IMPLEMENTATION CHARRETTE

An implementation charrette is perhaps the most complex and time intensive charrette of the four charrette types we present. The East Clayton charrette was desinged to achieve institutional and regulatory change. This process was set in motion when the Surrey City Council authorized their planning department to use seven principles of sustainable communities as the basis for developing the new community of East Clayton, and to use the process of the charrette to open up the planning process to involve designers and a diverse group of stakeholders.

East Clayton Charrette

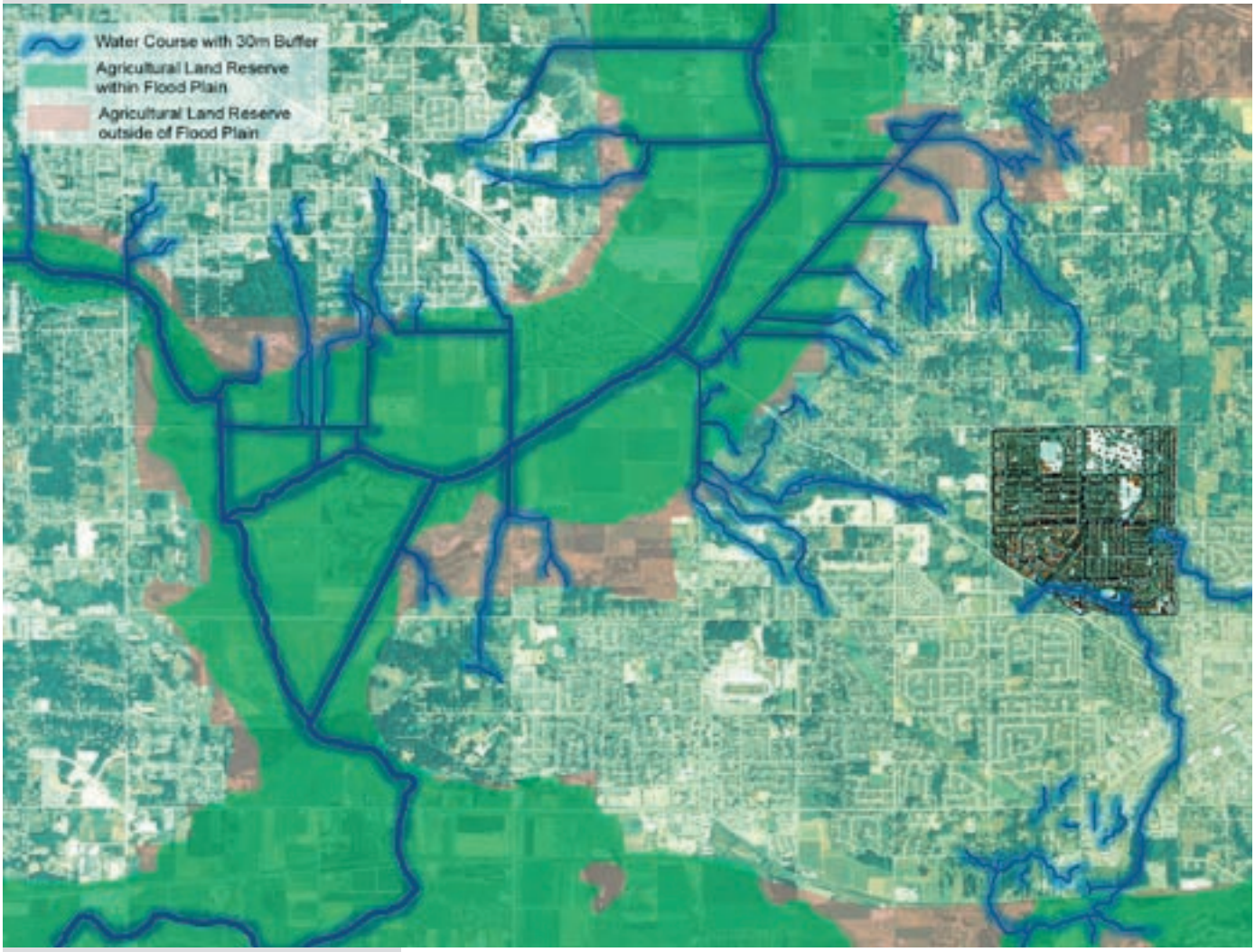
Charrette Dates
November 1999 and February 2000

