m wide and sidewalks will be 1.5 m wide. The City's landscaping and lighting standards will also be implemented.

The proposed trails that surround NW 254 should utilize granular surfaces. At the time of the Natural Area Management Plan preparation, emergency access to NW 254 will be addressed.

3.5.4 TRANSIT SERVICE

Public transit service will be provided on the collector road, which is illustrated in **Exhibit 6**. Access to the transit route along the collector road, will be within a 400 meter walking distance from all residential areas within the amendment area. Transit funding will be provided by the Developer for the first few years of development until the basic threshold of population is attained to establish transit ridership in the neighbourhood.

3.6 Institutional

The proposed development includes *an institutional site [amended by Editor]* located on the collector road in the east of the neighbourhood.

3.7 Parks & Open Space

The parks and open space system includes a combination of active and passive recreation opportunities that link important destinations in the *Stewart Greens NSP* and provide transportation options for residents. On-street sidewalks, walkways and greenways connect these amenities.

Bylaw 18047
June 28, 2017

A SWMF is located in the south central area to serve a utility function, as well as provide a focal point as a passive recreational destination. Directly to the south of this SWMF is a planned SWMF in the Webber Greens Neighbourhood which is approximately 4.0 ha. The fact that these two facilities adjoin each other is significant considering the facility to the south is planned to be further linked to parks and open space corridors creating a long green corridor.

(Deleted – Bylaw 18047, Approved June 28, 2017)

Bylaw 18047
June 28, 2017

A park in the centre of the neighbourhood will provide the majority of open space for passive and active recreation. The centrally located park site and the SWMF are connected by a linear park. This linear park will be dedicated as MR (0.21 ha) at the time of subdivision. With this MR dedication, the overall MR dedication (6.30 ha) exceeds the required MR (6.19 ha) for the NSP area by 0.11 ha. This over dedication will be treated as a non-credit MR. This non-credit MR over dedication will reflect active transportation and recreational purposes that this linear park will serve.

The minimum width of the linear park shall be 18.0 m. A shared use path connection shall be provided, which will act as an integral part of this linear park. Enhanced pedestrian crossings will be implemented as a means of improving pedestrian safety, providing traffic calming, and maintaining attractive street designs. The linear park and local road interface will incorporate elements that focus on the pedestrian crossing, which shall include pavement marking and may include tactile materials and signage.

In the southwest of the neighbourhood is a 2.48 ha open space comprised of a natural area (NW 254) and park. Much reduced in area from the 7.93 ha cited within the City's original inventory of significant areas, NW 254 has been reduced by tree removal in its northern reaches within the Normandeau area and through natural die-off. It has a present day area of approximately 5.87 ha, of which approximately 2.73 ha (46.5%) fall within the NSP area. It is proposed that approximately 1.86 ha of the area of NW 254 falling within this NSP be retained as a natural area. This area is in addition to approximately 0.62 ha, which together will create a 2.48 ha park and act as a destination, providing opportunities for passive recreation while also buffering residential uses in Normandeau Gardens.

3.8 Public Utility Lots

Bylaw 18047
June 28, 2017

Two public utility lots are proposed. These are located in the southeast of the neighbourhood on either side of the proposed collector road and provide an opportunity for entry features into the neighbourhood. The public utility lot to the west of the collector road will accommodate a dry pond. A few other public utility lots are located throughout the NSP area and provide connections to the nodes, including the natural area and SWMF.

3.9 Landscaped Buffer along Collector Road

(Deleted – Bylaw 18047, Approved June 28, 2017).

3.10 Schools & Student Generation Calculations

Bylaw 18047
June 28, 2017

Stewart Greens is estimated to generate 186 and 62 students for grades K-8 and 9-12 respectively in public schools. For separate schools, the estimation for grades K-8 and 9-12 is 93 and 31 respectively. Development of this NSP estimates a generation of 372 students.

In the *Lewis Farms ASP*, there are many school facilities that *Stewart Greens* residents may utilize. In total, twelve schools exist or are planned to be built. Access to schools will be provided from *Stewart Greens* via vehicular and non-vehicular routes in the northwest and southwest.

4.0 ENGINEERING SERVICES

4.1 Provision of Utility Services

Stewart Greens respects that cost-effective municipal infrastructure and services are required by the goals of *Plan Edmonton*. The lands within this NSP are engineered to provide services that are safe and sustainable, with the latest technologies to ensure lower maintenance and servicing costs.

4.2 Stormwater Management Services & Drainage

The stormwater management facilities, detailed in **Exhibit 7**, have been located to conform to the natural contours of the land. The facilities present amenity opportunities and are shaped and located to establish views for users and passers-by. Pedestrian access will be provided along portions of the perimeter of the stormwater facilities in compliance with City policy. Detailed information regarding the proposed drainage system will be incorporated into a Neighbourhood Drainage Report, which has been submitted under separate cover.

4.3 Sanitary Services

The proposed sanitary system for the *Stewart Greens* area is detailed in **Exhibit 8** and will follow approximately the same design rationale as the storm drainage system.

Detailed information regarding both the sanitary drainage system and the required storage and pumping capacities will be provided within a Neighbourhood Drainage Report, which has been submitted under separate cover.

4.4 Water Services

Water servicing as illustrated in **Exhibit 9** will be designed to provide peak hour flows and fire flows for single family, multi-family, parks and institutional uses. Water looping will be provided in accordance with EPCOR requirements. Prior to detailed design, a Water Network Analysis will be submitted to EPCOR for approval.

4.5 Shallow Utilities

Electric power, natural gas, and telecommunication infrastructure are all situated within close proximity to the amendment area and all will be extended into the area as required to service the proposed development pattern.

5.0 PLAN IMPLEMENTATION

5.1 Sequence of Development

The staging of future development within *Stewart Greens* will proceed through the logical progression of the extension of servicing infrastructure from the south. A likely staging plan is illustrated in **Exhibit 10**.

6.0 DEVELOPMENT CONTEXT

6.1 Land Ownership

Bylaw 18047
June 28, 2017

As illustrated in Exhibit 1 – Local Context, the Stewart Greens NSP is located in West Edmonton. The legal description and local ownership of these lands are comprised of the following.

Table 1: Land Ownership (Bylaw 18047, Amended June 28, 2017)

| Land Ownership | | | |
|----------------|---------------------|-------------------|-----------|
| Key | Legal Address | Owners | Area (ha) |
| 1 | NE1/4 31-52-25-4 | Private Landowner | 10.6 |
| 2 | Lot A, Plan 4270NY | Private Landowner | 8.79 |
| 3 | NE1/4 31-52-25-4 | Institutional | 7.20 |
| 4 | NE1/4 31-52-25-4 | Institutional | 6.78 |
| 5 | NE1/4 31-52-25-4 | Institutional | 6.14 |
| 6 | Plan 1023661 | Province | 0.02 |
| 7 | Road Plan | City of Edmonton | 1.15 |
| 8 | Plan 3989AO Block X | Province | 0.23 |
| 9 | Plan 3989AO Block X | City of Edmonton | 0.15 |
| 10 | Lot 1 Plan 7922283 | Private Landowner | 1.67 |
| 11 | Plan 3989AO Block Y | City of Edmonton | 1.03 |
| 12 | Road Plan | City of Edmonton | 0.40 |
| 13 | Multiple | Private | 18.19 |
| | | Total | 61.91 |

Lands subject to *Stewart Greens* fall within a series of ownerships illustrated in **Exhibit 11** - Land Ownership.

6.2 Existing Land Uses

The majority of the lands within *Stewart Greens* have been cleared and are vacant or in agricultural use, with tree cover limited to the tree stand along the west boundary of this Amendment area common with Normandeau Gardens and midway along the south boundary common with an existing golf course.

An existing recreational vehicle storage site is located in the southeast of *Stewart Greens* immediately north of the proposed commercial office site. The owner of the *aforementioned site* has expressed interest in having the site designated as medium density residential through this NSP *[amended by Editor]*.

6.3 Topography & Drainage

Elevation of lands within this NSP range from 692 m in the west sloping eastward to 685 m in the vicinity of 199 Street. Local variations in topography across *Stewart Greens* are shown on the contours in **Exhibit 12 - Land Features and Topography**.

6.4 Natural Areas

The City of Edmonton's *Inventory of Environmentally Sensitive and Significant Natural Areas* (Geowest 1993) identifies a natural area (NW 254) in this NSP. NW 254 is located along the west boundary of Stewart Greens, in the southwest portion (see **Exhibit 12**). Much reduced in area from the 7.93 ha cited within the City's original inventory of significant areas, NW 254 has been reduced by tree removal in its northern reaches within the Normandeau area and through natural die-off. It has a present day area of approximately 5.87 ha, of which approximately 2.73 ha (46.5%) fall within the NSP area. It is proposed that approximately 1.86 ha of the area of NW 254 falling within this NSP be retained as a natural area. Extensive work has been conducted on NW 254 with the recommendation that a Natural Area Management Plan be prepared and approved prior to approval of zoning in the immediate area of NW 254. From prior study, the most significant area of NW 254 is proposed for preservation.

