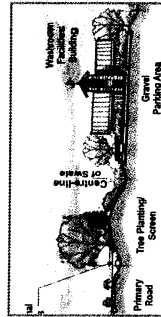


Federal Green Space Lands - Draft Master Plan and Implementation Strategy

Submitted to: **Transport Canada**
November 25, 2003



Prepared by:  EDA Collaborative Inc.  SENECS Consultants Limited



EXECUTIVE SUMMARY

The Green Space Lands offer an unprecedented opportunity to complete a continuous natural open space link from Lake Ontario to the Oak Ridges Moraine and link the Dufrins and Rouge watersheds as well as maintain and enhance viable agriculture in a countryside setting. In addition, it has real potential to be the catalyst to enhance natural and cultural heritage resources as well as establish regional trail linkages with the surrounding communities and countryside. The Green Space Lands provide unique opportunities to lead by example in sustainable planning and design for the 21st century that will inform and influence the planning of adjacent lands including the balance of the Federal Pickering Lands Site.

Purpose

This Draft Master Plan and Implementation Strategy is intended to illustrate the vision for ecologically sustainable recreation and agriculture and to outline the projects required to implement the Plan, identify potential partners and timelines for projects.

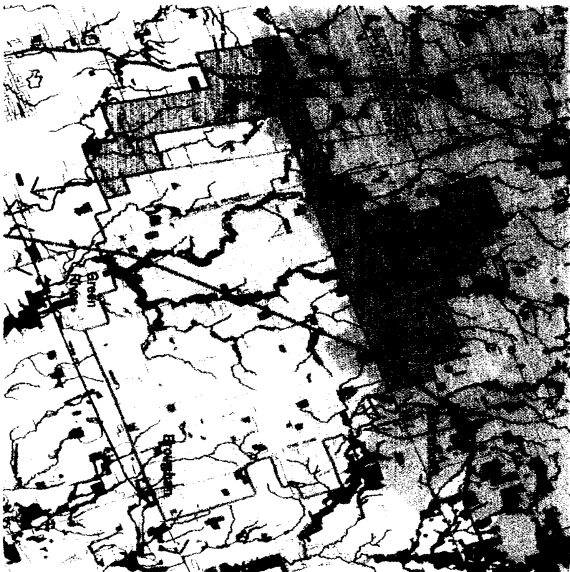


Figure 0-1 The Pickering Lands Site (shaded light green within border) and Green Space Lands (shaded darker green within border)

Background

The Green Space Master Planning process was initiated in January of 2003, and completed in October of 2003. The impetus for this Draft Master Plan was created by the Minister of Transport, the Honourable David Collette, who announced that a portion of the federally owned Pickering Lands Site expropriated in the 1970's would be protected as green space. The Draft Master Plan process was preceded by a consultation process that resulted in the Green Space Strategy which identified the 15 Guiding Principles, established a Green Space Stewardship Advisory Committee and initiated the Master Plan exercise.



EXECUTIVE SUMMARY / 2

The Fifteen Guiding Principles for development of the Green Space Lands are as follows:

1. *Ownership of the lands to remain with the federal government.*
2. *Environmentally sensitive areas will be protected.*
3. *The Rouge Park North Plan, the Provincial Oak Ridges Moraine Plan, local government (Official) Land Use Plans and potential future airport plans will be considered in Green Space planning activities.*
4. *Land being used for agriculture should continue with the adoption of enhanced best practices (no large scale, corporate farming operations) and be compatible with safe airport and aircraft operations, Green Space activities and Guiding Principles, enforced through covenants in long term leases.*
5. *Residential tenancies are to be compatible with Green Space Guiding Principles and activities through covenants in their leases.*
6. *Cultural heritage should be maintained with emphasis on revitalizing and enhancing the Hamlet of Altona.*
7. *Incorporate native cultural heritage initiatives in Green Space Land Use planning where possible.*
8. *Cemeteries and archaeological sites are to be preserved.*
9. *Long term re-naturalization, preservation, enhancement and restoration of watersheds, corridors, linkages and infrastructure (buildings) will be a priority throughout the entire Green Space Lands.*
10. *The general public should have controlled access to the Green Space Lands with uses being passive in nature.*
11. *No new residential or large-scale commercial development.*
12. *No expansion of service corridors (major highways, pipelines – fuel, sewer, water) except where there would be linkages with smart urban transportation solutions, as approved by the Minister.*
13. *Expansion of the Green Space Lands, at a future date, could be considered.*
14. *Transport Canada will continue to have effective communication strategies for all aspects of Green Space planning.*
15. *Activities must be consistent with the government's Alternate Service Delivery policy.*

The Draft Master Plan process has regard to these principles in the development of a vision, themes for development and ultimately, the Draft Master Plan itself.

The Draft Master Plan Process

The purpose of this Draft Master Plan process is to develop a long term land use, land management and implementation plan incorporating monitoring processes to ensure the viability and sustainability of the vision for these lands.

The process evolved through a series of steps including background context/inventory of existing conditions, analysis of stewardship options and existing conditions and finally the development of the Draft Master Plan itself.

Three design workshops were held throughout the process to obtain input on the development of the Draft Master Plan. These workshops were attended by the members of the study team, Transport Canada staff and the Green Space Stewardship Advisory Committee members, who represent stakeholders and agencies in the vicinity of the Pickering Lands Site. The results of those workshops laid the foundation for planning on the Green Space Lands.