Charrette Client
City of Surrey

Charrette Type
Implementation

Charrette Participants

City of Surrey:
How Yin Leung, Wendy Whelen, Fransisco Molina (Planning); Eric Emery (Engineering)
Jean Lamontagne (Parks, Recreation and Culture)
John Strandt (Fire); Gerry McKinnon and Dale Hadden (Operations)
Department of Fisheries and Oceans:
Barry Chillibeck
Ministry of Environment, Lands, and Parks:
Erin Stoddard
BC Hydro:
Allan Grant
East Clayton Community:
Norman Alexander, Amar Bains, Elsa Watts (Citizen Advisory Committee)
Developer:
John Turner (Progressive Construction)
Engineering Consultants: Sudu Vatagotagombura, Jane Farquason (Reid Crowther Ltd.)
Designers:
Bob Worden, Doug Ramsay (Ramsay Worden Architects Ltd)
Stacy Moriarty (Moriarty/Condon Ltd.)
Patrick Condon (UBC James Taylor Chair in Landscape and Liveable Environments)
Facilitators:
John Blakney (Pacific Resources Centre Ltd.)
Jennifer Crawford (Pacific Resources Centre Ltd.)
Environmental Consultant:
Helmut Urhan (Tera Planning)



Above
The 250 hectare East Clayton site is located on the eastern border of Surrey, geographically the largest and the fastest growing municipality in the Lower Mainland Region. Situated upland of the region's Agricultural Land Reserve (shaded area), the site also drains into two of the region's most significant water bodies (the Serpentine and the Nicomekl River).

The East Clayton Neighbourhood Concept Plan, and the charrette process from which it was produced is a larger initiative called the Headwaters Project. The Headwaters Project was initiated in January 1999 by the City of Surrey, the UBC Chair in Landscape and Liveable Environments, and the Pacific Resources Centre, with support from a host of government and related agencies.[1] Building on the momentum of previous joint projects in the Municipality of Surrey, notably the Surrey Design Charrette (1995)[2] and the Alternative Development Standards Workshop (1997),[3] this partnership convened with the goal of building a model community that would apply sustainable planning principles and alternative development standards "on the ground." The result would be a replicable model of how to develop more sustainable communities throughout the Lower Mainland and potentially beyond. The first and most important component of the Headwaters Project is the East Clayton Neighbourhood Concept Plan (NCP). The NCP was developed over a one-and-a-half-year period through an integrated and consultative design process that involved over 150 people from fourteen different constituency groups in a process that featured over a dozen information-sharing workshops, public open houses, and a unique four-day design charrette. This process was set in motion in 1998 when the Surrey City Council endorsed seven core principles to guide the NCP.

1. *Increase density and conserve energy by designing compact walkable neighbourhoods. This will encourage pedestrian activities where basic services (e.g., schools, parks, transit, shops, etc.)are within a five- to six-minute walk of homes.*
2. *Provide different dwelling types (a mix of housing types, including a broad range of densities from single-family-homes to apartment buildings) in the same neighbourhood and even on the same street.*
3. *Communities are designed for people; therefore, ensure that all dwellings present a friendly face to the street and to promote social interaction.*
4. *Ensure that car storage and services are handled at the rear of dwellings.*
5. *Provide an interconnected street network, in a grid or modified grid pattern, to ensure a variety of itineraries and to disperse traffic congestion; and provide public transit to connect East Clayton with the surrounding region.*
6. *Provide narrow streets shaded by rows of trees in order to save costs and to provide a greener, friendlier environment.*
7. *Preserve the natural environment and promote natural drainage systems (in which stormwater is held on the surface and permitted to seep naturally into the ground). (See pages 46-47 for a description of how these principles were incorporated into the East Clayton NCP.)*

The 250 hectare East Clayton site is located on the eastern border of Surrey, abutting the northwestern edge of Langley Township. The site drains into the broad Serpentine River and Nicomekl River flood plains, which are located to the west and south, respectively. These sensitive flood plains are protected from urban encroachment by their inclusion in the Agricultural Land Reserve and are designated as protected "green zone" lands in the GVRD's Livable Region Strategic Plan. Given these conditions, it was especially important that the development of East Clayton should neither cause damage to the streams that drain the site, nor increase the amount of water conveyed by those streams to flood-prone farms in the flood plain below. At the same time, the plan would need to help meet city- and region-wide demand for various types of housing, address the need for linking housing to local employment opportunities, and provide effective transportation and servicing links with existing urban centres (such as Langley and Cloverdale).

