Site Context & Existing Conditions
The study site for this design prototype is located in the northeastern portion of Surrey: just south of Tynehead Regional Park. The site is 110 acres in size, and contains portions of 172 Street, and meets the Agricultural Land Reserve (ALR) in along its Western boundary at 92 Avenue. The site drains southwesterly into the Serpentine River.

The existing land use on the site is rural and exurban in character, with a mix of agricultural land uses, single unit dwellings, and some two unit dwellings. Recreational hobby farm activities are common in the area, with residents keeping vegetable gardens and animals such as sheep.

Proposed Design
Using riparian areas and the existing hydro line as a green armature, the proposed design shown below aims to provide a variety of residential housing options south of Tynehead Park. An interior mixed use segment is proposed around a school site, and community recreation centre. Housing is proposed to be higher density to the north around this node, and lower in density as the area approaches the Agricultural Land Reserve to the south. Forested park buffering is proposed to the Pacific Highway to the east.

Site Structure Diagrams

Figure 5. Proposed site design sketch showing watercourses, land use, parcel lines, roads and major vegetation. 400m walking radius buffers are also included.

Figure 6. Streamside path typology. Shown: Orwell River, PEI.

Figure 7. A triangular plaza bounded by commercial frontage. Shown: Newberry Plaza, Chicago, IL.

Figure 8. False Creek typologies responding to an inclined site. Shown: False Creek, Vancouver, BC.
Produced Urban Framework – “First Take”

The first intent is to increase the density and job opportunities, bring more facilities and services, and improve the sense of livelihood in the neighbourhood in order to achieve residential capacity healing, along with providing better access and utilize the maximum value of the place. Since the neighbourhood is besides the ALR line, there is the potential to have more interaction between the farmland and the residential zone. For instance agricultural institutions, or agricultural-residential parcels can create opportunities for residents who seek different lifestyle, which is more in relation with the nature. Some big parcels have the potential to be broken down into smaller parcels in order to process the densification of the city.

Figure 1: Study Area

Diagrams:
1. The mobility system: The road hierarchy helps to explain how much traffic will influence the place. We kept the condition of the highways and secondary roads as they exist now, and added trails and greenways inside the neighbourhoods (Golden Ears highway and 92 Ave.), to increase the connectivity between the communities, the access to major streets, as well as the access to destinations.
2. The green system: This neighborhood has a great advantage in terms of access to green spaces and forests. Green trails give people the chance to experience nature while inside the neighborhood. In addition, we can expand the trails throughout the green system and make connections between green space parcels.
3. The unique features: We are providing three major unique feature nodes: an educational center, a farmers’ market, and a commercial-cultural spot. This study area has the unique feature of a transition zone from the highway to farmland, and the density gradually decreases when getting close to the ALR line. Since it is beside the ALR line, this area has the potential to have interaction between the farmland and the residential zone. For institutional agriculture, or residential agriculture, education on how to be self-sufficient should be expanded by creating community gardens.
The site is located on the intersection of Pacific highway and Trans Canada line. The Golden Ears Way is on the south of the neighborhood which is designed to connect Surrey to Langley and provide access to existing industrial and commercial areas on either side of the Fraser river. The neighborhood comprises of single family courtyard houses and a few light industries. The topography of the neighborhood has dramatic west-east and south- north slope which creates a unique sense of place for the viewers. This unique location of the neighborhood acts as a strength and an opportunity for future development.

Vision Statement:
The overall intent of the neighborhood is to build an integrated community around existing green systems in a way that it strengthens the economy.

Proposal

**Challenges**

- Large size plots
- Highway acts as a barrier between green systems
- The road connectivity gives easy access to inter city and intra city transportation.
- Leoran Brook Creek connects to the Fraser River.
- Job Attractions: Industries, Agricultural activities

**Interconnected Green Systems**

- Fraser River
- Pacific Highway
- Golden Ears Way
- Tynehead Park
- Leoran Creek

**Opportunities**

- To encourage light agro based industries to support the existing agrarian economy.
- To provide affordable housing in order to support future growth.
- To build inter-dependency and connectivity with surrounding neighborhoods.

**Proposals**

- To strengthen public realm by using existing green systems.
- To organise light commercial along important nodes and corridors.