Consultation

The Draft Green Space Master Plan was developed in consultation with the Green Space Stewardship Advisory Committee and certain key stakeholders. The membership of the Green Space Stewardship Advisory Committee represents a broad range of expertise and public awareness sufficient to ensure that the interests of key stakeholder groups, including municipal and tenant interests, are reasonably considered.

Upon acceptance of the Draft Green Space Master Plan by the Minister of Transport, the Draft Master Plan will be circulated for comment to municipal and regional councils and key stakeholders in early 2004. This will be followed by an open public consultation process with opportunities to make comments. The Draft Master Plan may be modified as a result of this consultation.

Vision for the Green Space Lands

Concepts developed in the workshops evolved into a vision statement for the development of the Green Space Lands that focused on sustainability. The concept of sustainability relied on the Brundtland definition, which is: *"The use of resources without depleting the capital for future generations, essentially, living within the means of the Earth's ability to provide resources that are undiminished by use and available for future generations to use and enjoy."*

Accordingly, the vision statement developed for the Green Space Lands reads:

The Green Space Lands will showcase Canada's leadership in sustainable green space management. The Lands will provide compatible ecological, agricultural, recreational, educational and economic functions while respecting cultural heritage, the existing residential community and countryside within a management framework that can adapt to change. Stewardship principles and best management practices will guide the long term management of the Green Space Lands.

Concept for the Development of the Green Space Lands

The Draft Master Plan concept focuses on the relationship and connection of the Green Space Lands with its surroundings, recognizing that there will be a demand for future recreation and that there will be a need to balance agricultural and recreational uses on the site in a way that ensures a major expansion to the natural system as well as ecological sustainability. The goal and objectives to clarify the vision for the development of the Green Space Lands include:

Goal

The goal for the Green Space Lands is to establish a sustainable balance between the physical, social and economic environments that protects the countryside landscape and its ability to support human health for future generations.

Objectives

The objectives for protecting the countryside landscape and ensuring sustainability include:

Ecological Framework: To protect, restore, enhance, and connect the ecological features on site to those that exist off site and to manage the ecological system in such a way that it can be self-sustaining into the future providing natural functions throughout the Green Space Lands.

Agricultural Function: To support the working landscape by minimizing potential conflicts between future recreational users and by maintaining sufficient land area and infrastructure to support long term agricultural use of the lands in the context of ecological sustainability.

Cultural Heritage: To support the protection and enhancement of cultural heritage including structures, settlements, farm clusters as well as the connecting cultural landscape character.

Airport Function: To mitigate the potential impacts of a possible future airport within the watershed and to provide a transition between adjacent urban uses and the airport. Ideally, the planning for the Green Space Lands should influence the development of the airport site in terms of "greening" and sensitivity to natural features and functions.

Community / Social Sustainability: To support living on the land by ensuring that residential uses can continue outside of the areas most impacted by a possible future airport as well as by encouraging additional complimentary uses and services.

Public Use: To create opportunities for recreation and other forms of public use that connect to the surrounding communities and that support learning and recreational activities both on and off the Green Space Lands.

Transportation: To provide opportunities for the Green Space Lands planning to influence transportation decisions both on and off the lands to ensure that the countryside character of the landscape is considered, valued and protected/enhanced in transportation projects. Furthermore, to support forms of transportation that are "smart and green".

Financial Viability: To provide opportunities for a range of functions on the Green Space Lands that could generate income or provide the basis for securing funding through a variety of means in order that the lands be as self supporting as possible.

Landscape Protection: To protect and enhance the countryside character to positively reflect the above goals and objectives.

A conceptual Draft Master Plan was developed to illustrate the intent of the goals and objectives and to describe the nature of the physical connections to the surrounding landscape in the form of a trail system and enhanced ecological system that created the skeleton upon which the vision for the lands would evolve over time. The Toronto and Region Conservation Authority introduced the concept of sustainability within their Strategy document for the Duffins watershed. The resulting "target" ecological system identifies the areas that are needed to be preserved, restored and expanded in order for the watershed to be sustainable post-urbanization. The Draft Master Plan incorporates the "rounded out" target ecological system prepared by the Toronto and Region Conservation Authority as the ultimate natural ecological management area for the Green Space Lands. This natural area amounts to approximately 60% of the lands within the Green Space Lands.





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The bulk of the remaining lands are allocated to agricultural functions where emerging forms and "new" agricultural practices will be encouraged provided they are sustainable relative to low demand for water, pesticides and energy. Recreation functions will also be accommodated and will include a major trail system that connects with other regional and municipal trail systems and provides a cohesive internal system for the Green Space Lands. Tourism opportunities such as farm vacations, bed and breakfasts, country inns, artist's studios, restaurants, and countryside retail shopping are possible uses. Depending on potential impacts of a possible future airport, Altona will be considered as a rural village development opportunity for tourist and visitor destinations.

Throughout the Draft Master Plan process it has been recognized that the development of a possible future airport will have a significant impact on the nature of the experience on the Green Space Lands as well as on its ecological function. This reality has necessitated that the options for stewardship/management of the lands needs to recognize that air transport and accessory uses are likely to be the principal function of adjacent lands.