Guiding Policy

In addition to the Growth Strategies Amendment Act (1995) and the Livable Region Strategic Plan (1995), the NCP was also directed by the following policies:

Surrey Official Community Plan (1996)

Surrey's OCP "promotes planned community development – bringing together residents, business and city resources to guide the location and form of growth toward long term city and regional goals for complete and sustainable communities."[4] It identifies East Clayton as "urban." This means that the City will eventually serve the area with the infrastructure (e.g., water, sewer, roads) necessary to support urban densities of at least six dwelling units per acre and to supply employment opportunities for people who will live in the community.

Clayton General Land-Use Plan (1998)

The Clayton General Land-Use Plan contains the planning and implementation framework for the larger Clayton district and provides the context for the development of individual neighbourhoods within it.[5] More than half of the Clayton district was designated as "suburban," meaning that densities were to be at or below one unit per acre. East Clayton, the southeastern quadrant of the larger Clayton district, was designated urban and was to be the first portion of Clayton to be developed. The Clayton General Land-Use Plan includes objectives for developing a complete community that respects and maintains aspects of its rural character, provides jobs close to residents, provides a rich and varied natural environment for both human and wildlife use, and manages change both incrementally and efficiently.

With these policies as a context, the East Clayton Land-Use Plan had the following goal:

To build a community in the East Clayton area of Surrey that meets local, provincial, and federal policy objectives for sustainable development.[6]

Charrette Process

Planning for a more sustainable East Clayton community demanded an integrated planning method, and a multi-party approach to building policy and developing acceptable standards of commitment among diverse constituencies. The charrette method was chosen as the ideal format for meeting these demands. The charrette would build confidence in new ideas, provide time for reflection, and build acceptance for alternative ways of developing a community - all within a relatively short period of time.

Design professionals served to facilitate, not to lead, the charrette. Since the Headwaters Project was designed to produce a replicable model for circumventing institutional barriers, it was important that those typically vested with the authority to guide development be provided with new means to affect change.

Rules of the Game
The following simple guidelines offered insight, structure, and a level playing field to all those involved in the process:

1. *Build capacity for integration through shared awareness and determination to act jointly*
2. *Involve early on (preferably at the beginning) those people, agencies, and organizations that can influence planning policy and development standards (including their implementation)*
3. *Share information equally*
4. *Share resources across mandates for mutual gain*
5. *Build confidence in the process, in plan policies, and in alternative development standards*
6. *Ensure the direct involvement of municipal staff*
7. *Gain access to the necessary technical expertise*
8. *Deal with issues efficiently*

Design Brief
The most crucial part of initiating any implementation charrette process is writing the design instructions. These instructions are referred to as a design brief and must show stakeholder consensus. The Headwaters Project team held a series of workshops with various stakeholder groups to forge this consensus. These stakeholder groups were of several types, each constituting a "community of interest." They included: City of Surrey Planning, Engineering, Parks and Operations/Maintenance Departments; the Ministry of Agriculture; the Clayton Citizen's Advisory Committee; developers and builders; the Department of Fisheries and Oceans; the BC Ministry of Environment, Lands and Parks; the Surrey School Board; Translink; BC Hydro, public safety and emergency services. Each of these groups identified and/or suggested design and performance targets that they considered the most important. The brief organized the wide ranging performance standards into a number of general objectives under the overarching categories of: (1) Land and Water, (2) Community, and (3) Buildings and Energy.

1. Land and Water: Celebrate and protect the ecological performance of native habitats, hydrology, and landforms, and ensure that storm drainage systems do not alter stream systems.

- *Protect and enhance all environmentally sensitive and/or degraded areas (wetlands, watercourses, ravines, watersheds, ground water recharge areas, critical wildlife habitat areas, areas with fragile or unstable soils) maintaining and/or enhancing the ecological performance of native habitats, hydrology, and landforms.*
- *Preserve, create, and link urban and rural open space, including parks and recreation areas. Maintain and enhance public access to streams, where environmentally sustainable.*
- *Identify and enhance special recreation opportunities within the site (e.g., streams, topographic features, natural areas etc.).*
- *Protect natural habitat and improve stream flows and water quality to contribute to fish protection (as consistent with federal and provincial fish protection legislation).*
- *Create an integrated and linked system of green and open spaces that serves multiple functions.*
- *Integrate an urban forestry strategy with a water conveyance strategy.*
- *Incorporate natural drainage infrastructure that is compatible with fire protection systems.*

2. Community: Provide housing that is affordable to a range of incomes within neighbourhoods that connect residents to their destinations in efficient, people-friendly ways.

