

QUEENSBOROUGH COMMUNITY PLAN REVIEW AND UPDATE

Information Bulletin

November 2008

Queensborough community has prompted the City to initiate a review of the Queensborough Community Plan. The City will be assisted by the consultant firm of UMA. Through this review, the City will ask local residents, property owners, and business owners to share their vision of what Queensborough should be like in the future – and what needs to happen to get there. This information bulletin provides some background on community utility infrastructure.

COMMUNITY UTILITY INFRASTRUCTURE AND SERVICES

Queensborough is a strategic location within Metro Vancouver; it is central to the region's major roads and is located on the Fraser River. As a result, Queensborough reaps both the benefits and challenges posed by its location within an urbanized metropolitan area.

LIVING IN AN URBAN ENVIRONMENT:

Full Access to Community Utility Services

One of the benefits of Queensborough's urban location, is its access to full community utility services, including water supply, sanitary sewer services, and storm water drainage. Residents and businesses in Queensborough enjoy the benefits of good quality water supply, reliable sanitary sewer collection, and a system of storm water drainage, as well as solid waste collection and recycling services. The community is largely protected from the flood risk of the Fraser River with dikes and development policies that provide additional flood protection. The Queensborough Fire Hall provides the community with local emergency services.

Sufficient Water Supply

Queensborough is well served with clean water for household use, commercial activities, and industrial operations. Water is supplied to the City from the Seymour and Coquitlam reservoirs via large transmission pipes operated and maintained by Metro Vancouver (previously the Greater Vancouver Regional District.) Water quality is excellent and meets Canadian Drinking Water Standards.

The 2008 Master Water Servicing Study for the City found that there are very few deficiencies in the system for both existing residents and businesses and that the current supply system should support future anticipated growth through to 2021. Some specific upgrades to the system will be required to meet anticipated growth in the Port Royal area and along Duncan Street and Blackley Avenue. It is anticipated that these upgrades will be done in concert with redevelopment in these areas.



Watercourses



The map shows the network of ditches, watercourses and dyking in Queensborough.

Reliable Sanitary Sewer Collection

The majority of Queensborough is provided with a city sanitary sewer collection system. There are 24 municipally-operated sanitary pump stations which pump sewage to either the Metro Vancouver pump station or directly into the Metro Vancouver trunk sewer. The sewage is then conveyed to the Annacis Island Treatment Plant.

According to the 2008 Master Sewer Servicing Study, only minor upgrades are required to address capacity issues for both the current and future uses to 2021.

The area north and south of Ewen Avenue, around Stanley Street, consists of relatively large lots, which are not connected to the City sewer system, but serviced by individual septic systems. As this area redevelops into more intensive uses, whether residential, commercial or industrial, the area will need to be tied into the City's collection system.

Storm Drainage and Watercourses

The existing storm drainage system in Queensborough is a mix of closed sewers and open ditches that discharge through 4 pump stations to the Fraser River. In larger areas of redevelopment the original open ditches have been replaced by a closed drainage systems as in at Port Royal and Thompson's Landing. In existing single family areas with open ditches, these ditches are expected to remain.

The existing drainage systems function adequately for most events, up to a 25 year return. However, in the past, residents have voiced some dissatisfaction with the large, open ditches that drain slowly, leaving pools of stagnant water.

In 2008, an analysis was undertaken to review options for modifying the streetscape to address both standing water in the ditches and roadway amenities. Options for enclosing the ditches, as well as enhancing the ditches were presented. Due to high costs, residents overwhelmingly decided to retain the current open ditch standard. While Ewen, Salter, and South Dyke roadways will eventually

include closed systems, the City is working on an open ditch and streetscape standard for the local streets.

From an environmental perspective the majority of ditches in Queensborough are considered Class C or non-fish habitat and therefore there are no set back or fisheries related issues.

Two ditches are classified as watercourses with fish rearing habitat (Class A); one is located below the Queensborough Bridge north of Boyd Street and the other is on the west side of Stanley Street north of Beach Street. Class B watercourses (those providing a food and nutrient source but inaccessible to fish) exist mainly along Boyd Street, Hwy 91A, Boundary Road, Duncan Street and Beach Street. Provincial Riparian Areas Regulations (RAR) dictate setback requirements to both Class A and B ditches. In addition, any impacts to these ditches require the



approval of the federal Department of Fisheries and Oceans and possible habitat enhancements.