Key Findings

The key findings of the Draft Master Plan include:

1. Based on the Duffins Watershed Strategy (Toronto and Region Conservation Authority, 2003), the Green Space Lands will be essential to creating a significant natural system and biodiversity that would help ensure ecological sustainability within the watershed as well as reduce potential impacts of the construction and operation of an airport within the Pickering Lands Site.
2. Transport Canada is recommended to act as the lead federal agency in managing all of the lands within the Pickering Lands Site. The Airport Master Plan and the Draft Green Space Master Plan will need to be reconciled to identify and address key areas of potential conflicts and to develop a strategy for managing conflicts in use to ensure that the future development of an airport is not precluded or inappropriately constrained.
3. It is recognized that federal funding will be required to implement the Draft Master Plan, since it is unlikely that the Green Space Lands will be self-sustaining based solely on income from leases and/or the sale of buildings.
4. Arrangements should be made to permit revenues generated within the Green Space Lands to be directed from general revenue to the Green Space Project implementation.
5. There is a need for preparation of an appropriate governance model since the Draft Green Space Master Plan is a project that is not specifically contemplated within the mandates of existing federal departments. Existing plans and programs do not provide stable sources of funding that are sufficient to develop a Green Space of this scale over a long period of time. Subsequent studies will identify the necessary formal authorities that need to be put into place.
6. The Draft Master Plan identifies a series of steps to be undertaken in the planning and development of the recommended property management framework. Several options should be investigated including long term leases and/or sale of buildings in combination with long term leases or a variation of

this arrangement. This finding is based on community needs, real property sustainability and financial viability. The existing management framework will need to remain in place until the completion of the Implementation Strategy identified in the Draft Master Plan is complete.

7. A major initiative is required in the Green Space Lands to protect existing natural resources and create new, enlarged natural ecological system linkages that will support the connection of Lake Ontario with the Oak Ridges Moraine as well as link the Rouge and Duffins watersheds. The creation of the ultimate natural system will involve transition of strategic land areas including agricultural lands.

8. Agricultural uses will be maintained on the Green Space Lands to protect and enhance the rural countryside character. This will involve protection of key agricultural land areas and encouragement of innovative and emerging forms of sustainable agriculture that are consistent with Best Management Practices including conservation of water and non-use of pesticides and other appropriate measures.

9. Protection of cultural heritage resources including structures, cultural landscapes and settlement clusters will be encouraged on the Green Space Lands. This will involve a combination of techniques including protection of heritage structures in their existing location, relocation to designated areas such as the village of Altona as part of a revitalization plan or appropriate documentation and removal.

10. Public use on the Green Space Lands will be encouraged through development of a recreational trail system, interpretation and educational facilities as well as compatible public use activities and facilities in appropriate locations.

11. A transportation strategy for the Green Space Lands will be part of a larger transportation plan for the entire Federal Pickering Land Site undertaken by the Greater Toronto Airports Authority. Regional, municipal and airport needs will be addressed. However, the principles of "Context Sensitive Design" will be applied within the Green Space Lands to recognize its special countryside character and related considerations. (Context Sensitive Design asks questions first about the need and purpose of the transportation project, and then equally addresses safety, mobility, and the preservation of scenic, aesthetic, historic, environmental, and other community values. Context Sensitive Design involves a collaborative, interdisciplinary approach in which citizens are part of the design team.)

12. Implementation of the Draft Master Plan for the Green Space Lands will involve a variety of partnerships with other federal, provincial and local partners with the range of skills, expertise and ability to access funding.

13. Implementation of the Draft Master Plan will be accomplished through a series of projects that have been identified and by completing the necessary detailed site work and studies required to undertake development and protection of the GSL.

Draft Master Plan Description

The Conceptual Draft Master Plan is illustrated in Figure 2-9 (page 6). Figure 2-10 (page 7) shows an expanded area of the Green Space, illustrating the potential for Green Space treatments into the area between Tenth Line/Reesor Road and York Durham Town Line. This is reinforced based on findings during the Draft Master Planning process, that the Green Space Lands study area boundaries as originally defined was too small an area, ultimately, to achieve sustainability objectives for the Green Space Lands Master Plan. Therefore, two versions of the Conceptual Draft Master Plan were created to demonstrate potentials through expansion of the Green Space Lands to include the residual airport study lands noted above.

The Draft Master Plan also recognizes the potential for the Green Space Lands planning approach to be extended further outside the present boundaries to make other critical natural system linkages and further reduce impacts on the sustainability and biodiversity of the natural systems within the watershed and wider region.

Work associated with the Draft Green Space Master Plan will be phased over the short term (one to five years), medium term (six to ten years) and long term (eleven plus years). This will ensure the appropriate research is conducted and the necessary level of detail is taken into account during Plan implementation.

The existing Transport Canada/ Public Works and Government Services Canada property management structure will continue to manage the Green Space portion of the Pickering Lands Site over the short term. Transport Canada and a Green Space Stewardship Advisory Committee based group will oversee the Green Space Master Planning activities.