- *Housing Equity: Provide a balance of housing types so that houses meet the needs of a range of ages and lifestyles and are affordable to groups and individuals within a wide range of incomes. At least 20% of the housing shall be for persons with family incomes in the bottom third of incomes region-wide.*
- *Density and Mixed Housing: Supply higher-density housing in areas close to commercial areas. Mixed housing and densities are to be blended and balanced with existing uses (e.g., built residential areas, agricultural areas, commercial/industrial) through establishing compatible densities, housing types, lot sizes, and effective buffering.*
- *Special Needs Housing: Provide adequate special needs housing (e.g., seniors, disabled, family crisis victims, etc.).*
- *Safety: Employ proven methods of enhancing community safety and sociability.*
- *Public Safety and Fire Systems: Ensure fire equipment can be manoeuvred effectively through the streets. Set definitive service boundary for the provision of fire protection and ambulatory services.*
- *Jobs: Provide workspace in commercial, office, or light industrial facilities for the working population that are also consistent to targets set out in the Clayton General Land Use Plan.*
- *Schools: Locate schools away from major transportation corridors, within five minute walking distances from residential units, and in quieter neighborhoods.*
- *Integration of Land-Uses: Create a mix of building and land-uses, integrating residences, work, shopping, and services (community, professional, commercial, and institutional).*
- *Lane system: Ensure municipal services and utility work crews can gain access to lanes by using appropriate width and surface materials. Explore the use of various permeable low cost materials for surfacing lanes.*

3. Buildings and Energy: Maximize opportunities to reduce on site and off site energy use and demand.

- *Solar Heat: Reduce building energy requirements by providing optimal solar orientation for active and passive solar water-heating and day-lighting.*
- *Energy Infrastructure: Aim for the efficient use of utility infrastructure by considering utility system design as part of the community design. Provide as appropriate, or maintain flexibility so as to provide in the future, energy service from alternative technologies such as community-scale generating systems, district heating, and co-generation.*
- *Design with Climate: Enhance community microclimate through design response to wind, sun, vegetation, and precipitation.*
- *Auto Trip Reduction: Reduce number and length of commuter and daily-use automobile trips.*
- *Auto Alternatives: Provide safe, comfortable, barrier-free and direct pedestrian access to transit routes. Provide a multimodal community route system that gives walking and biking priority over auto travel.*

Conclusion and Lessons Learned

The lion's share of the guidelines included in the East Clayton Neighbourhood Concept Plan were developed at the four day East Clayton Charrette. The draft NCP was presented to the public in July 1999 and the land-use plan was approved in November 1999. The second phase of the Headwaters Project, now in its initial stages, involves the coordination and design of the first development project based on the standards and guidelines contained in the NCP.

Key lessons from the East Clayton implementation charrette are:

- Implementation charrettes have the advantage of involving all appropriate parties in determining the exact future design for a community. All parties take ownership of the plan and, ideally, are proud of it.
- Opposition is dealt with as part of the design process, not afterwards (when it is often too late).
- The charrette team should stay together as long as possible. Difficulties and miscommunication occurs when participants go their separate ways while issues are still outstanding.
- Implementation charrettes often produce more conservative results than do visioning charrettes. This is because inevitable compromises occur as an integral part of the design process rather than during implementation of the master plan.
- The design brief is crucial to the success of the charrette as it establishes the "rules of the game," to which all parties agree in advance.
- Participants must have sufficient authority to "negotiate on the fly" and to stand behind their decisions once the projects are implemented.
- The process takes many hours and can be costly. Funds ordinarily directed to creating standard neighbourhood area plans can and should be redirected into this kind of process.

Notes:

[1]The Headwaters Project is supported by: the Affordability and Choice Today Program (Federation of Canadian Municipalities), the Canada Mortgage and Housing Corporation, the BC Agricultural Investment Program, the BC Ministry of Agriculture and Food, the BC Ministry of Municipal Affairs, Environment Canada, Fisheries and Oceans Canada, the Greater Vancouver Regional District, and the Real Estate Foundation of BC.

