

The Fraser Delta Lowlands: NEW BUILDINGS

Summary

The Fraser Delta Lowlands are comprised of Richmond, Ladner and Tsawwassen.

The Current Situation

These three communities are built on the Fraser River delta which is on average at or below sea level. This is some of the best arable land in BC and the Eastern half of these municipalities are in the Agricultural Land Reserve.

The Lowland communities are low density and prone to sprawl putting development pressure on the ALR. There is a strong segregation of land uses in the Lowlands with residents living in the West and commuting North and East to work and services.

Total population added by 2056: 154,660

Summary of added dwelling units:

61,864 new housing units were added to densify the Fraser Delta Lowlands.

645 Single detached homes

894 Townhouse, 34,685 Garden apartment (35 units/building)

20,000 Mixed-use commercial (25 units residential/building)

5640 Mixed-use live work, business/industrial (15 units residential/ building)

Secondary suites legalized



The complete Fraser Delta Lowlands: Richmond, Ladner and Tsawwassen

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The Fraser Delta Lowlands: NEW BUILDINGS

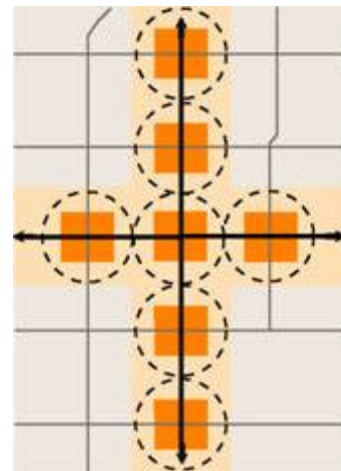
Neighbourhood scale solutions

We integrated higher density, commercial space and public transportation at the neighbourhood scale to give all residents the opportunity to work and shop within walking distance of their homes. In order to respect the single family characters of Richmond and Delta. We added street oriented medium density housing typologies with work on the ground floor and residential above.

Our Strategies

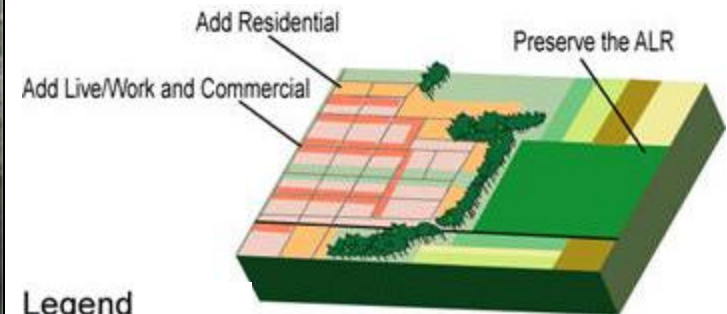
- Add density to existing neighbourhoods and service them with a robust transit system.
- Protect the ALR and reinforce open space.
- Add live/work and commercial nodes to the neighbourhoods to create complete communities.
- Position nodes of density and commercial activity within a five minute walk of all residents.

Opportunities and Constraints

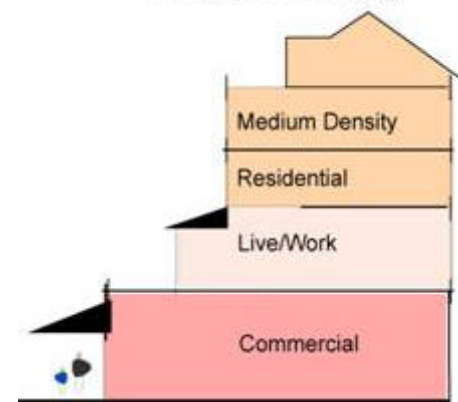


Densified commercial corners

Brownfield infill



Flexible Zoning



Mixed use building

The Fraser Delta Lowlands: GREEN INFRASTRUCTURE

District scale overview

The Green infrastructure in this district is distinct from all other areas of the GVRD. Much of this region is coastal floodplain. The dike system along the edge of the Fraser and the Georgia Straight protects this area from flooding and creates a great opportunity for recreation and wildlife habitat.

By preserving and creating green spaces along the waters edge, the habitat rich foreshore is preserved and accessible as a recreational and transportation corridor (Fig.2).

The foreshore is connected through green corridors to the interior green spaces, creating a green web. This network of green creates urban habitat for flora and fauna in the region, and provides residents with a safe, aesthetic walkway option.

Most importantly, our densification strategies allowed us to preserve the ALR instead of allowing growth to encroach on this valuable fertile land and source of food security for the GVRD (Fig.4).



Green networks for people's well being and habitat integrity:

By preserving the shoreline and the ALR, connections between these two major systems was done using existing canal infrastructure, green streets, and where feasible, linking open spaces with a trail network were strategies proposed for the building of green infrastructure.

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The Fraser Delta Lowlands: GREEN INFRASTRUCTURE

Neighbourhood details

In Tsawwassen a sustainable community design, that focused on bringing jobs and services into the district, while preserving the green edge along the water, replaced barren agricultural fields. This new green community adds jobs, affordable housing, new vibrancy and dynamism to an aging residential suburb (Fig.1).

