

Systems Strategies

Greater Surrey –PATTERNS OF WORK

Sustainable Strategies – Summary

Home based, commercial/office based, and industry/business based are the three types of work patterns, which are being proposed as sustainable strategies for the future of Greater Surrey.

The basic idea of live-work is to ensure at least one person works at home. It cuts down the traffic flow during rush hours generated by the traditional work patterns which are addressed by the separation of work and home.

Commercial based work sites could be more frequently found around business centers.

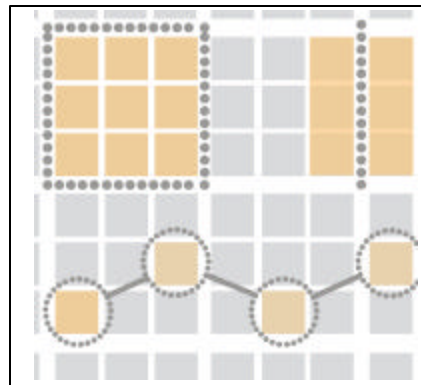
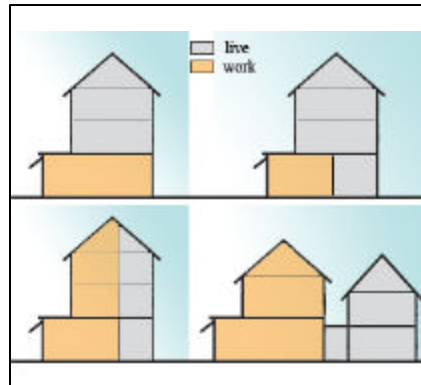
Because of the increased commercial activities in none commercial areas in Greater Surrey, it will make these places function as potential commercial lands and increase jobs opportunities in the future development.

Industry/ business based work places usually need a lot of space, such as super blocks. In these areas, efficient and frequent public transit systems are required to encourage transit oriented flows.

Greater Surrey is characterized by the variety in opportunities of sustainable work system. Mixed used development of live-work areas will address the most efficiency and sustainability of these work systems for the Greater Surrey.

Home based work

Living quarters can serve as workplaces, with modifications to facilitate this arrangement.

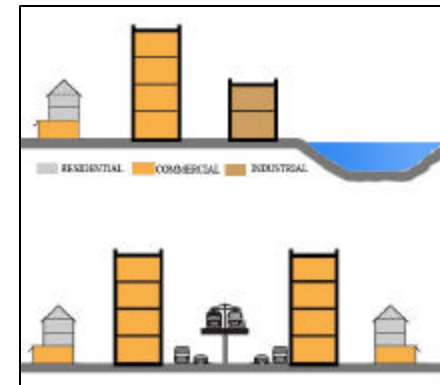
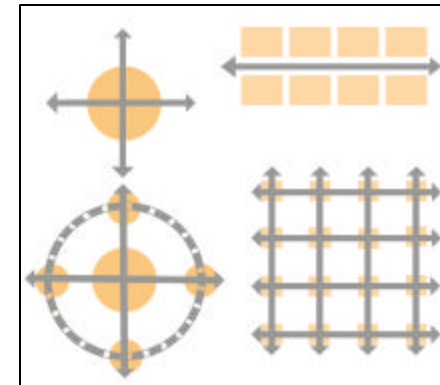


Industry based work

Industrial areas always produce increased opportunities for job places. The mode and ease of transit is often what promotes this arrangement.

Commercial based work

The image below shows four patterns of commercial based works which are characterized by distribution of arrangements: center, linear, centers and sub-centers, and grids.



Section pattern of Surrey

The above mentioned living/work arrangements are featured in the City of Surrey, mostly in the dense city center and along the river, where mixed use arrangements prevail.

Greater Surrey – PATTERNS OF WORK

Strategies Applied – Summary

According to the Official Community Plan, the projected job opportunities in Surrey will reach 1,422,000 jobs in 2021. But the real situation is that the trend of job development in Surrey so far has somewhat lagged behind these expectations.