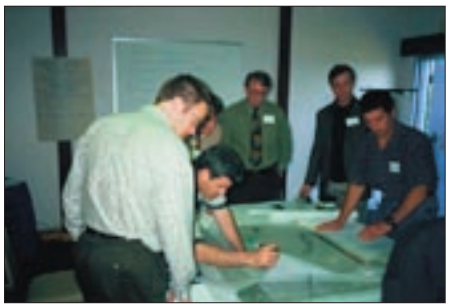
[2] Patrick Condon, Sustainable Urban Landscapes: The Surrey Design Charrette (Vancouver: UBC James Taylor Chair in Landscape and Liveable Environments, 1997).

[3]See Patrick Condon and Jacqueline Teed, Alternative Development Standards for Sustainable Communities Workbook, Charrette (Vancouver: UBC James Taylor Chair in Landscape and Liveable Environments, 1998).

[4]Greater Vancouver Regional District, Liveable Region Strategic Plan (Burnaby, BC: Greater Vancouver Regional District, 1995).

[5]City of Surrey Department of Planning and Development, City of Surrey Official Community Plan (Surrey, BC: City of Surrey, 1999).

[6]UBC James Taylor Chair in Landscape and Liveable Environments and Pacific Resources Centre, East Clayton Design Brief (Vancouver, BC: UBC James Taylor Chair in Landscape and Liveable Environments, 1999).



The Charrette Design Table
The design table structure for the charrette involved everyone with an interest in the East Clayton development process. Interests such as a landowner's concern over land values, a developer's hopes for a fair return on a residential development, environmentalists' desire for quality streams and the City's fear concerning its ability to cost-effectively maintain what is built, were only some of these concerns. The charrette design table structure ensured fair representation of these interests.

A Draft Land-Use Plan
Guided by the charrette design brief, the design table developed the first iteration of the East Clayton Land-Use Plan in four days. In these four days, the design table made crucial decisions regarding how the community would function as a sustainable unit in the larger Clayton district. Decisions regarding the site's ecological infrastructure, roads and circulation, housing densities, employment centres and community services were negotiated "on the fly".

Public buy-in
The NCP process was deliberately designed to promote awareness of the principles and concepts of a more sustainable urban community, to reinforce acceptable solutions at each stage, and to generate an acceptable plan. In May, 1999, the draft land-use plan was presented at a public open house. This gave citizens of East Clayton and its envrions an opportunity to see how the principles were embodied in the plan. It also allowed those involved to measure the level of constituent buy-in. Comment sheets indicated a high level of public acceptance and allowed the process to move forward to refining the draft plan for approval.

East Clayton

Outlined below are the seven principles approved by Surrey City Council to guide the NCP, accompanied by a description of how each is represented in the Land Use Plan. The NCP supports a variety of land-uses and residential/community types to maximize affordability, sociability, and availability of commercial services within easy walking distance for the proposed population of 13,000. Envisioned as a complete, mixed-use community, East Clayton is designed to promote social cohesion, local economic opportunities, and environmental stewardship while providing equitable access to housing and jobs and reducing dependence on the automobile.

1

Conserve land and energy by designing compact walkable neighbourhoods. This will encourage pedestrian activities where basic services (e.g., schools, parks, transit, shops, etc.) are within a five- to six-minute walk of their homes

Achieving a pedestrian-oriented neighbourhood requires that homes be within a walkable distance of shops and services and that streets be interconnected to provide the widest possible choices for reaching nearby destinations. Accordingly, residential neighbourhoods are to be structured around a fine-grained modified grid of streets and lanes, with block dimensions averaging 160 metres (525 feet) by 80 metres (250 feet). They are to be considered both public corridors and neighbourhood amenities, and are to accommodate automobile, pedestrian and bicycle traffic, while ensuring easy access to local destinations.

2

Drawing credit: Bob Worden, Ramsay Worden Architects, Ltd.

Provide a mix of housing types, including a broad range of densities from single-family homes to apartment buildings in the same neighbourhood and even on the same street

The plan accommodates a wide variety of household types and tenures to serve a diverse and socially cohesive community. The plan promotes the integration of different family types and ages to strengthen the larger community. Creative and economic housing options will be encouraged, such as single-family homes with a second dwelling unit available to provide a "mortgage-aid" to young families. The secondary unit will provide an affordable housing option to individuals and families in need.

3

Drawing credit: Bob Worden, Ramsay Worden Architects, Ltd.