A Stage 1 Natural Site Assessment (August 2006) *was conducted* for an area within this site that encompasses the above-mentioned natural area NW 254 *[amended by Editor]*. This site investigation identified several environmental components, which are potentially sustainable but may be affected by future developments depending on mitigative measures and development design. This Natural Site Assessment, submitted under separate cover, was used for the preparation of *Stewart Greens*.

6.5 Environmental Impact

Impact to the natural environment has been minimized through the preservation of a portion of the environmentally sensitive area, NW 254, as identified in the *City of Edmonton Inventory of Environmentally Sensitive and Significant Natural Areas* 1993 (see **Exhibit 12**). Prior existing resources extraction well sites within the amendment area are no longer operative and have been abandoned. An Environmental Site Assessment, Phase 1 and 2, was completed by a *private environmental consultant*, and submitted under separate cover *[amended by Editor]*.

6.6 Well Sites

Exhibit 13 presents the location of resource well sites and pipelines in *Stewart Greens*. Currently, there are two (2) resource well sites; one (1) of the well sites has been reclaimed (LSD 10-31-52-25-W4M) and issued a reclamation certificate (#54-10775). Well site LSD 9-31-52-25-W4M has been abandoned, but requires that a Reclamation Certificate be obtained for this well. Based on the time of abandonment, July 18, 1952 and given the environmental standards at the time, there is a low to moderate risk that subsurface soils on or in the vicinity of the well leases may have been impacted based upon *the environmental consultant's* ESA report findings *[amended by Editor]*. The following table summarizes the resource well sites in *Stewart Greens*.

Table 2

| Location | License No. | Licensee | Date Drilled | Current Status | Reclamation Certificate |
|-------------------|-------------|------------------------|---------------|------------------------------|-------------------------|
| LSD 10-31-52-25-4 | 0028350 | Private - Corporate | June 30, 1965 | October 9, 1969 Abandoned | #54-10775 |
| LSD 9-31-52-25-4 | 00049245 | Private - Corporate | July 17, 1952 | July 18, 1952 Abandoned | |

[amended by Editor]

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June 28, 2017

A Phase 1 Environmental Site Assessment update and addendum (February 2007) (see Exhibit 14) was undertaken for the NSP Amendment Area. A subsequent Phase 2 ESA (September 2005) (see Exhibit 15) and Phase 3 ESA (May 2012) were undertaken for the eastern portion of the Stewart Greens Amendment Area. An additional Phase 3 ESA was completed as a result of a wellhead leak at wellsite LSD 10-31-52-25-4.

The environmental consultant also undertook an additional Phase 2 Environmental Site Assessment relating specifically to wellsite LSD 10-31-52-25-4 (see Exhibit 16) [amended by Editor].

- the analytical results of soil testing did not identify concentrations of parameters that would preclude the development of the property for residential land use. If conditions other than those presented in this report are encountered during the excavation of the site, the environmental consultant should be notified immediately so we can re-evaluate our conclusions based on the new information [amended by Editor];*

Bylaw 18047
June 28, 2017

As a result of circulation of the Phase 2 ESA report to concerned agencies, requests were made for additional field information regarding the 10-31 well. The Phase 2 and the subsequent Phase 3 ESA were endorsed by the appropriate authorities (City of Edmonton and Provincial government).

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June 28, 2017

The environmental consultant also undertook an additional Phase 3 Environmental Site Assessment relating specifically to wellsite LSD 10-31-52-25-4. An additional Phase 3 ESA was completed for the same wellhead due to a previous leak.

No major pipelines are in operation within *Stewart Greens*.

6.7 Surrounding Development Activity

To the west of this NSP is the Normandeau Gardens Residential Area.

The Anthony Henday Transportation Utility Corridor lies to the east of the subject site.

Directly to the south of *Stewart Greens* is the Webber Greens NSP. These lands are presently under active development for residential development.

Directly north across Stony Plain Road is an undeveloped quarter section (S.E. 1/4 SEC. 6-53-25-4) zoned Industrial Reserve (AGI). Adjoining this quarter section to the west (S.W. 1/4 SEC. 6-53-25-4) are two parcels of land, 3.3 and 1.7 ha in size, fronting on Stony Plain Road and accommodating a motel and car dealership.

6.8 Archaeological & Heritage Resource

A letter dated June 15, 2006 from *the Provincial government* confirmed the following: "In July of 2004, the City of Edmonton provided the *Provincial government* with information regarding an application to amend the Lewis Farms Area Structure Plan in part of Section 31-52-25-W4M [*amended by Editor*]. At that time, staff of the *Provincial government* reviewed the potential for the proposed development to impact historical resources and concluded that a **Historical Resources Impact Assessment would not be required**" [*amended by Editor*].

6.9 Soils & Geotechnical Assessment

A preliminary geotechnical investigation was carried out for *Stewart Greens* stating (see **Exhibit 17**) [*amended by Editor*]:

the findings from this investigation indicate that ground conditions are poor over much of the site for low density residential foundations.

The investigation concluded that the soil and groundwater conditions found in *Stewart Greens* will require:

removal of the peat and underlying soft clay soils and replacement with a suitable engineered structural fill would be required to support footing foundations. Alternatively, a pile and foundations system could be considered.

The applicant has initiated the process of removing and replacing unsuitable materials for development which will make the proposed development concept plausible [*amended by Editor*]. The Geotechnical Report does not recommend specific land uses within the areas of *Stewart Greens* except for a stormwater management facility that should be located in the middle-south of the subject site where fewer silt and sand layers are located (Geotechnical Analysis pg. 12). This same location - generally - is where a stormwater management facility is proposed to be sited.

6.10 Environmental Site Assessment

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Phase 1, 2 and 3 ESAs were conducted. The results of these investigations and recommendations are summarized under the preceding Section 6.6 Well Sites. Additional Phase 2 and 3 ESAs were undertaken for LSD 10-31-52-25-4 well, which are also referenced under the preceding Section 6.6 Well Sites.

7.0 POLICY CONTEXT

Stewart Greens has been prepared with regard to physical geography and statutory plans, policies and design principles that govern land development in the City of Edmonton, including the *Lewis Farms Area Structure Plan*, the *Edmonton Municipal Development Plan (Plan Edmonton)*, *Edmonton's Suburban Neighbourhood Design Principles* and other relevant planning policies and initiatives.

7.1 Lewis Farms Area Structure Plan

City Council adopted Bylaw 8733 in June 1988. In February 2006, this document was consolidated by virtue of the incorporation of the following bylaws: 10881, 12183, 12184, 12488, 13661, 13807 and 14579.

Chapter four of the *Lewis Farms ASP* sets out Development Objectives; the following statements are applicable to those objectives:

- *Stewart Greens* will affect the OVERALL Development Objectives of the *Lewis Farms ASP*. Resource extraction has been phased from the subject property as detailed in the attached **Exhibit 13** and **Table 2**.
- *Stewart Greens* affects the incorporation of a variety of housing forms, and park integrated with the adjacent residential neighbourhoods. Re-designation from Business/Industrial to Residential will increase the overall population within the *Lewis Farms ASP*, which can be accommodated.
- *Stewart Greens* contributes to the hierarchy of commercial land uses to serve the anticipated population within the *Lewis Farms ASP* trading area.
- *Stewart Greens* proposes a well-linked network of open space, connecting destinations both within and beyond the Neighbourhood and providing active and passive uses for future residents.
- The proposed transportation network establishes an identifiable hierarchical system of roads, sidewalks and trails providing transportation options to residents while interconnecting the Neighbourhood with surrounding transportation infrastructure.
- *Stewart Greens* proposes to maintain mature vegetation in a park in the southwest that will protect a portion of lands within the boundaries of this NSP designated as a natural area (NW 254) in the City of Edmonton's *Inventory of Environmentally Sensitive and Significant Natural Areas* (1993).
- The configuration and uses of land suggested in *Stewart Greens* do not conflict with neighbouring uses; rather, they complement planned adjoining uses, as *Stewart Greens* suggests that the planned SWMF directly to the south be contiguous with and extend into the lands of *Stewart Greens*. Lands within *Stewart Greens* that are adjoining the Normandeau area are proposed to be park or low density residential with a separating berm, thus allowing for the continuation of existing uses.
- *Stewart Greens* suggests a sequence of development that takes advantage of existing infrastructure. Stormwater ponds are configured and located to act as amenities and as well

as destinations along a fully integrated open space network with the Webber Green Neighbourhood to the south.