Richmond presented a unique opportunity to use existing canals as green corridors. By expanding on the region's existing canals into residential areas, canalised green streets were created (Fig.3). They add character to the neighbourhoods and provide recreational opportunities to the residents while revealing Richmond's natural drainage.

At the neighbourhood scale proximity to green space was seen as a priority. A maximum 5 minute walking distance to public green space provides residents with ample recreational opportunities.

Fig.1 *A complete, sustainable and green community:* The edge of the ALR should provide an opportunity to express a sustainable vision



Fig.2 *Protect the Foreshore:* The shoreline provides opportunities for a green corridor.

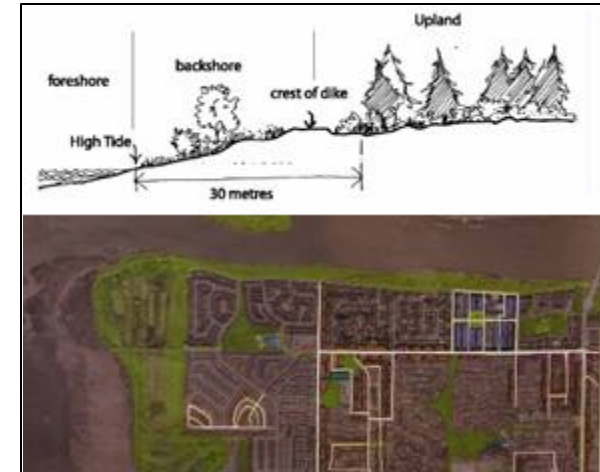


Fig.3 *Use existing canal infrastructure for green connections* Richmond presents unique opportunities for green corridors.



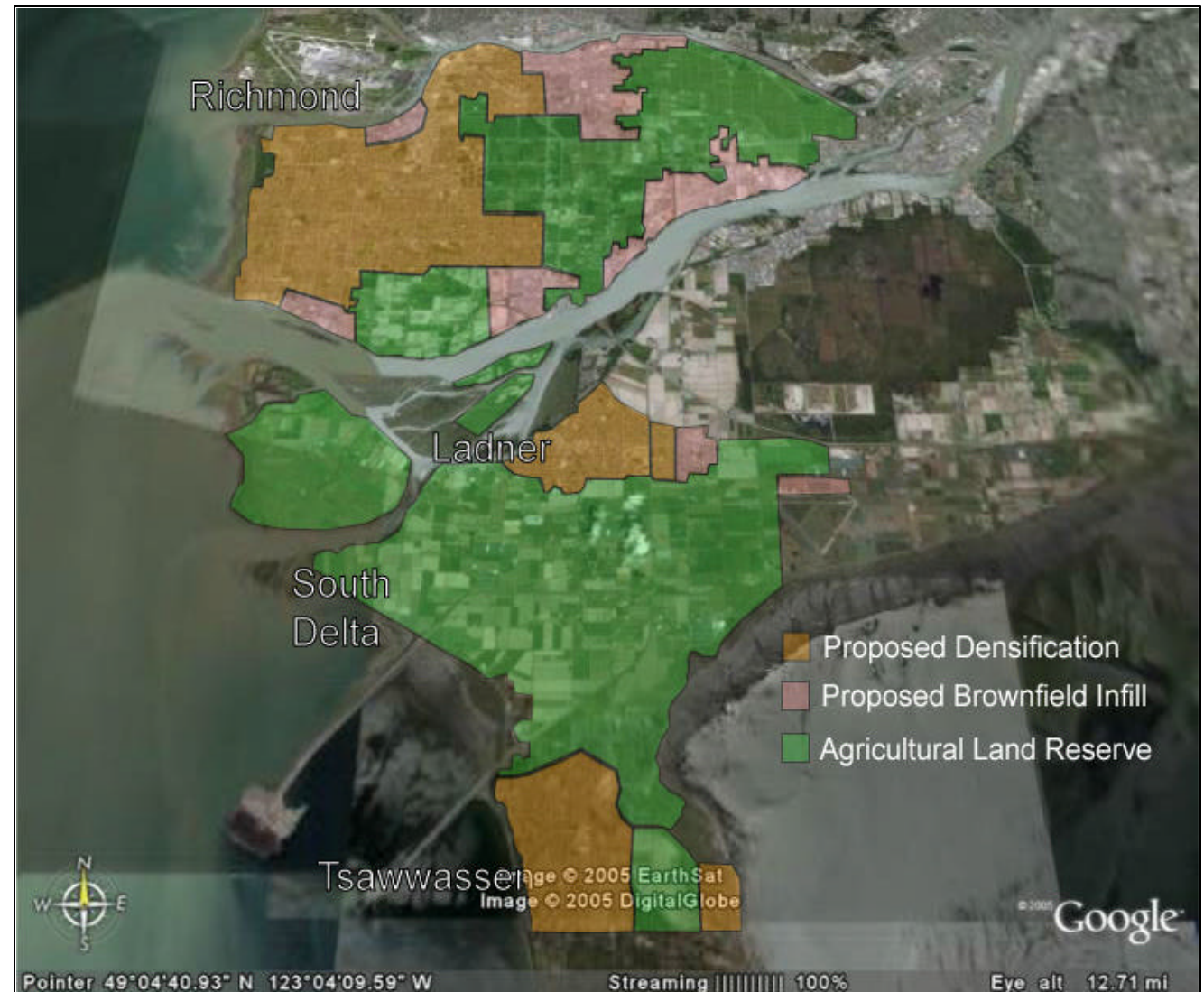
Fig.4 *Save the ALR:* All areas of the ALR are to be saved by using density measure at the neighbourhood scale