Implementation

The Draft Master Planning process identified a number of projects that will be required to implement the Draft Master Plan. These are summarized under three major headings:

1. Governance and Management

- Governance Model
- Property Management Model
- Partnership Strategy
- Marketing Strategy

2. Planning Integration and Strategies

- Integrated Pickering Lands Site Draft Master Plan
- Special Study Areas, including developing a Revitalization Strategy for Altona, Block West of Ninth Line, South Rouge Park Area, and Mitchell's Creek
- Green Space Transportation Strategy
- Agricultural Management Plan
- Airport Mitigation Strategy

3. Detailed Planning and Design

- Detailed Concept and Design for Trails System and Recreation Facilities.
- Ecological Monitoring Plan
- Local Heritage Structures and Cultural Heritage Evaluation
- Ecological Transition Study

Funding

Implementation Planning Projects/ Studies (listed above), are targeted at \$2.8 million over the first five years. It is critical as well in the short term to move beyond planning to "on the ground" implementation. In order to accomplish this, an additional \$2.5 million is the targeted amount to cover capital expenditures in support of key short term implementation priorities in years one to five.

Preliminary estimates for long term implementation (major capital costs) are targeted at \$20 million, of which some \$8 million will be required for ecological expansion/enhancement, \$5.6 million for trails and associated gateways, \$5 million for an arrival/interpretation node, and close to \$1.5 million for roadway tree planting. The key short term costs of \$2.5 million are included in the above noted \$20 million estimate.

No estimates have been made with respect to the medium/ longer term governance and administrative budgets associated with the Green Space Lands. These costs will be further defined when the Green Space planning is more complete; on the ground implementation has begun; and future governance structure and management requirements are better understood. Ideally, revenue gained from property management and other changes can off-set additional expenses in support of the Green Space Master Plan.

There is no basis for costing at this time for Grade Separated Links, Recreation Nodes, and Restoration of Heritage Structures.

All estimates are in 2003 dollars.





Figure 2-10
Conceptual Draft
Master Plan (Expanded)

Scale 1:45,000
 FEDERAL GREEN SPACE LANDS
 EDA Collaborative Inc. and SENES Consultants Limited

- LEGEND**
- Existing Vegetation
 - Green Space Boundary
 - Airport Study Lands
 - Boundary
 - Aerial
 - Contour Line
 - Water System
 - Oak Ridges Moraine
 - Main Trail
 - On Road Trail Link
 - Road-scape Enhancement
 - Trailhead / Rest Stop
 - Recreation Node
 - Gateway Treatment
 - Grate Separated Link
 - Special Study Area
 - Special Activity Node (Alona)
 - Agricultural Land
 - Ecological Management Area
 - Short to Medium-Term
 - Ultimate Potential Ecological Management System Long-term
 - Ecological Management Linkages (On site)
 - View Corridors

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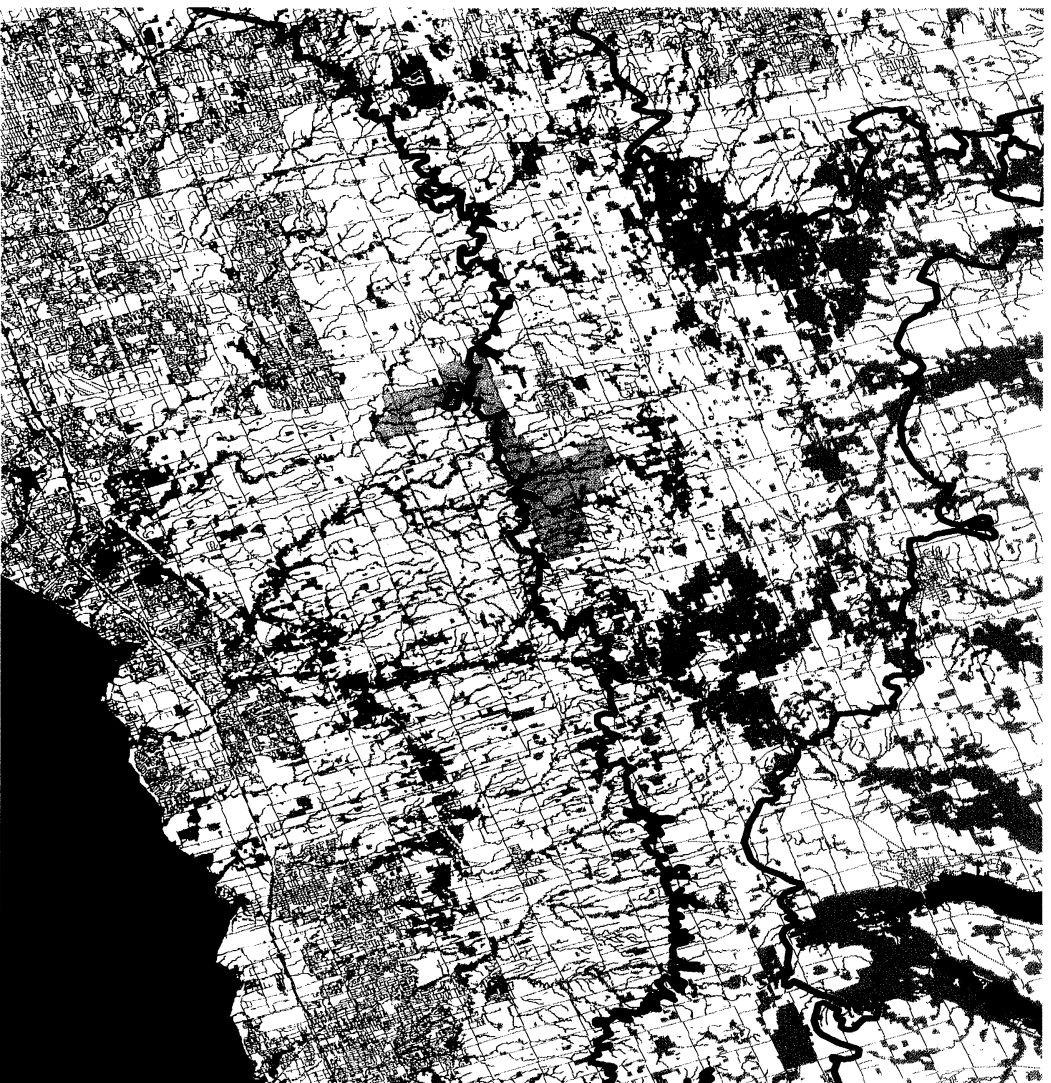
1.0 INTRODUCTION