7.2 Major Commercial Corridors Overlay

Bylaw 12800, Section 8.13 Major Commercial Corridors Overlay requires that commercial development along Major Commercial Corridors, Stony Plain Road among these thoroughfares, is subject to Development Regulations. A zoning bylaw amendment may be necessary to discharge lands within *Stewart Greens* from the Commercial Corridors Overlay.

7.3 Plan Edmonton

Plan Edmonton Bylaw No. 11777 (as amended) sets out a strategy to accommodate the future growth and development of the City. *Stewart Greens* is compatible with *Plan Edmonton* for the following reasons:

- The *Lewis Farms ASP* area and its component neighbourhoods currently offer commercial and residential development choices. This amendment increases the area of residential use adjacent to the existing golf course and east of existing residential land within Normandeau Gardens and increases the viability of commercial development to the south of this NSP and for the proposed commercial/office development in the southeast corner of this NSP.
- Reducing the amount of business area and replacing it with residential will increase compatibility with neighbouring residential uses to the west and south.
- The proposed amendment from Business/Industrial to Residential use will mitigate the noise, pollution and traffic that are associated with industrial development. This will help enhance the quality of the urban environment since the subject neighbourhood and community is already predominately residential.
- The ability to continue the Business/Industrial land use on the subject property has been impacted severely by City of Edmonton Council's decision to eliminate access from Stony Plain Road (Highway 16). The most effective and efficient use of these lands is Residential.
- Currently, there is a strong demand for homes in the West Edmonton area. The proposed conversion to Residential use facilitates meeting the City's goal of fiscally sustainable development through more effective and efficient use of lands within this neighbourhood.
- Within *Stewart Greens*, resource well sites have been decommissioned. The City's policy guidelines for integration of resource operations and those of the *ERCB* will not be required to be followed *[amended by Editor]*. No utility corridors are existing that require integration into the open space system of the Plan.
- More intensive multi-family residential development is proposed adjacent to the collector road in the east section of the NSP lands. Development is proposed to be phased in such a way as to take advantage of developed roadways and existing infrastructure.
- Open spaces have been designed to integrate and protect natural areas, to be accessible by multiple modes of transportation and to be connected in such a way as to provide active transportation opportunities as well as recreational activities. A natural area (NW 254) has been partially preserved within the western edge of *Stewart Greens* area.

- *Stewart Greens* proposes park sites that are accessible by various modes of transportation.

7.4 Suburban Neighbourhood Design Principles

Edmonton's Suburban Neighbourhood Design Principles (January 1996) provide guidelines in assessing the design and servicing of new suburban neighbourhoods. The following statements about *Stewart Greens* address these guidelines:

- Infrastructure to service the proposed changes are in place to the south and north and will be extended as required.
- Roadways within *Stewart Greens* will be developed as a mixture of collector and local roadways. Adjacent land uses will assist in the determination of appropriate road right-of-way widths and cross-sections. All public roadways will be constructed to City of Edmonton standards. Road profiles and intersections will acknowledge key pedestrian linkages through design details.
- Bicycle and pedestrian movement throughout *Stewart Greens* and the larger Lewis Farms area is intended to follow the local, collector and arterial roadway network, as well as incorporate walkways/trails into open space corridors, and in association with stormwater management facilities.
- Future transit service can be accommodated along the collector roadway extended to the south and to 199 Street, which provides excellent accessibility from individual residential development areas. Access to the transit route will be within a 400 metre walking distance from all parts of the proposed residential areas.
- The park facilities are located so that they can be developed in a manner that coincides with the staging of development.
- The park sites are located with access characteristics that could accommodate other land uses over time.
- Dispersed parks and open space are proposed in the Neighbourhood to provide accessible localized recreation and open-space areas for residents.
- A system of walkways and sidewalks will provide linkages with the retained natural area, passive parks, stormwater management facilities and will be well-linked to amenities outside of *Stewart Greens*, such as the Webber Greens Neighbourhood to the south.
- Multi-family residential parcels are proposed alongside the collector road within easy reach of park sites and walkway systems, and at the edge of the Neighbourhood; the parcels will be easily accessed by pedestrian, bicycle, transit and vehicular traffic.

7.5 Policy Guidelines for the Integration of Resource Operations with Urban Development

Development of lands within *Stewart Greens* will be in accordance with the City of Edmonton's *Policy Guidelines for the Integration of Resource Operations with Urban Development* (1985) and *Policy C515 Oil and Gas Facilities [amended by Editor]*. These guidelines focus on:

- resource consolidation by the operators;
- development setbacks;
- urban design;
- surface improvements for resource leases and flow-line right-of-way; and
- operating guidelines.

Development of the Neighbourhood will respond to these Guidelines. Covered under prior Section 6.6 “Well Sites”, resource facilities within this NSP are abandoned; a reclamation certificate has been issued for LSD 10-31-52-25-4.

7.6 *Energy Resources Conservation Board (ERCB) [amended by Editor]*

The *ERCB (formerly AEUB)* is the agency with jurisdiction on matters related to oil and gas resource activities. It has rules, regulations and guidelines for these activities in their predevelopment, operating and post-operating (abandoned) stages. *Stewart Greens* recognizes and will not be required to follow the *ERCB* guidelines governing development around operating facilities, as all facilities within the NSP have been decommissioned.

The *ERCB* has well-established procedures for well site abandonment and guidelines for development around abandoned facilities. Abandoned wells in *Stewart Greens* are planned in roadways, open space/park areas and public utility lots.

7.7 Transportation Master Plan

Stewart Greens conforms to *Edmonton’s Transportation Master Plan*, approved by City of Edmonton Council April 14, 1999. The proposed land use and road network of *Stewart Greens*:

- is compatible with the proposed arterial system;
- allows for future transit routing; and
- ensures safe and dispersed flow of traffic through the neighbourhood with multiple access points to the arterial road system.

7.8 Crime Prevention through Environmental Design (CPTED)

Stewart Greens incorporates principles and guidelines established by Crime Prevention Through Environmental Design (CPTED) to minimize the number of crime prone areas. Development of the road network, parks, stormwater management facilities, and the built environment will use CPTED principles to help create a safe and secure neighbourhood.

7.9 Smart Choices

The Smart Choices program includes a development checklist against which NSP submissions must now be measured. Two sections of the checklist, Walkability and Urban Design, apply to this NSP. *Stewart Greens* creates a walkable neighbourhood by providing a mix of uses, increasing the density of the area, including an extensive interconnected pedestrian network that links destinations

such as residences, parks, focal points and providing the opportunity for linkage to adjoining neighbourhoods.

Stewart Greens aims for high urban design standards:

- Architectural controls will ensure quality building design and materials compatible with the rest of the planned neighbourhood.
- Open spaces will be designed with consideration to CPTED and will include a high standard of landscaping with amenities such as benches, waste receptacles and special lighting.

Exhibit 1 (Bylaw 18047, June 28, 2017)