The Fraser Delta Lowlands: JOBS CLOSE TO HOME

District scale overview

Richmond is a complete community with more jobs than qualified workers largely due to YVR. South Delta has fewer jobs but faces similar problems of land use segregation. The issue in the Fraser Lowlands is the separation of residential, industrial and commercial areas. The re-integration of these three separate yet essential land uses could increase the prosperity and quality of life in the Fraser Lowlands by reducing commuting and allowing people to work in their neighbourhoods.

The job market is changing in the lowlands with service industries replacing traditional resource based industries. As this transition occurs many brownfield sites are being left behind creating an opportunity for mixed work/live infill.



Complete communities create jobs

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The Fraser Delta Lowlands: JOBS CLOSE TO HOME

Job Sites

Jobs added summary:

18,000 live work jobs
12,000 new commercial jobs
3520 Institutional jobs
3000 Industrial jobs
Total airport jobs: 53, 000

Total jobs created: 89,520

In Richmond and South Delta employment centres were diversified by allowing for small commercial nodes in all neighbourhoods.

Flexible zoning and the infill of brownfield sites with medium to high density residential will make communities out of these brownfield sites while allowing existing industrial to continue functioning (Fig.5).

Residents will have the opportunity to live near services, their places of employment and close to open spaces (Fig.6).

In South Delta the creation of small dense commercial nodes redistributes jobs locally and provides people with the opportunity to work in their immediate neighbourhood (Fig.8).

Fig.5 *Richmond Knight St. Corridor:*
Brownfield sites are infilled with live/work creating complete communities.



Fig.6 *Densified corners are commercial nodes:*
Density creates nodes of commercial, services, culture and transportation.



Fig.7 *Preserve river dependant job sites and the ALR*



Fig.8 *Jobs within 400 m. walking distance:*

The Fraser Delta Lowlands: TRANSPORTATION

Moving around the district

Connect the districts through transit, bike, and pedestrian networks.

The Fraser Delta Lowlands are currently characterized by sprawling developments of single family homes surrounded by agricultural lands. Low density development leads to car dependant travel and makes transit, bike, and pedestrian transport methods unreasonable. These residential corridors require concentration and diversification. As population increases along the corridors, the bus, bike, and pedestrian networks connecting the districts and the region expand. Buses from Tsawwassen and Langley can run more frequently and connect to the Richmond Skytrain station.

Continuing transport greenways along the Fraser and the dikes of Richmond is another necessary development. These changes can make transit, biking, and walking a more viable option for commuters. Linking diverse transportation methods increases community livability and commercial opportunities while reducing pollution, transportation costs, and traffic congestion.



Transit network connecting the districts:

Transit routes are illustrated by the thicker white lines. The new Canada Skytrain line is coloured in pink. Buses run on the 800m grid pattern in Richmond serving all the neighbourhoods along high density corridors.

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The Fraser Delta Lowlands: TRANSPORTATION

Moving around the neighbourhoods

Dense mixed-use transit corridors

The 2056 Richmond has a dense bus network along the 800m grid that connects all neighbourhoods to the Skytrain stations, and to the greater region (Fig.9). The new higher density corridors have residential garden apartments along the streets, mixed-use commercial buildings, and bus stops on each corner (Fig.10). This network of density allows for frequent bus service and shopping options in 5 min. walking distance. Tsawassen's new development also has higher density, mixed-use commercial corridors serviced by transit (Fig 11).

Green mid-block connections

Richmond's street system is only interconnected on the 800 m grid pattern. Due to the existing maze of cul-de-sacs inside this grid, it was impossible to create an interconnected street pattern on the smaller scale. Therefore the grid was retrofitted where possible with green mid-block connections for safe and easy pedestrian and bike flow (Fig.12). These green streets also connect the open green spaces functioning as habitat and stormwater corridors.

Fig.9 *Richmond's transit network* The network of buses connect to the new Canada Skytrain line at Richmond centre



Fig.10 *Dense mixed-use transit corridors in Richmond*: The higher density commercial corners allow for a 5 min. walk to transit



Fig.11 *Connect all communities to transit*



Fig.12 *Green mid-block connections*
Green connections improve the flow of people, water and animals