This Draft Master Plan is the cornerstone of a Strategy that was developed by the Green Space Project for the Green Space Lands (GSL) that form part of the Pickering Lands Site (PLS). The PLS is an assembly of properties expropriated by the federal government in the 1970's for possible future airport uses. The establishment of this process represents a new, exciting and holistic vision for the planning of the PLS that includes protecting the federally owned portion of the Oak Ridges Moraine (ORM) and an area that connects the ORM lands to the Rouge Park and the Rouge Duffins corridor.

The Draft Master Plan and Implementation Strategy has been prepared to develop and implement a vision for the GSL as well as to develop a strategy for management of the lands that recognizes the unique natural and cultural environment as well as the history of the lands themselves and their role in promoting sustainability within the Duffins / Rouge watersheds.

1.1 Background

The Green Space Master Planning process was initiated in January of 2003 and completed in October of 2003. The impetus for this Master Plan was created by the Minister of Transport, the Honourable David Collenette, who announced on March 23, 2001 that a portion of the federal lands expropriated in the 1970's for an airport would be protected as green space. In total the GSL encompass approximately 3,051 hectares of land (2,251 hectares or 5,562 acres on the ORM and another 800 hectares or 2,000 acres on the western boundary of the PLS (www.tc.gc.ca).



LEGEND

-  Oak Ridges Moraine
-  Watercourses and Lakes
-  Vegetation
-  Roads
-  Watercourses
-  Study Area - GSL
-  Pickering Lands Site
-  Duffins Watershed



Figure 1-1
Study Area Context



1.2 Process

The Green Space Project developed a Green Space Strategy after six months of stakeholder consultations. The Strategy has three components:

- Protection through continued federal ownership;
- Fifteen Guiding Principles under which the Green Space Lands would be managed and protected; and,
- Creation of a Green Space Stewardship Advisory Committee (GSSAC) composed of external land management entities and led by Transport Canada with a mandate over the following twelve months to develop a Draft Master Plan embracing the fifteen Guiding Principles.

Transport Canada worked with the GSSAC to direct the development of the Draft Master Plan. The GSSAC is comprised of:

Chair, Patricia Short-Gallé – Regional Manager, Pickering Lands, Green Space, and Planning, Transport Canada;

Brian Buckles - Green Door Alliance;

Ron M. Christie - Chair, Rouge Park Alliance;

Lilli Duoba – Manager, Environmental Planning & Rouge Park, Town of Markham;

Alex Georgieff - Commissioner of Planning, Durham Region;

Alex Grant - CAO, Town of Uxbridge;

Craig Mather - Toronto & Region Conservation Authority;

Tom Melymuk - Division Head, Corporate Projects & Policy, City of Pickering;

Bruce Moran - Tenant Representative, Pickering Lands Green Space;

Don Prince - Chief Land Securement Officer, Oak Ridges Moraine Land Trust;

John Waller – Director, Long Range Strategic Planning, Region of York.

The Fifteen Guiding Principles for development of the Green Space Lands (GSL) are as follows:

1. Ownership of the lands to remain with the federal government.
2. Environmentally sensitive areas will be protected.
3. The Rouge Park North Plan, the Provincial Oak Ridges Moraine Plan, local government (Official) Land Use Plans and potential future airport plans will be considered in Green Space planning activities.
4. Land being used for agriculture should continue with the adoption of enhanced best practices (no large scale, corporate farming operations) and be compatible with safe airport and aircraft operations. Green Space activities and Guiding Principles, enforced through covenants in long term leases.
5. Residential tenancies are to be compatible with Green Space Guiding Principles and activities through covenants in their leases.
6. Cultural heritage should be maintained with emphasis on revitalizing and enhancing the Hamlet of Altona.
7. Incorporate native cultural heritage initiatives in Green Space Land Use planning where possible.
8. Cemeteries and archaeological sites are to be preserved.
9. Long term re-naturalization, preservation, enhancement and restoration of watersheds, corridors, linkages and infrastructure (buildings) will be a priority throughout the entire Green Space Lands.
10. The general public should have controlled access to the Green Space Lands with uses being passive in nature.
11. No new residential or large-scale commercial development.
12. No expansion of service corridors (major highways, pipelines – fuel, sewer, water) except where there would be linkages with smart urban transportation solutions, as approved by the Minister.
13. Expansion of the Green Space Lands, at a future date, could be considered.
14. Transport Canada will continue to have effective communication strategies for all aspects of Green Space planning.
15. Activities must be consistent with the government's Alternate Service Delivery policy.