EXHIBIT 1
Local Context

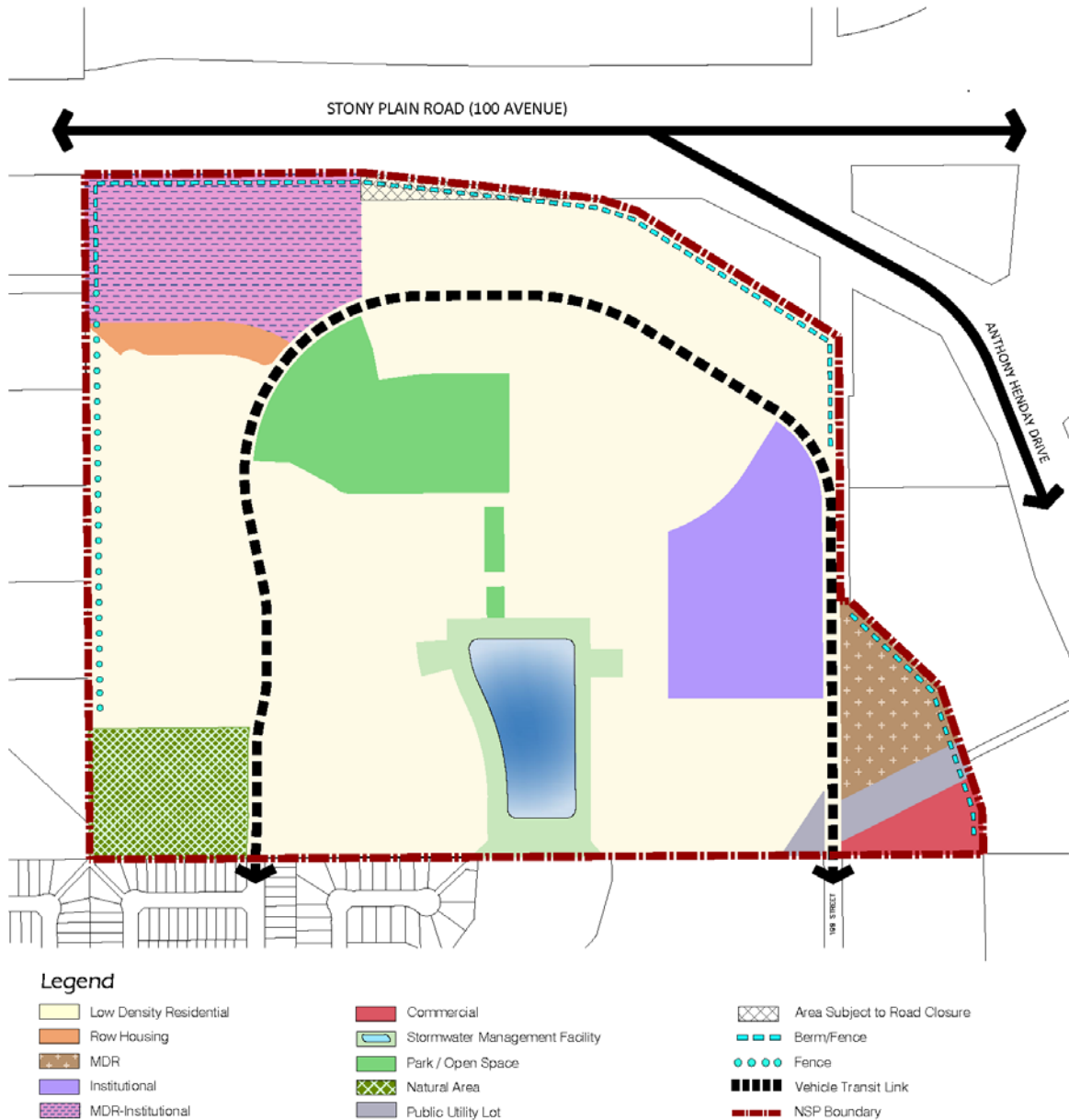


Exhibit 2 (*Deleted - Bylaw 18047, June 28, 2017*)

Exhibit 4 (Bylaw 18047, June 28, 2017)



EXHIBIT 4
Proposed Development Concept



Please Note:
This map is a conceptual in nature. The specific location and alignment of facilities, roadways, and services may be technically amended at the time of subdivision.

Stewart Greens

Exhibit 5 (Bylaw 18047, June 28, 2017)

**STEWART GREENS NEIGHBOURHOOD STRUCTURE PLAN
LAND USE AND POPULATION STATISTICS
BYLAW 10847**

| | Area (ha) | % of GA |
|---|--------------|-------------|
| GROSS AREA | 61.91 | 100% |
| Natural Area (Environmental Reserve) | 0 | |
| Pipeline & Utility Right-of-Way | 0 | |
| Arterial Road Right-of-Way | 0 | |
| GROSS DEVELOPABLE AREA | 61.91 | |
| Existing Land Uses | | |
| Commercial | 0.80 | 1.3% |
| Parkland, Recreation, School (Municipal Reserve (MR)) | 6.30 | 10.2% |
| Urban Village Park/Local Pocket Park (MR) | 3.61 | |
| Linear Park (MR) | 0.09 | |
| Linear Park (Non-credit MR) | 0.11 | |
| Natural Area (MR) | 2.49 | |
| Institutional | | |
| Church Site | 4.05 | 6.5% |
| Transportation | | |
| Circulation @ 20% | 12.38 | 20.0% |
| Transit Centre | N/A | |
| Infrastructure/Servicing | 4.34 | 7.0% |
| Stormwater Management Facility | 3.59 | |
| Public Utility | 0.75 | |
| Total Non-Residential Area | 27.87 | 45.0% |
| Net-Residential Area (NRA) | 34.04 | 55.0% |
| | 61.91 | 100.0% |

RESIDENTIAL LAND USE AREA, UNIT & POPULATION COUNT

| Land Use | Area (ha) | Unit/ha | Units | People/Unit | Population | % of NRA |
|--|--------------|---------|--------------|-------------|--------------|---------------|
| Single/Semi-Detached | 26.75 | 25 | 669 | 2.8 | 1,873 | 78.6% |
| Row Housing | 0.67 | 45 | 30 | 2.8 | 84 | 1.9% |
| Medium Density Residential (MDR) | 1.69 | 90 | 152 | 1.8 | 274 | 5.0% |
| Medium Density Residential – Institutional (MDR-Institutional) | 4.93 | 90 | 444 | 1.8 | 799 | 14.5% |
| Total | 34.04 | | 1,295 | | 3,030 | 100.0% |

STUDENT GENERATION COUNT

| | |
|---------------------------------|------------|
| Public School Board | 248 |
| Elementary School | 124 |
| Junior High School | 62 |
| Senior High School | 62 |
| Separate School Board | 124 |
| Elementary School | 62 |
| Junior High School | 31 |
| Senior High School | 31 |
| Total Student Population | 372 |

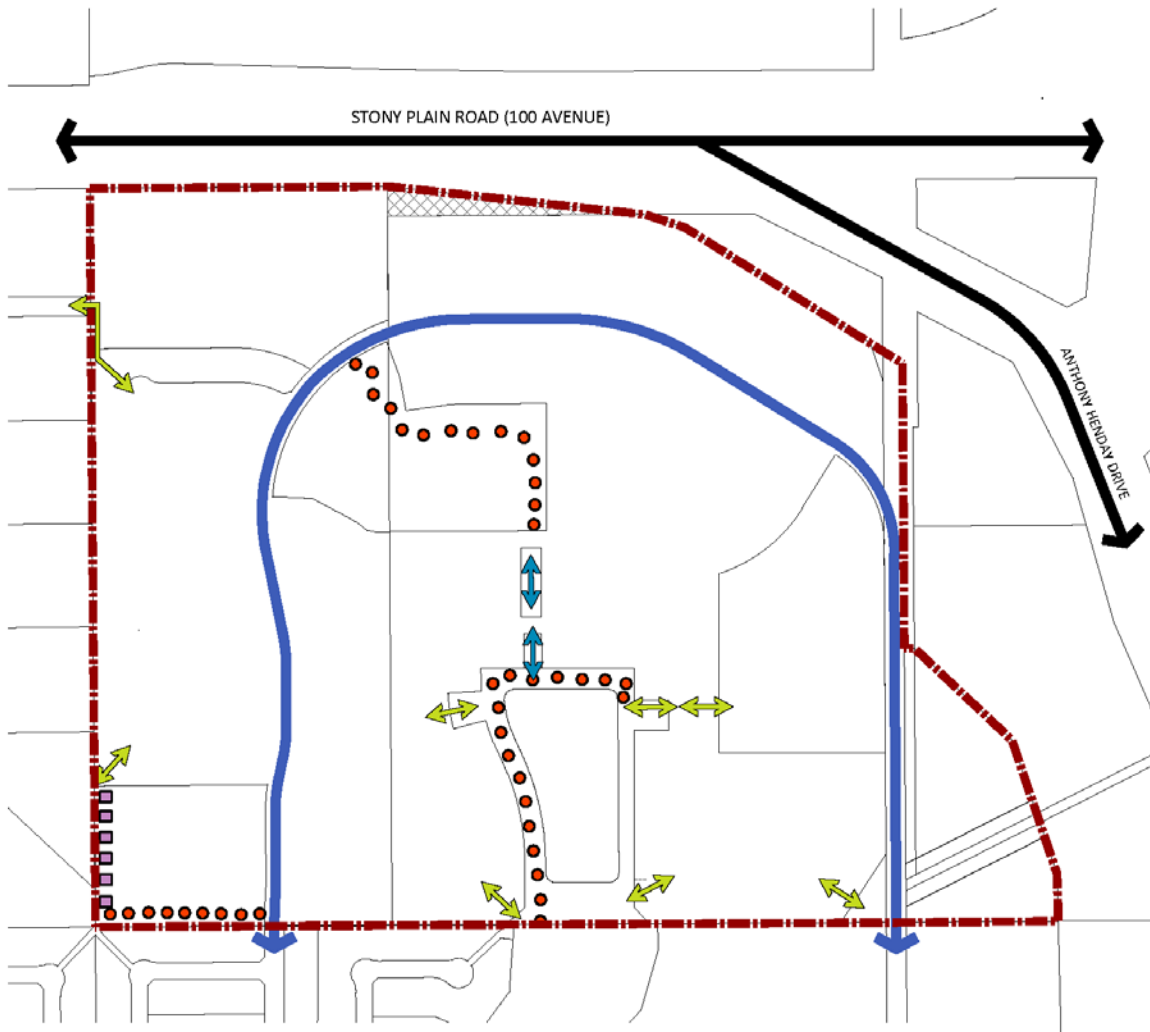
SUSTAINABILITY MEASURE

| | |
|--|-----------|
| Population Per Net Residential (ppnrha) | 89 |
| Units Per Net Residential Hectare (uprha) | 38 |
| Single/Semi-Detached)/(Low Rise/Multi-Medium Units) Unit Ratio | 52% / 48% |
| Population (5) within 500 m of Parkland | 100% |
| Population (5) within 400 m of Transit Service | 100% |
| Population within 600 m of Commercial Service | 52% |