**Figure 1. Existing conditions of study area.**

**Figure 2. Diagram.**

**Figure 3. First impressions proposal.**

**Figure 4.** This section shows the proposed light industrial use with mixed residential stacked above creating courtyards and recreational areas.

**Figure 5.** Proposed pedestrian bridge that connects the neighborhood to the Fraser River through green infrastructure.
The first design step for the site was identifying the green infrastructure and using it to guide the foundational arrangement of the land. By protecting existing green space and water streams, we enhance the ecological capacity within the site while potentially offering a significant public amenity to future residents.

In addition, the transition from a major industrial zone to our site is a key design driver in the first impressions proposal. It was essential to propose a gradual transition in zoning from the heavy industrial to lighter industrial to residential. The co-existence of the working and living realm helps create a compact community with a diversity of uses.

Furthermore, to complement the proposed intensity of use and residential mid-density lots, the team determined that more frequent street movement is required for ease of access and enhanced mobility.

Lastly, there are points of interest that received more delicate design. Charlie’s Tree is enhanced into a community celebrated park in memory of Charlie the pilot, while the intersection at 184th and 92nd is transformed into a commercial node as the vibrant heart of the site.

**Existing Site Conditions**

This site is located in North Surrey within the guildford area. The site boundary includes 184th street to the west, 187th street to the east, 92nd Avenue through the centre, and 88th Avenue to the south.

Currently the site is predominantly residential zoned with low-density single family homes. It fosters a rural feel with abundance of tree canopy, open spaces in private lots, and vast views to the larger context of the city surroundings.

The major ecological features in the site are the forested lands at the northern edge extending into the centre, and the water stream that runs along the central forested area. The site also used to hold a culturally significant tree that was in memory of a former pilot who lived in the area. The tree no longer exists due to extreme weather conditions.

The opposite side of the highway 1 adjacent to the study area is zoned industrial. This poses a challenge to the site, as it will be necessary to transition from this use smoothly into what might be a dense residential area in the future.
**Existing Context**

Located within the larger study area of Port Kells neighborhood, the land of this site is mainly composed of low density, rural and detached residential uses. Other uses include many institutions including one school, community centers and several heritage sites. The characteristics of the study area is mainly dominated by the existence of several creeks, the longest one being ‘Latimer Creek’ that runs all along the site from North to South. The creeks and its surrounding riparian buffer areas work as the ecological heart of the site and shape the landscape. Another important feature of the site is the ALR surrounding it in almost all directions. The character of the ALR is such that it is almost reaching into the residential lands. The historic ‘Harvie Road’ diagonally cuts through the site from north to south, intersects with 88 Ave and 189 St, and creates a 5-point intersection. A greenway enters the site from the west, runs along 90 Ave, and goes down south towards the ALR from the intersection of 90 Ave and 192 St.

**Opportunities and Challenges**

The major opportunity that the site has is at the intersection of Harvie Road and 88 Ave. The existing land uses at this intersection is mostly community amenities and institutions. What this neighborhood lacks is commercial and civic land uses, for which this intersection has the most opportunity for growth. The other two intersections that are important with Harvie Rd is at 188 St and 90 Ave. These intersections can work as secondary commercial or mixed-use center.

**Produced Urban Framework – “First Impression”**

The overall intent for the designed neighborhood is to densify the residential zones and provide adequate job opportunities by encouraging commercial facilities around major intersections as well as designing a walkable community in a way that the ecological infrastructure of the neighborhood is protected and then enhanced so that it works as a positive impact on the increased population.

For the increased population, one school is provided along with diversified housing options. For recreational facilities, our intent is to capitalize along the stream infrastructure and use it as an alternative transportation route. A 5 min walkability from retail, schools, greenways, parks and civic facilities is expected with the population growth. Connectivity is increased by adding to the existing greenway and by adding new roads to finish up cul-de-sacs.

Most of the density is centered around the central area of the site. For the Northern and Southern part, our intent is to increase connectivity towards the industrial and Agricultural lands respectively.

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**Figure 1:** Existing Landscape and Opportunities

**Figure 2:** Open Space Connectivity

**Figure 3:** ALR and Opportunity for commercial growth

**Figure 4:** Vehicular and pedestrian mobility

**Figure 5:** Proposed Landscape, Roads and Green Infrastructure