The Draft Master Planning process embodies these principles in the development of vision, goal and objectives, themes for development and ultimately, the Draft Master Plan itself. The Draft Master Plan illustrates the proposed concept for developing the lands as Green Space and it includes the following sections:

- 2.0 Draft Master Plan for Development
- 3.0 Implementation Strategy





2.0 DRAFT MASTER PLAN

The philosophy, vision, goal and objectives have been driven by the need to consider the short and long term environmental and cultural heritage functions that these lands will provide in the context of a growing and increasingly urban Greater Toronto Area. In addition, since the PLS is planned as a possible future airport, there will be unique constraints placed on the GSL in terms of both noise and the implementation of the Airport Zoning Regulations.

2.1 Planning Context for the GSL

The GSL is in an area that is affected by federal, provincial and local planning processes and initiatives. The Province of Ontario has passed legislation that protects the ORM as well as being actively involved in the planning of the Seaton and Agricultural Assembly lands in north Pickering as well as the provincially owned land in Markham that was part of the Duffins / Rouge Agricultural preserve. Local and regional governments have, or are in the process of, implementing the ORM Conservation Plan policies, uses and vision in their Official Plans to ensure better linkages in agriculture transition and rural landscape goals for the Countryside ORM area. The Rouge Park Alliance has prepared the Rouge Park North Management Plan that includes lands within the Rouge Corridor or west half of the GSL and the TRCA has completed a strategy for the Duffins Creek watershed that includes the majority of the PLS. In many ways, conservation based planning has been the focus in lands surrounding the GSL as agencies and individuals have sought to find a balance between human and environmental needs.

As part of the Pickering Lands Site, the GSL resides within the Greater Toronto Area (GTA) a region that has experienced, and will continue to experience, dramatic changes as a result of pressures for new urban growth and development (See Figure 2-1 Future Urbanization and Figure 2-2 Context Map). The GTA is expected to become the sixth largest urban centre in North America. The GSL will therefore play an integral and essential role in the greater region as a significant public green space. Furthermore, the Green Space has the potential to embody the principles of sustainable development espoused by all levels of government by integrating human and ecological values on the lands in a way that preserves the character of the countryside and protects ecological integrity while providing for recreational and interpretive opportunities.