Exhibit 6 (Bylaw 18047, June 28, 2017)



EXHIBIT 6
Transportation Network



Legend

- Collector Road/Bus Route
- NSP Boundary
- Area Subject to Road Closure

- Potential Pedestrian Connection
- 3.0m Wide Shared Use Path

- Multi-Use Trail
- Proposed 1.5m Concrete Walkway

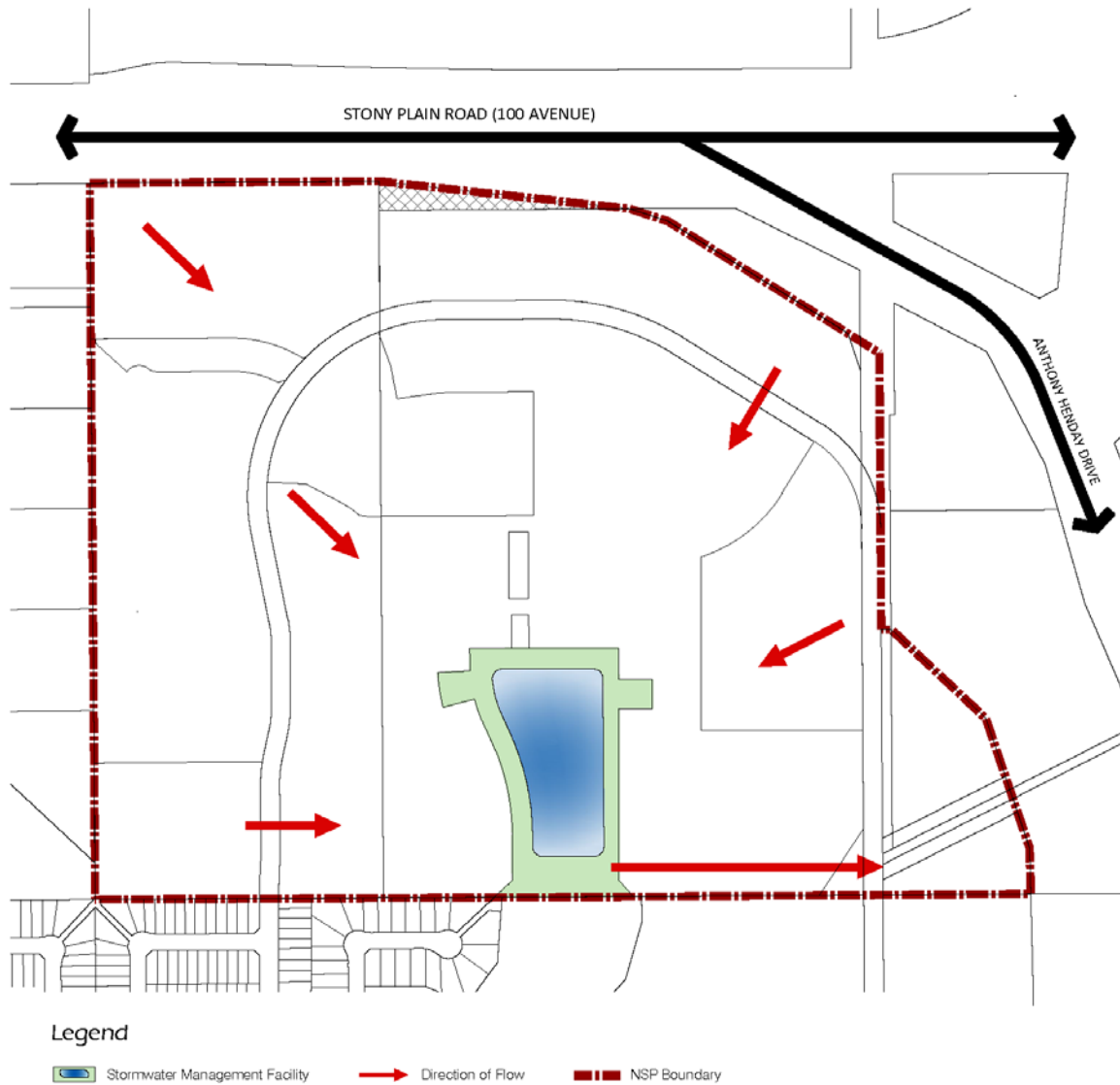
Please Note:
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Stewart Greens

Exhibit 7 (Bylaw 18047, June 28, 2017)



EXHIBIT 7
Stormwater Management



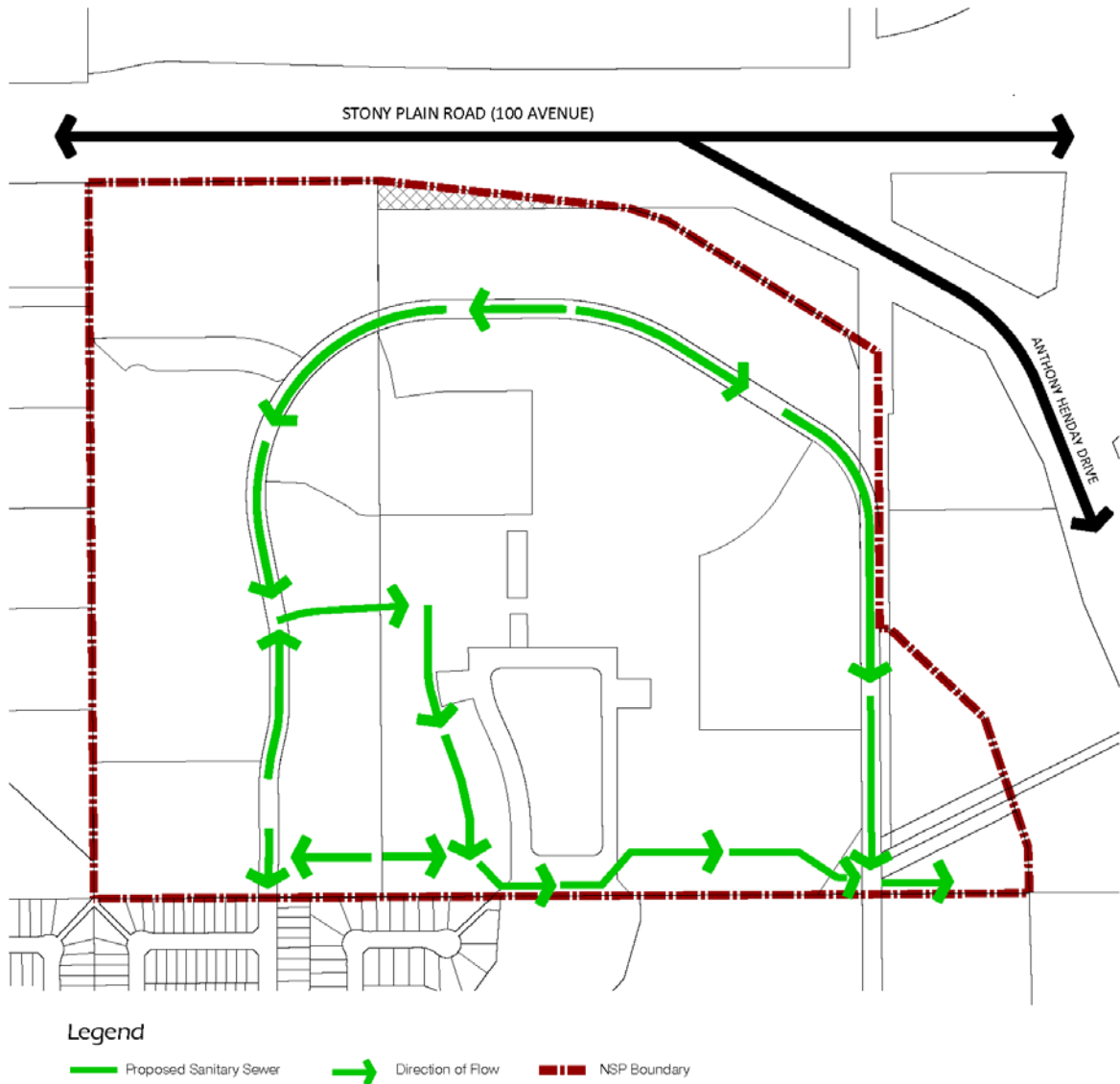
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Stewart Greens

Exhibit 8 (Bylaw 18047, June 28, 2017)