Communities are designed for people; therefore, all dwellings should present a friendly face to the street in order to promote social interaction

Blocks are to be proportioned to create a fine-grained, interconnected network of streets to reduce congestion and to allow as many homes as possible to front directly onto public streets. Dwellings are situated closer to streets to ensure more "eyes on the street" and to create a larger, private backyard. Front yards will have buffers that ensure privacy and clearly distinguish between private and public space. Street trees, boulevard infiltration devices, and on-street parking will create a pleasant envelope for pedestrians and provide a buffer from passing traffic.

4

Ensure that car storage and services are handled at rear of dwellings
The existing site conditions (i.e., topography, vegetation, road network, and parcel configuration) determined the proposed community structure and lot sizes for East Clayton. Narrow lots demand lanes to prevent building fronts from being consumed by garages, front yards from being consumed by concrete, and residents from being closed off from contact with activities on the street by the barrier of the garage. Lanes allow cars to gain access to units from behind, resulting in a reduction of the required frontyard setback and an increase in useable backyard space. A small portion of the plan includes shallower blocks that have wider driveway access lots with no lanes.

5

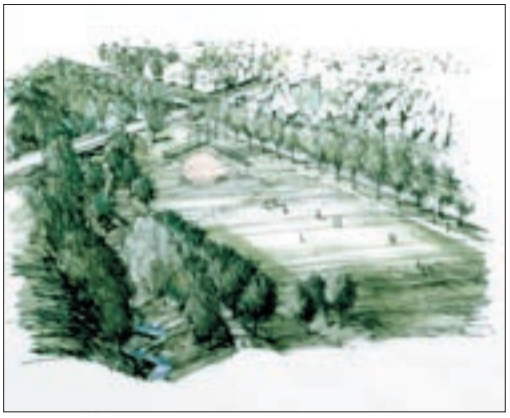
Provide an interconnected street network, in a grid or modified grid pattern, to ensure a variety of itineraries and to disperse traffic congestion; and provide public transit to connect East Clayton with the surrounding region
The organization of roads, blocks, parks, parkways and riparian areas responds to the site's topography and the location of its sub-watersheds. The street network is organized around a four-part hierarchy of streets, which includes arterials, collectors, local streets, and lanes.

6

Provide narrow streets shaded by rows of trees in order to save costs and to provide a greener, friendlier environment
Paved street widths for local and collector streets range from 6 metres (20 feet) to 11.3 metres (37 feet). Street rights-of-way range from between 17 metres (56 feet) and 22 metres (72 feet), depending on the specific infrastructure and servicing and amenity requirements of each individual corridor (i.e., drainage, traffic volume, and urban forestry).

7

Preserve the natural environment and promote natural drainage systems (in which storm water is held on the surface and permitted to seep naturally into the ground)
The backbone of the plan's ecological infrastructure is its linked system of streets and open spaces, which includes local streets, major and minor parks, schools, riparian protection areas, tree preservation areas, neighbourhood parks, and buffers. This system will have many beneficial functions. It will simultaneously satisfy social, recreational, and educational demands while meeting important ecological goals such as stream protection, stormwater management, and habitat preservation.



Drawing credit: Bill Wenk

Illustrative Plan

East Clayton

East Clayton Neighbourhood Concept Plan

The charrette team collaboratively produced the plan shown on these pages. They hoped that what the community envisioned would ensure the protection of the East Clayton environment while supplying a variety of affordable dwelling types. The plan calls for the production of approximately 4,500 homes, including single family detached, semi-detached, fee-simple row-house, coach houses, and apartments. These homes will accommodate 13,000 new residents at densities averaging twenty-five units per hectare, or ten units per acre (inclusive of park, commercial, and business park lands as well as land consumed by street rights-of-way). Land uses are highly integrated so that those living in the community can shop, work, and recreate without leaving the area. The focal point for this complete community would be "Clayton's Main Street" (located at the north-west corner of the community), where street-front commercial buildings and residences above shops will provide a commercial and public centre for the residents of East Clayton and, eventually, other communities within the larger Clayton district.

The plan is structured around a fine-grained, interconnected street/block system. This system allows easy movement by transit, car, foot, or bike. Tree-lined boulevards, infiltration devices, and on-street parking will buffer the pedestrian from passing traffic. The plan calls for lanes at the rear of most dwelling units so that trash, garages, and driveways will not deter from the friendliness of the street. Most importantly, the plan is designed to respond first and formost to the site's ecological carrying capacity. The site incorporates a system of streets, yards, parks, and other naturally absorptive areas in order to infiltrate runoff and avoid stream destruction and the flooding of lower-lying agricultural areas.

East Clayton