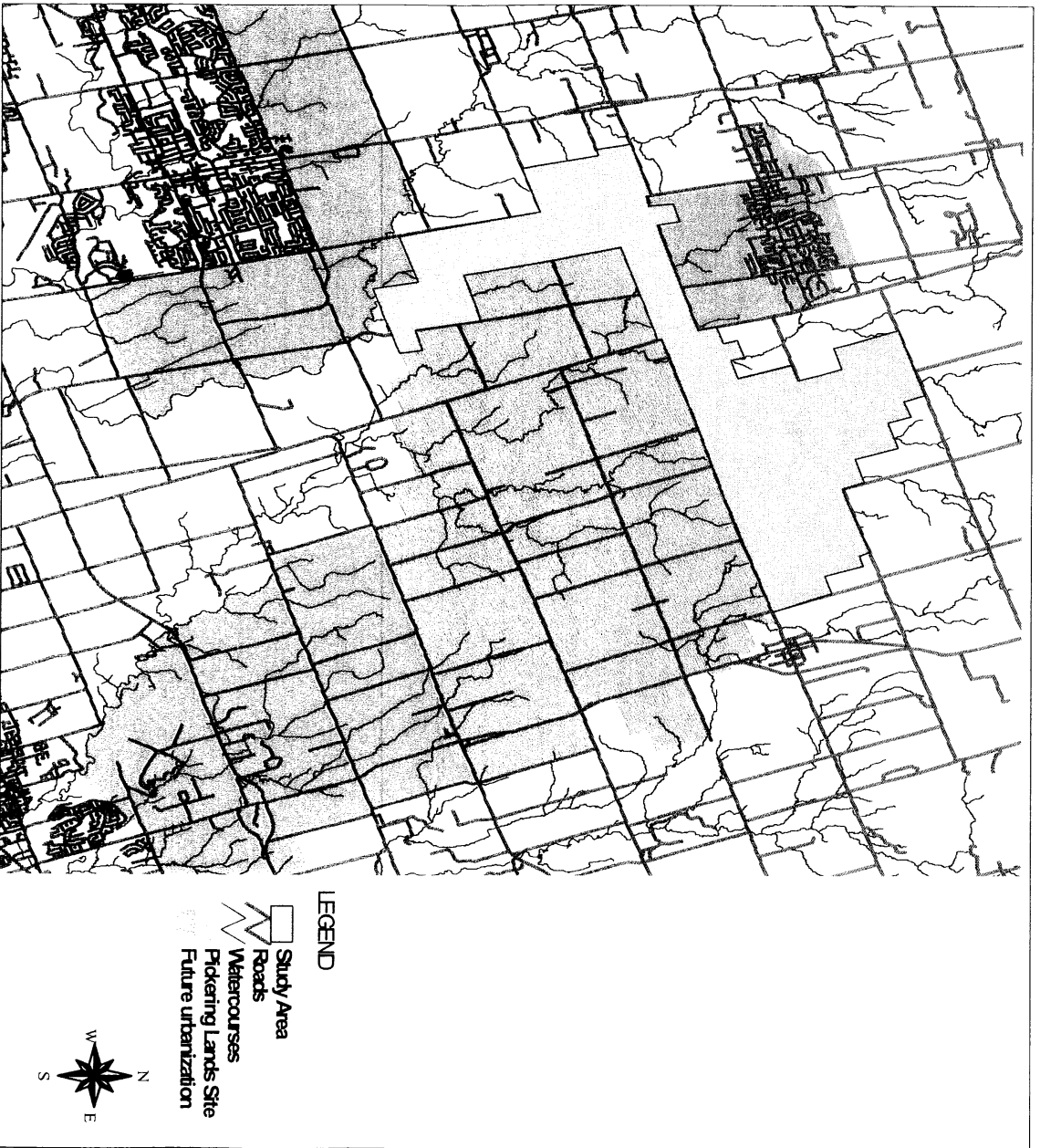


Figure 2-1
Future Urbanization



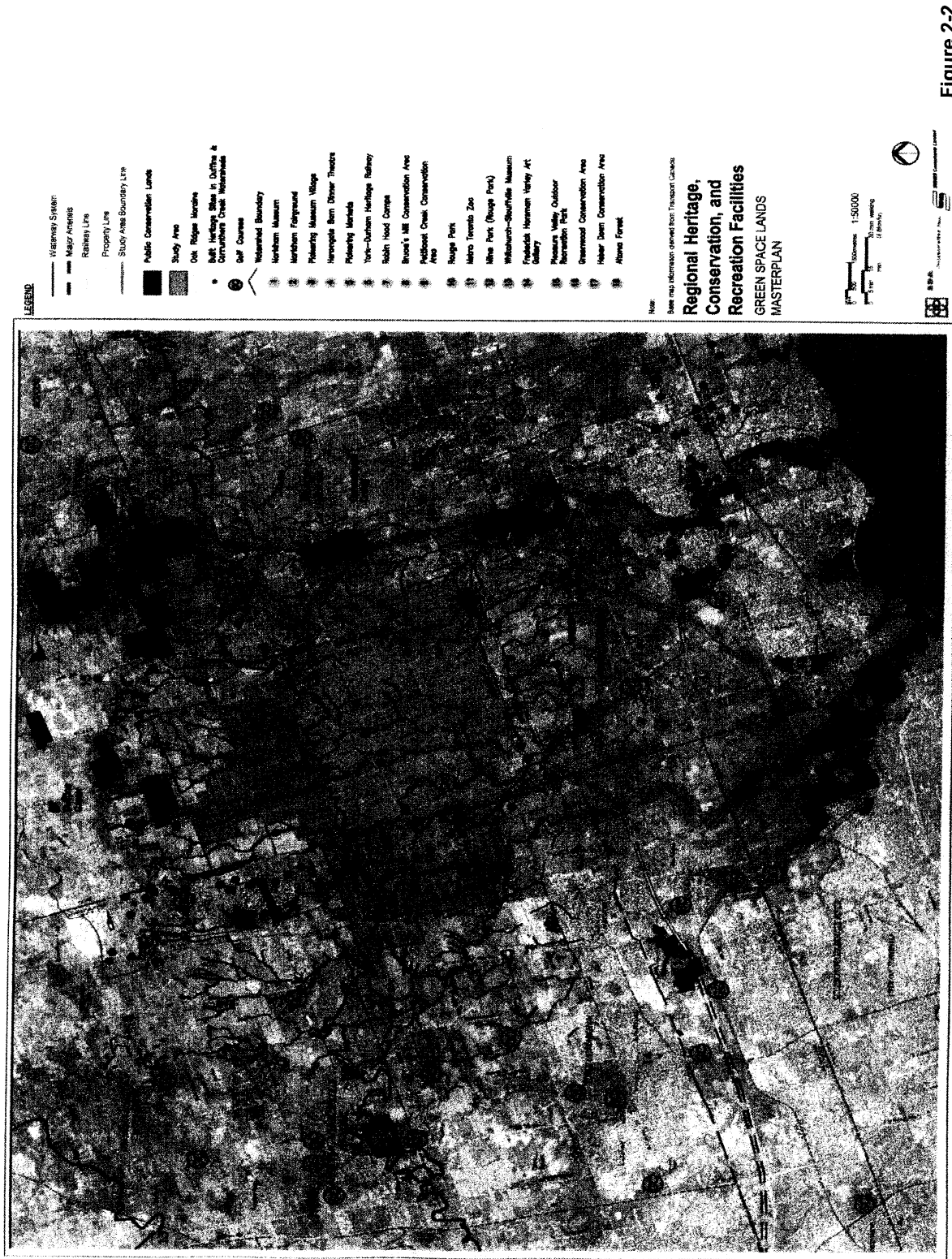


Figure 2-2

Context Map with Regional Heritage, Conservation and Recreation Facilities

2.2 Philosophy and Vision for the Draft Master Plan

Early in the planning process, the Draft Master Plan participants adopted the philosophy of ensuring that the planning and subsequent development for the lands was "sustainable". "Sustainable" meant balancing social, economic and ecological needs in such a way as to leave the "capital" of the lands intact for the enjoyment of future generations. Central to this philosophy of sustainability was the concept of protecting and promoting human health by balancing human needs with those of the natural and economic environments.