EXHIBIT 8
Sanitary Service



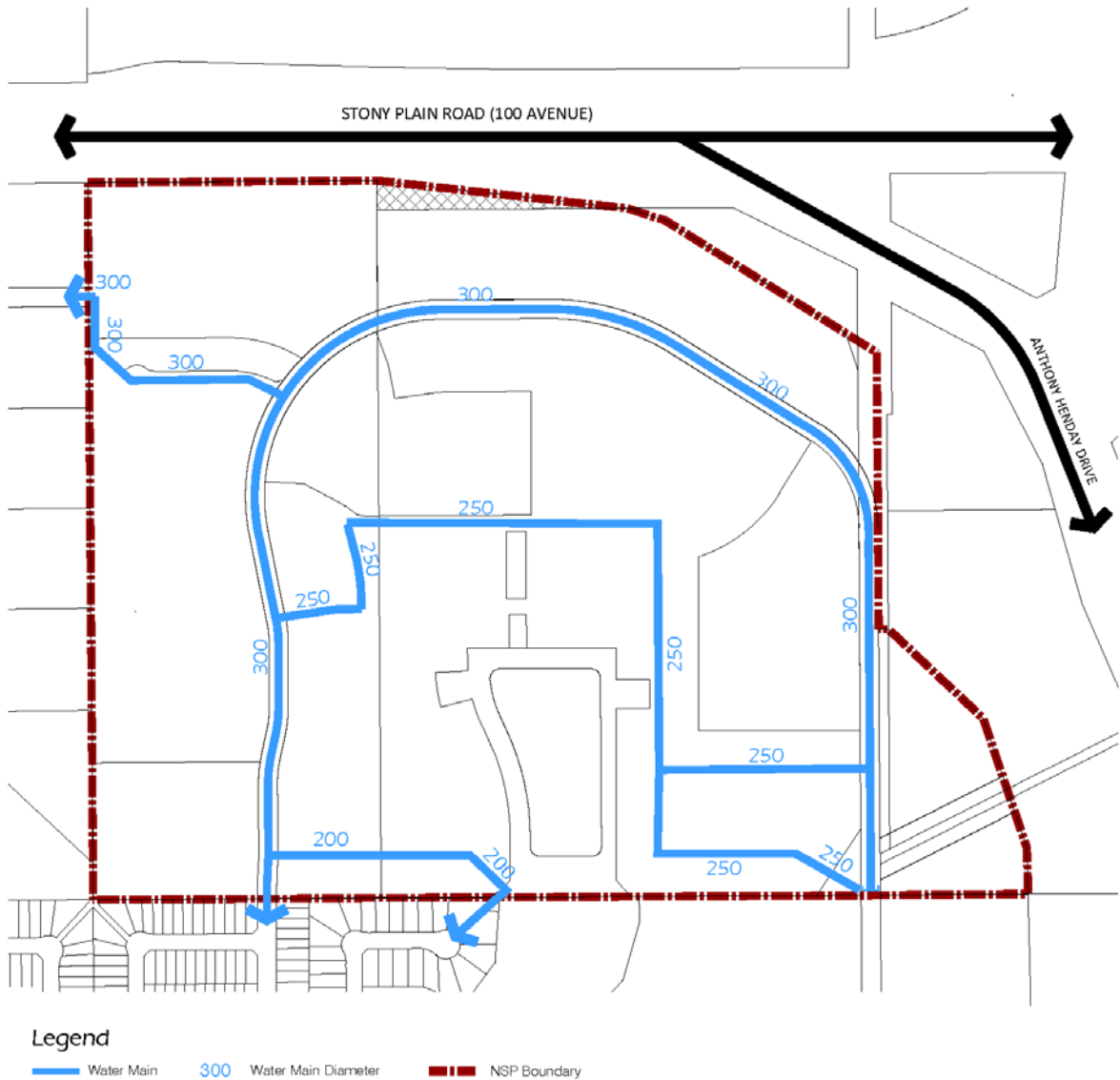
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Stewart Greens

Exhibit 9 (Bylaw 18047, June 28, 2017)



EXHIBIT 9
Water Service

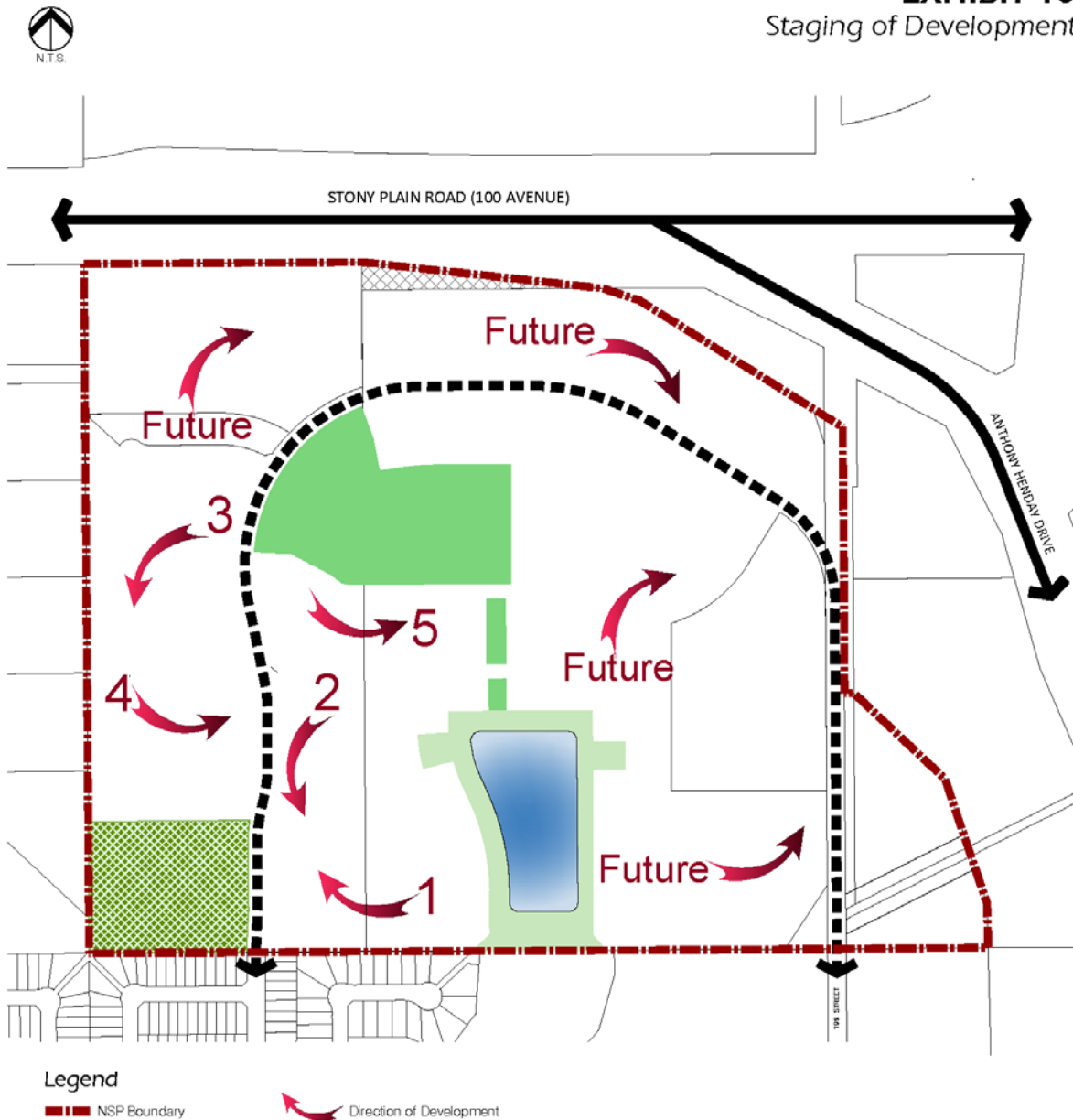


Please Note:
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Stewart Greens

Exhibit 10 (Bylaw 18047, June 28, 2017)