Two ideas will be applied to generate more work opportunities from the Urban Design perspective. One is using flexible zoning to offer more chances for work on a regional scale, minimize the time which is spent on the way to and from workplaces, associated with central commercial areas and the transportation grids.

Another is layering working and living spaces into one mixed-used building ensures at least one family member can work at home. Use centers, sub-centers, lines, and grids to form a live-work system, which allow people to live in or at least near their workplaces in order to save time and money.



Taxonomy Great Surrey

Transportation system in Surrey has a typical regular grid pattern. The work sites are applied into the grid by arrangements of centers and lines. Industry, commercial and green infrastructures co-operate with streets to make taxonomy zoning and set homes close to jobs.

Systems Strategies

Greater Surrey - PATTERNS OF GREEN INFRASTRUCTURE

Sustainable Strategies – Summary

Green Zone Net Work:

Parks, green corridors, farmlands and streams working together could increase property values and economic benefits to the entire community.

The Greater Surrey entire region is characterized by its fingered form of the connection between agriculture use and urban blocks. The sustainable pattern suggests keeping interlocking fingers of farmland and urban land. The urban fingers should not be more than one mile wide, while the farmland fingers should not be less than one mile wide.

Pierced Block is “A natural feature may pierce one side of a block.” The stream should be preserved as a part of a larger public open space system. Having a piercing block would benefit surrounding residential houses in many ways, e.g. the houses nearest the natural features will have desirable views. The use of fences in the back yard of these houses should be avoided so that others can also benefit from the natural scenery.

The 30m buffer of the riverside is strictly required in order to protect and maintain the healthy condition of Greater Surrey's green streams as well as restore the qualities of these streams. Constructions can not be built in the buffer zone area.

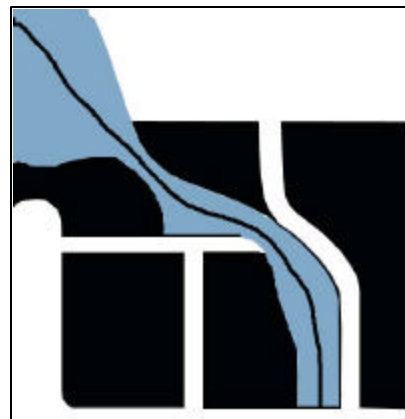
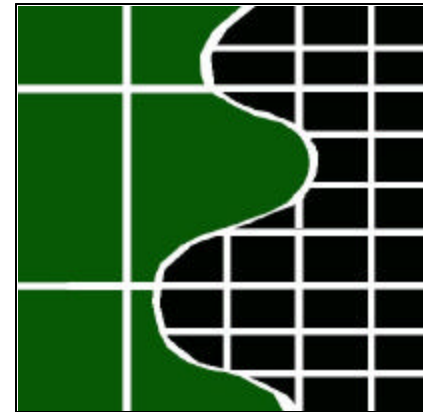
Green Zone Net Work

The pattern represents the net work of community parks, green corridors, agriculture lands and streams.



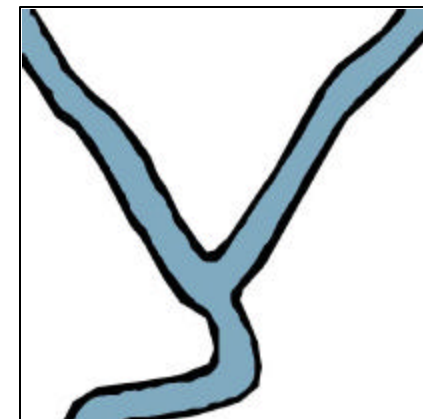
Form of Agriculture Land Use and Urban Space

The pattern shows fingered form of the transition between agriculture use and urban blocks.



Pierced Block

A natural feature may pierce one side of a block.



Buffer of Streams

The 30m buffer of the riverside is required in order to protect and maintain the healthy condition of streams.