Shoreline Habitat Management

The Fraser River Estuary Management Program (FREMP) has established a fish and wildlife habitat coding system for all foreshore areas in the Fraser River estuary. (FREMP is an inter-governmental

partnership established to coordinate the environmental management of the Fraser River Estuary as a significant aquatic ecosystems in the Lower Mainland.) Their colour-coded system classifies the overall habitat value of the river shoreline and are intended to guide prospective developers in selecting appropriate sites and identifying suitable design concepts. There are three colour codings: "red", "yellow" and "green". "Red" contains high habitat value and usually project works cannot alter or destroy habitat. "Yellow" colour coding means there is a moderate habitat value and development can occur in these areas with compensation and/or mitigation. "Green" coded habitat is low in value.

With an aim to protect aquatic and riparian habitat, the Program specifies requirements for future development, habitat enhancement, and compensation to protect aquatic and riparian habitat.

In Queensborough, areas of low habitat productivity have been assigned to the foreshore of former or and existing industrial sites, primarily along the River's edge east and west of the Queensborough Bridge. Areas of high habitat productivity are focused on areas that have seen little or no development over the years, such as the foreshore area between Boundary Road and Derwent Way.

Flood Protection and Community Safety

Queensborough is located within the Fraser River floodplain and as such, is susceptible to potential flood risk. The community is protected by dykes to the accepted Lower Mainland standard. These dykes are maintained and inspected annually. The recently completed Fraser River Flood level analysis indicated that small sections of the existing dykes should be raised slightly by about 0.3 metres.

Elevations for new development are, in general, dictated by the extent of the development and how it fits into the existing neighbourhood. New, larger subdivisions are to be built to a flood control elevation (FCL) of 3.53 meters, which is based on the river flood profile. The FCL increases to 4.2 meters at the east end of the community. Single infill lots are to be built with habitable space at 1.5 m elevation or 150 mm above the road centerline. Two lot developments in existing neighbourhoods are somewhat of a gray area. A restrictive covenant has been applied to all lots in Queensborough and dictates the required elevations for future development.

The City is currently developing a Flood Management Strategy to review future requirements and implementation strategies. The results of the Strategy will address the various shortfalls and recommend mitigation. This is being coordinated with the City of Richmond recognizing that diking is integral to two cities.

closer to the road. However, this option impacts the sanitary collection system which in most cases is located behind the homes. The system was installed without any ground treatment and is susceptible to settlement if a lane is built overtop. Therefore, mitigation measures could be needed to address the sewer settlement issue for rear loaded lots.

Community Character Issues that Impact Servicing

A significant community character issue that will impact servicing is vehicle access to homes. The two primary options are front loaded and rear loaded lots where the former refers to driveway access at the front of the home and the latter refers to rear lane access. As the majority of existing streets use open ditches and the intention is to maintain the open ditch concept, small lots that are front loaded will lead to multiple culvert crossings where there may be more driveway than ditch. Two potential options to address this are to limit the size of the lot or to construct shared driveways along the property boundary. Another approach is to use rear loaded lots that could lead to more attractive streetscapes with homes sited

Sustainable Infrastructure

Various sustainable infrastructure options are appropriate for Queensborough and most relate to water usage and drainage. Potable water usage for irrigation can be reduced by utilizing rain barrels and xeriscaping. Xeriscaping is defined as creative landscaping including the smart usage of plants (either native species or drought resistant), reduction in turf, soil improvements, design, etc. It has been shown that xeriscaping can reduce irrigation water use by 50 to 75%. Storm runoff reduction via infiltration is an option that would be appropriate primarily for new developments where the ground level is being raised. The water table is very near the surface in most of Queensborough, therefore opportunities for infiltration are limited.

OPPORTUNITIES AND CHALLENGES: THINGS TO THINK ABOUT...

Based on community feedback, for the most part, the system of open ditches are here to stay!

Given that open ditches will remain part of the Queensborough community, what issues need to be addressed? How can open ditches be used to enhance or contribute to the community of Queensborough?

Minimizing the risk of flooding

Provincial guidelines call for raising habitable levels to the Flood control Level (FCL). Typical

techniques to accomplish this include:

- Build homes on raised supports without permitting habitable space below the FCL
- Raise the grade to within a few feet of the FCL and then construct the house with a crawl space to ensure no habitable space is available
- Raise the grade of all surrounding land to the FCL

A further option is to choose not to satisfy the provincial guidelines and permit development below the FCL. However, this inherently

assumes that owners accept their homes will be at risk should a flood occur. Given that these options can result in significant elevation differences and potential impacts between adjacent homes, which of these options are best for the community?

Access Options: Front loaded vs. rear loaded lots

In your opinion, which of these options enhances the streetscape character of Queensborough? How do you feel about shared driveways or requiring larger lots? Keep in mind the impacts of each on the servicing infrastructure.

For more information about the Plan review and update, contact us at :

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