EXHIBIT 10
Staging of Development



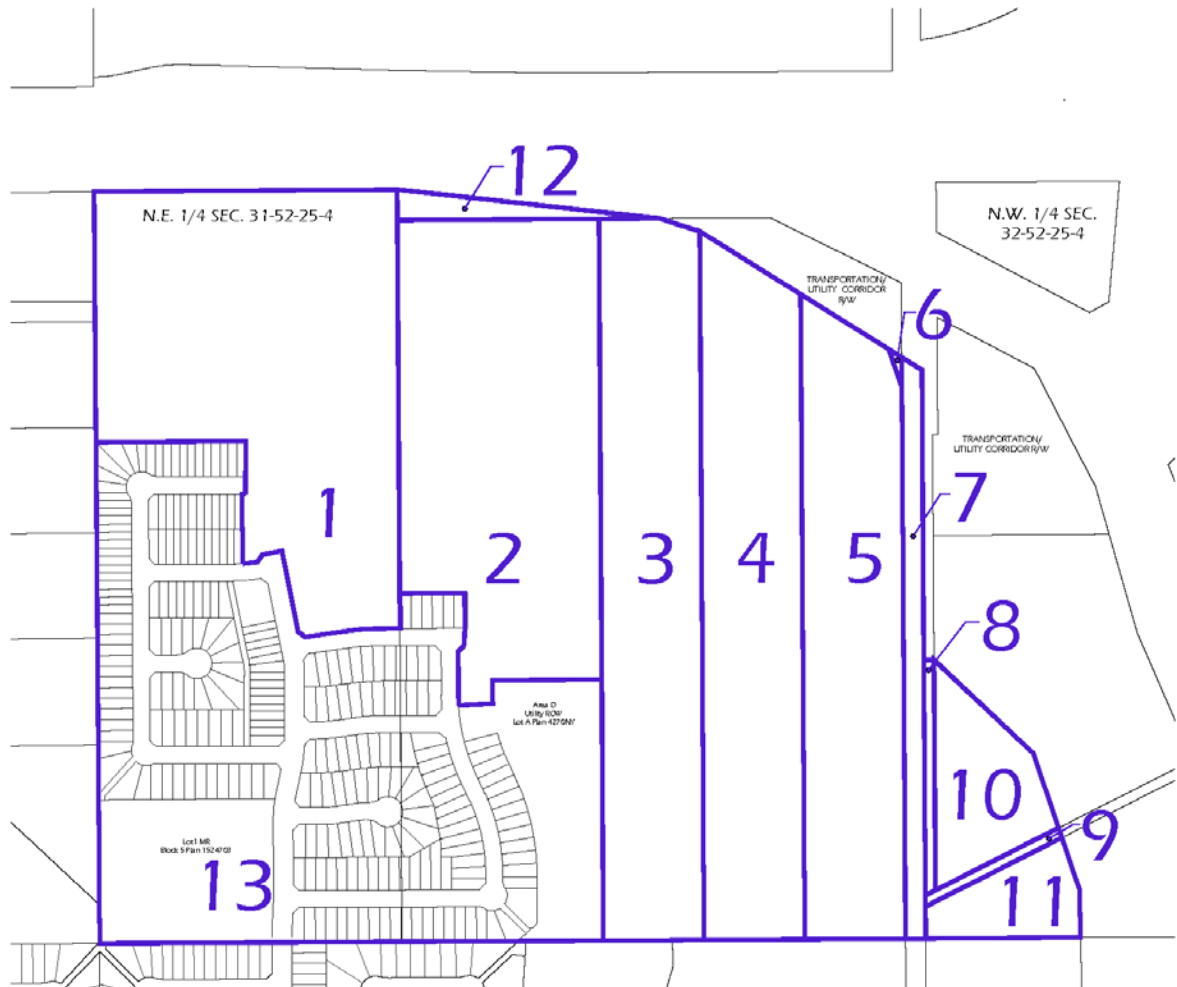
Please Note:
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location and alignment of facilities, roadways, and
services may be technically amended at the time of
subdivision.

Stewart Greens

Exhibit 11 (Bylaw 18047, June 28, 2017)



EXHIBIT 11
Land Ownership



Legend

— Ownership Boundary

| Key | Legal | Owner | Area (ha) |
|-----|---------------------|-------------------|-----------|
| 1 | NE¼ 31-52-25-4 | Private Landowner | 10.16 |
| 2 | Lot A, Plan 4270NY | Private Landowner | 8.79 |
| 3 | NE¼ 31-52-25-4 | Institutional | 7.20 |
| 4 | NE¼ 31-52-25-4 | Institutional | 6.78 |
| 5 | NE¼ 31-52-25-4 | Institutional | 6.14 |
| 6 | Plan 1023661 | Province | 0.02 |
| 7 | Road Plan | City of Edmonton | 1.15 |
| 8 | Plan 3989AO Block X | Province | 0.23 |
| 9 | Plan 3989AO Block X | City of Edmonton | 0.15 |
| 10 | Lot 1 Plan 7922283 | Private Landowner | 1.67 |
| 11 | Plan 3989AO Block Y | City of Edmonton | 1.03 |
| 12 | Road Plan | City of Edmonton | 0.40 |
| 13 | Multiple | Private | 18.19 |
| | | | 61.91 |

Please Note:
This map is a conceptual in nature. The specific location and alignment of facilities, roadways, and services may be technically amended at the time of subdivision.

Stewart Greens

Exhibit 12 (Bylaw 18047, June 28, 2017)



EXHIBIT 12

Land Features and Topography



Photo Source: Google Earth

Legend

- NSP Boundary
- Retained Tree Stand
- Contour/Elevation (m)

Please Note:
This map is a conceptual in nature. The specific
location and alignment of facilities, roadways, and
services may be technically amended at the time of
subdivision.

Stewart Greens

Exhibit 13 (Bylaw 18046, June 28, 2017)



EXHIBIT 13 Area Well Sites



Photo Source: Google Earth

Legend

- Abandoned Well Site
- NSP Boundary

Please Note:
This map is a conceptual in nature. The specific location and alignment of facilities, roadways, and services may be technically amended at the time of subdivision.