Greater Surrey - NETWORK OF GREEN ZONES

Strategies Applied – Summary

Surrey is called City of Parks. The existing green infrastructures in Greater Surrey area, which include community parks (include greenbelts more than 500), farmlands (approximately 35% entire lands), hundreds of kilometers of trails, rainforest and streams (Serpentine River, Nicomekl River and Mahood Creek. etc.) have already provided a well maintained base for establishing an interconnected green infrastructure system.

The protection of 30m buffer zone of rivers is written into law. The idea of keeping interlocking fingers of farmland and urban blocks is to reinforce this connection with each other. The urban fingers should not be more than one mile wide, while the farmland fingers should not be less than one mile wide.

The neighborhood parks have important meanings of social opportunities such as using a small park as a meeting place and playing football in larger parks. The suggestion is to "locate a small park within a 3 minute walk (250 meters) of all homes and a large park within a 7 minute walk (700 meters) of all homes."

Surrey prides itself as a "clean city" that values conservation and protection of natural resources such as air, water, ecological habitats, and agriculture lands while a sustainable network is being built.



Network of Green Zones:

In the image above, an interconnected green infrastructure system for Greater Surrey is created by the cooperation between the four green elements which are community parks, green corridors, agriculture and forest land, and streams.

Systems Strategies

Greater Surrey-PATTERNS OF MOVEMENT

Sustainable Strategies – Summary

More Transit, More Walking, Less Cars.

The City of Surry is ideal to be built on grid network of streets as most of the area is covered by flat lands and gentle slopes.

One of the ideas of “Being Transit Oriented” is to create main roads as “Transit High Street”. Transit centers can be highly successful places if frequent and efficient transit service is combined with high-density, mixed use development.

Interconnected Greenways spreading along with street networks build connections between regions, towns, communities and neighborhoods, improving flows of transit, people and rainwater and habitat.

Streets with pedestrian orientated features (i.e. continuous sidewalks, street trees, neighborhood gardens) make walking more pleasant, way-finding easier and create sense of safety in neighborhood.

Grid Streets Network:

Grid Streets network makes neighborhoods legible and tangible. Occasional interruptions by public spaces create neighborhood centers

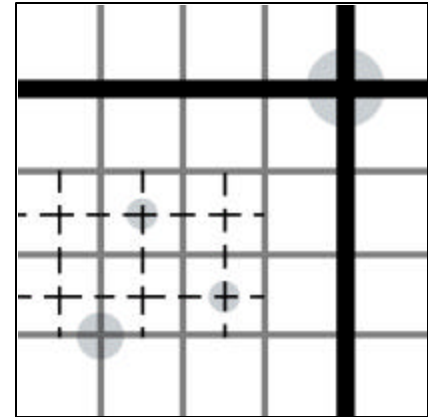


Greenway Oriented:

Interconnected greenway system facilitates the capture and flow of rainwater, meanwhile offer pleasant places for cycling and walking.

Transit Oriented:

The image below shows a linked transit system. The basic idea is to create a frequent and efficient transit service based on the interconnected network of streets.



Pedestrian Oriented:

Neighborhood can be walk able if the walking is pleasant with street trees, nice views and continuous sidewalk.

Greater Surrey-PATTERNS OF MOVEMENT

Strategies Applied – Summary

The Greater Surrey is expecting great growth in population and job demands in the next 10 years. A coherent system of interconnected movement pattern will help Surrey maintain healthy growth and a sustainable region.

Based on an improved grid street network, such attempts will be concentrated on better and more legible connections between regional employment and shopping centers.

Neighborhoods with increased density and mixed land use offer variety in social activities; as a result, working together with frequent and efficient transit system, a livable region is created, pedestrian-friendly streets encourage pedestrian activity in community by offering pleasant walking experience and sense of security, while city greenways link these pedestrians and cyclists to the surrounding community and regional open space to create a whole “walk able” region.



Interconnected Movement Pattern:

The image above shows how the interconnected system of streets, greenways and transit system working together as a “whole” Interconnected Movement Pattern and how this pattern is applied to Great Surrey.

Systems Strategies

Greater Surrey-PATTERNS OF NEIGHBORHOOD

Sustainable Strategies – Summary

An active main street features regional sustainability by giving transit priority, excluding or relegating cars to a minority status, creating pleasant walking and shopping experience, and giving easy access to other transit modes.

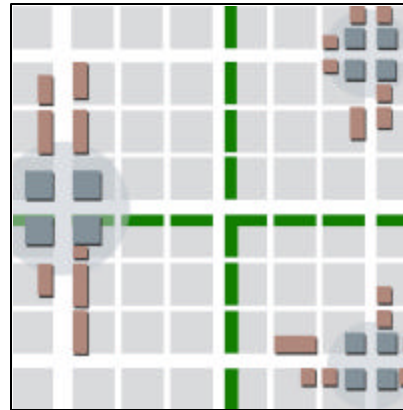
A complete community provides a healthy mix of housing types which offer more living options and affordability. Viable transit systems are needed to support the density of the community.

The neighborhood parks have important meanings of social opportunities such as using a small park as a meeting place and playing football in larger parks. The suggestion is to "locate a small park within a 3 minute walk (250 meters) of all homes and a large park within a 7 minute walk (700 meters) of all homes."

At the neighborhood scale, people's movements between work place and home form traffic flows. Work places help to increase neighborhood density and mixed land use, thus represent sustainable live-work neighborhoods.

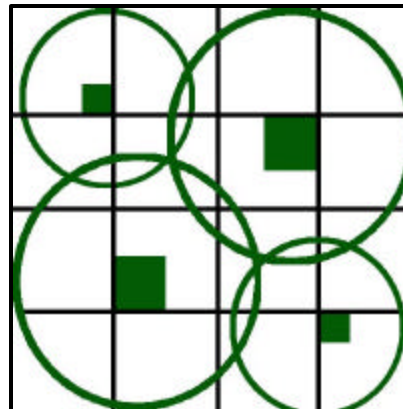
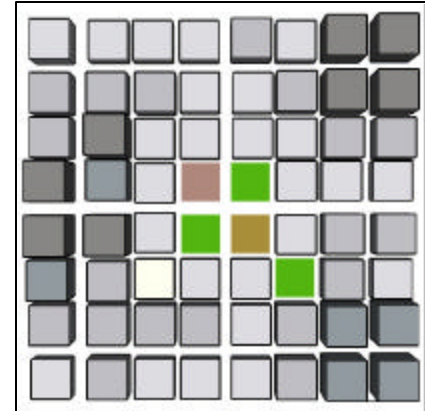
Active Main streets:

An active Main Street which provides safe and comfortable sense in and out always encourages people walking.



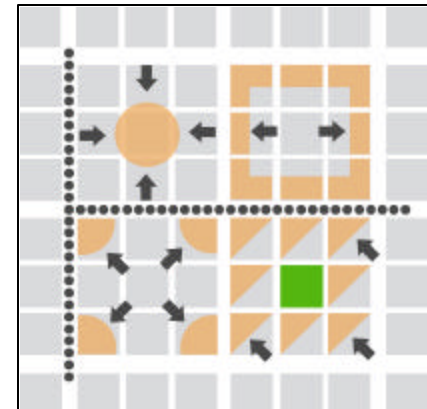
Affordable housing:

The neighborhood with mixed housing types makes variable life styles possible in one place where affordability is possible.



Green Neighborhood:

The pattern shows the coverage of the community parks. Small parks within 3 minutes and big parks with 7 minutes provide a multi-functions place.



Mixed land use :

There are four concepts of the relationship between neighborhoods and work places. Different layouts decide the directions of people's movement which are showed by black arrows.