Stewart Greens

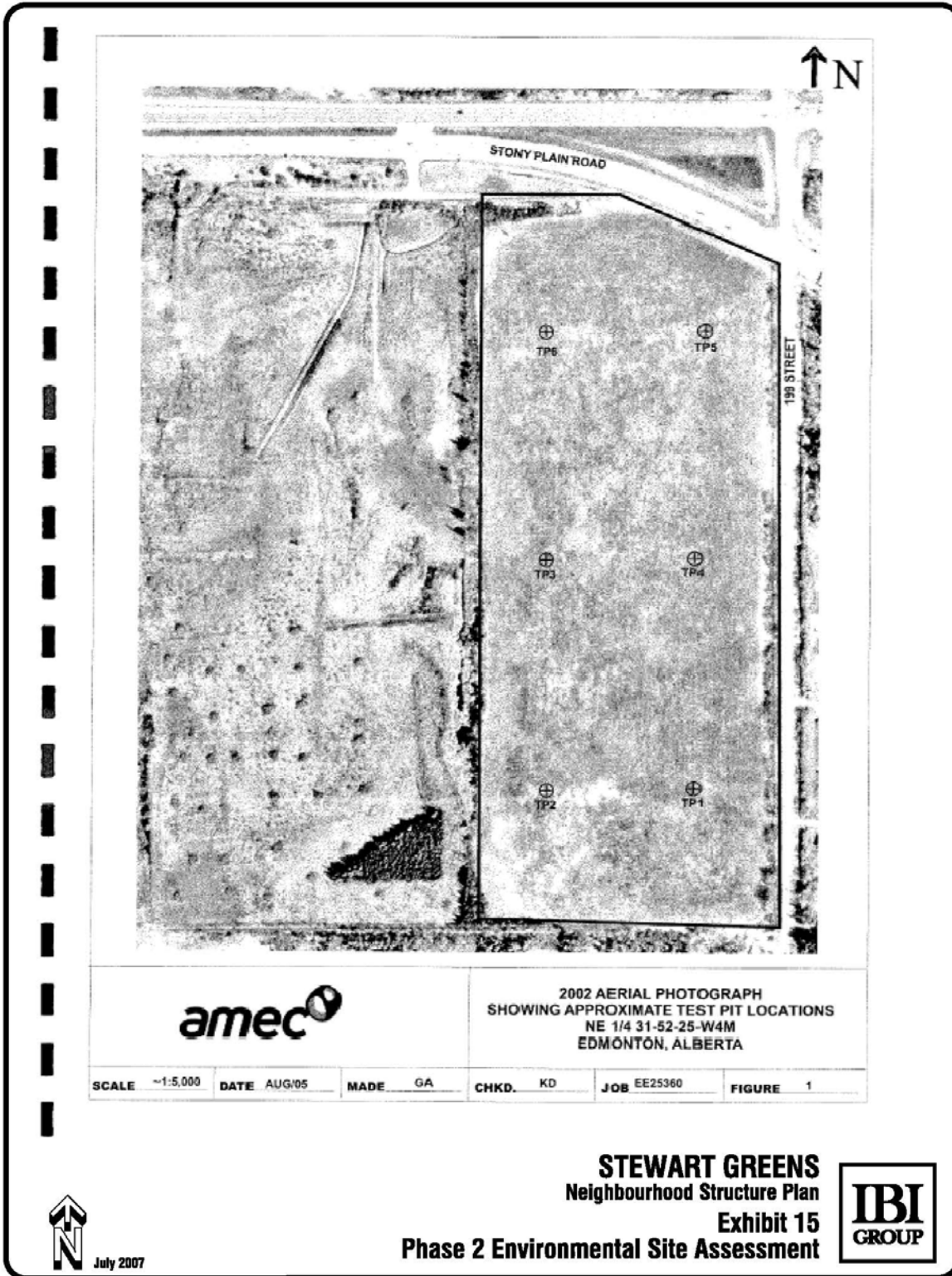


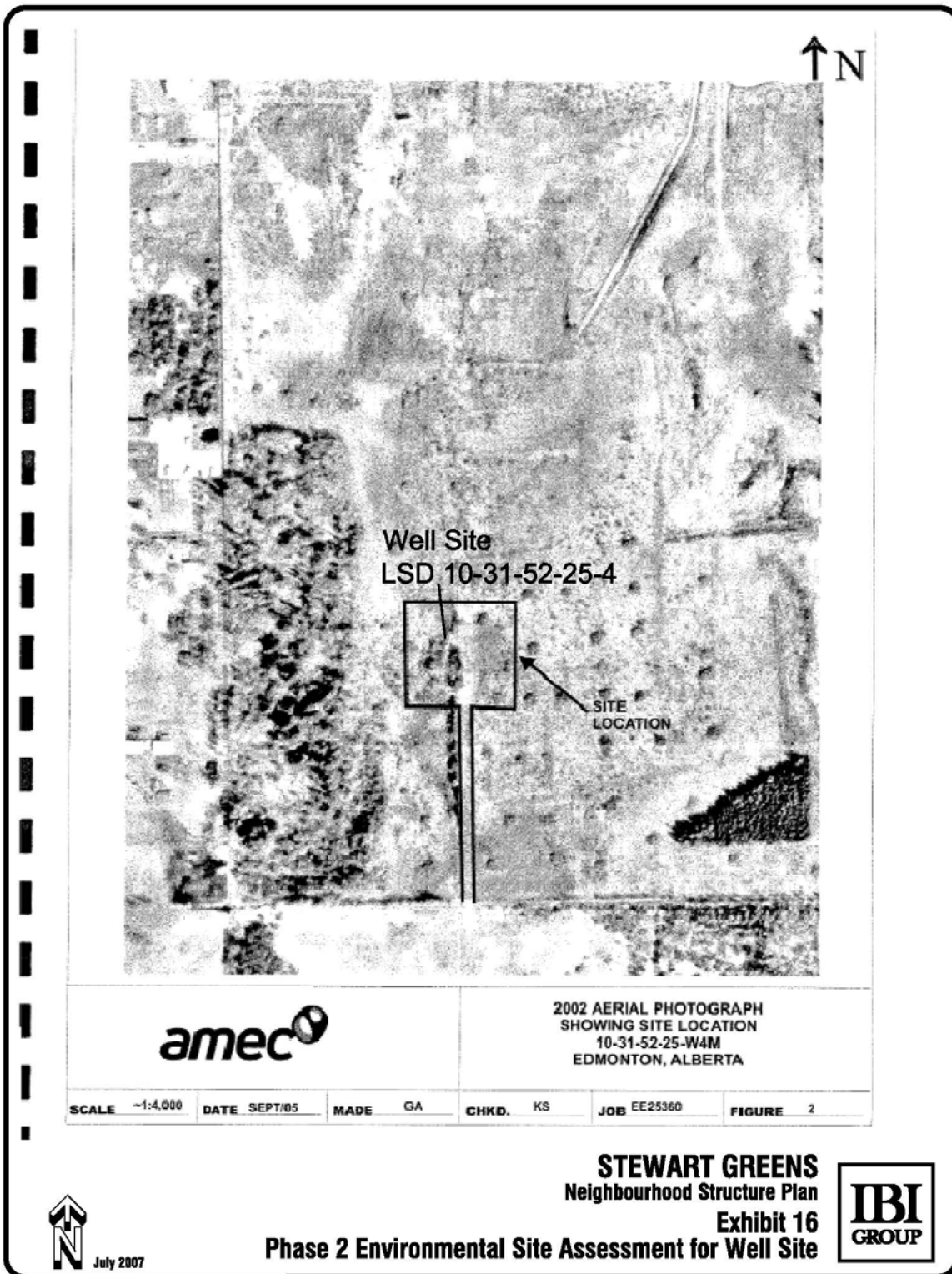
July 2007

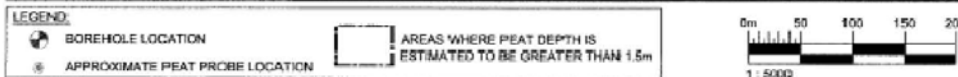
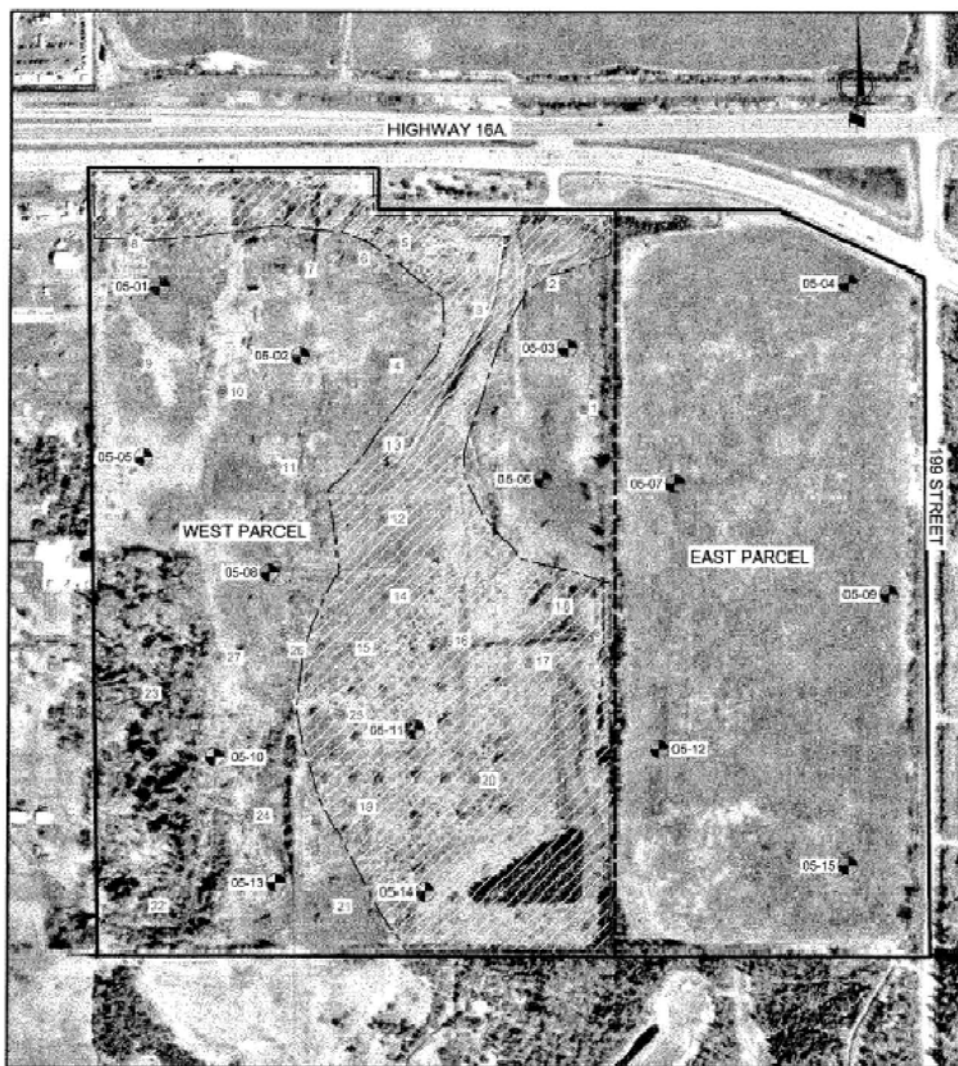


STEWART GREENS
Neighbourhood Structure Plan
Exhibit 14
Phase 1 Environmental Site Assessment









| | | | | |
|------------------------------------|--|--------------------|---|-----------------------------|
| CLIENT: BAYWEST PROPERTIES INC. | | DRP1 BY: KTK | BAYWEST PROPERTIES NE 1/4 SEC. 31-52-25-4 BOREHOLE LOCATION PLAN EDMONTON, ALBERTA | AMEC PROJECT NO: EA15576 |
| AMEC Earth & Environmental | | DRP2 BY: GV | | REV. NO.: 1 |
| amec | | SCALE: AS SHOWN | | FIGURE 1 |
| | | DATE: MAY, 2005 | | |

S:\Cadd\Map\EA15500\EA15576\EA15576-001.dwg - Layout1 - Jun. 28, 2005 3:14pm - keth.kendrick



STEWART GREENS
Neighbourhood Structure Plan
Exhibit 17
Geotechnical Report Graphic