Greater Surrey-PATTERNS OF NEIGHBORHOOD

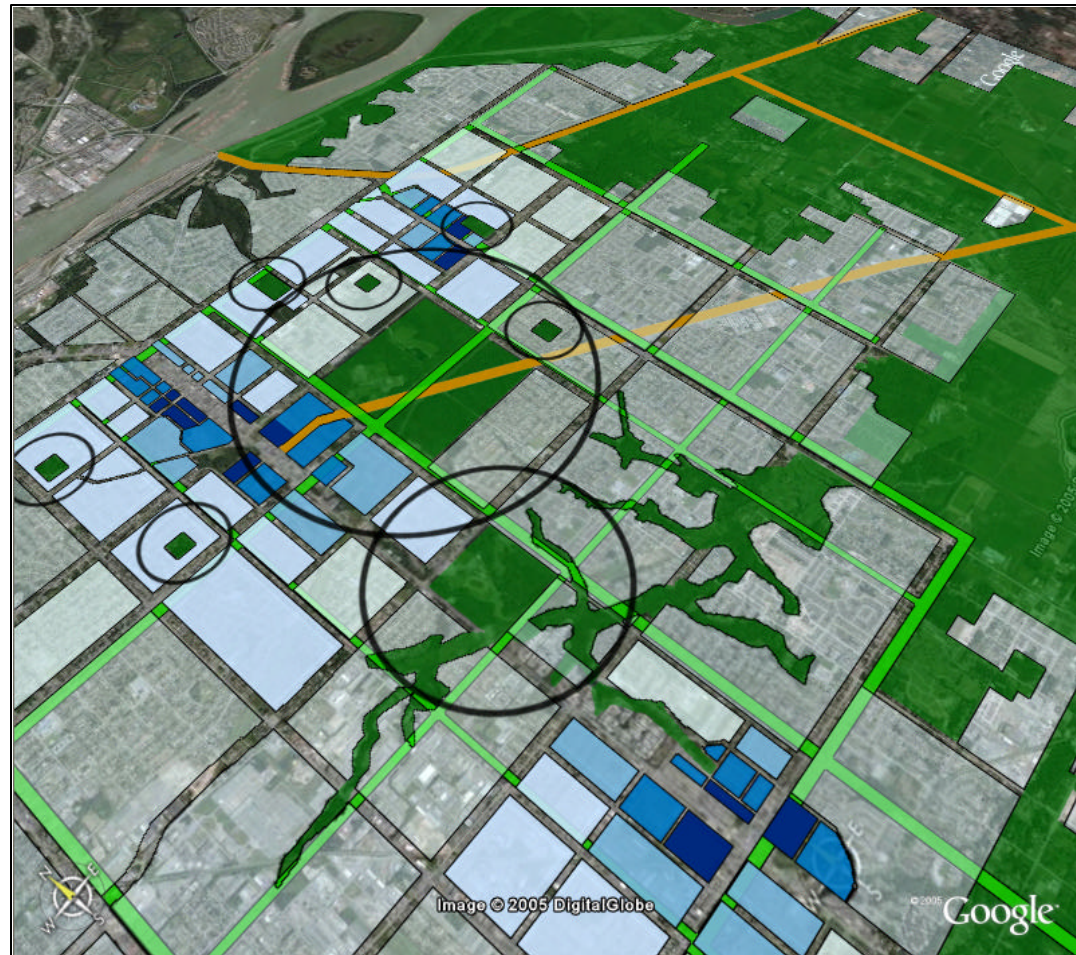
Strategies Applied – Summary

The Great Surrey includes Surrey, White rock and north Delta. Six subdivisions make up Surrey: Fleetwood, Whalley/City Centre, Guildford, Newton, Cloverdale, and South Surrey.

The existing transit systems and regional centers address the basic grid network outline. When Great Surrey improves the transit systems to get faster and more frequent traffic flows, it will maintain its healthier growth as a whole with the co-operation of the sustainable characterized neighborhood patterns.

Community parks, green corridors, farmlands, forest and streams create an interconnected green infrastructure system for Greeter Surrey by working together.

Intermixing residential, commercial, and business in order to ensure that jobs and services are "located closer to the people who need them".



Sustainable Great Surrey:

The above image addresses the opportunities about the sustainable neighborhood patterns which work in Great Surrey as an interrelated system of transit and greenway, mixed used land development with housing varieties, and high density regional centers with transit oriented feature.