The Opportunity

Due to its large site area and single ownership, the GSL offers an unprecedented opportunity to complete a continuous regional natural open space link from Lake Ontario to the Oak Ridges Moraine and link the Duffins and Rouge watersheds. In addition, it has real potential to be the catalyst to enhance natural and cultural heritage resources as well as trail linkages with the surrounding communities and countryside. The GSL provides unique opportunities to lead by example in sustainable planning and design that will inform and influence the planning of adjacent lands including the balance of the PLS.

Vision for the GSL

During a series of charrette workshops, conceptual themes that focused on establishing criteria, management objectives and stewardship models were presented and discussed. In addition workshop participants identified their visions for what the Green Space could be in fifty years or more. These ideas evolved into a vision statement for the GSL that focused on sustainability. The concept of sustainability relied on the Brundtland definition, which is: *"The use of resources without depleting the capital for future generations, essentially, living within the means of the Earth's ability to provide resources that are undiminished by use and available for future generations to use and enjoy."*

Accordingly, the vision statement developed for the GSL reads:

The Green Space Lands will showcase Canada's leadership in sustainable green space management. The Lands will provide compatible ecological, recreational, educational, agricultural and economic functions while respecting cultural heritage, the existing residential community and countryside within a management framework that can adapt to change. Stewardship principles and best management practices will guide the long term management of the Green Space Lands.

2.3 Goal and Objectives

A goal and series of objectives were developed to provide greater clarity of the vision in the Draft Master Plan concept.

Goal

The goal for the GSL is to establish a sustainable balance between the physical, social and economic environments that protects the countryside landscape and its ability to support human health for future generations.

Objectives

The objectives for protecting the countryside landscape and ensuring sustainability include:

Ecological Framework: To protect, restore, enhance, and connect the ecological features on site to those that exist off site and to manage the ecological system in such a way that it can be self-sustaining into the future providing natural functions throughout the GSL.

Agricultural Function: To support the working landscape by minimizing potential conflicts between future recreational users and by maintaining sufficient land area and infrastructure to support long term agricultural use of the lands in the context of ecological sustainability.

Cultural Heritage: To support the protection and enhancement of cultural heritage including structures, settlements, farm clusters as well as the connecting cultural landscape character.

Airport Function: To mitigate the potential impacts of a possible future airport within the watershed and to provide a transition between adjacent urban and rural uses and the airport. Ideally, the planning for the GSL should influence the development of the airport site in terms of "greening" and sensitivity to natural features and functions.

Community / Social Sustainability: To support living on the land by ensuring that residential uses can continue outside of the areas most impacted by a possible future airport as well as by encouraging additional complementary uses and services.

Public Use: To create opportunities for recreation and other forms of public use that connect to the surrounding communities and that support learning and recreational activities both on and off the GSL.

Transportation: To provide opportunities for the GSL planning to influence transportation decisions both on and off the lands to ensure that the countryside character of the landscape is considered, valued and protected/enhanced in transportation projects. Furthermore, to support forms of transportation that are "smart and green".

Financial Viability: To provide opportunities for a range of functions on the GSL that could generate income or provide the basis for securing funding through a variety of means in order that the lands be as self supporting as possible.

Landscape Protection: To protect and enhance the countryside character to positively reflect the above goals and objectives.



2.4 A Sustainable Basis for Planning

The Toronto and Region Conservation Authority (TRCA) introduced the concept of sustainability within their Strategy document for the Duffins Watershed. The resulting "target" ecological system identifies the areas that are needed to be preserved, restored and expanded in order for the watershed to be sustainable post-urbanization.

The proposed land management areas for the GSL are based on providing the protection and enhancement that is considered to be required for the sustainability of the watershed as well as to provide for countryside areas and recreational opportunities.

These proposed land management areas are depicted on Figure 2-4, and the rationale for the management areas is provided in Table 2-1. The management areas are intended to provide the framework for developing the Draft Master Plan and for identifying appropriate land uses in each area(s). The management areas consist of:

1. An **Ecological Management Area** encompassing existing natural areas and future natural linkage areas - The Ecological Management Area comprises a proactive vision for a natural system that is based on protection and enhancement to decrease future impacts on ecological quality and biodiversity throughout the watershed. The existing areas of the ecological management area will be protected for natural functions and the proposed linkage areas will be used for restoration and limited recreational use (trails).

2. A **Countryside Management Area** that includes lands on the Oak Ridges Moraine and lands within the Rouge watershed - The Countryside Management Area comprises a proactive vision for protecting and enhancing progressive agricultural uses and associated countryside landscape character. Recreational uses within the countryside management area will be restricted to existing rights of way, along designated hedgerows and field edges and will not be located to cross fields, enter barnyards, residential grounds of a farm, or active farming areas.

3. The **Community Area** of Altona - The Community Area comprises a proactive vision for the revitalization of the village of Altona. Potential options and uses will be investigated to the degree that recognizes both possible future airport constraints and servicing capabilities.

The management areas set out the framework for developing uses for the study area in the context of the existing policy framework. Special study areas have been identified in the Draft Master Plan based on their potential for different uses and the need to explore that potential in greater detail once the plans for a possible future airport are finalized and there is greater clarity with respect to the potential impacts related to its development and operation.

The land uses and designations outlined in the Oak Ridges Moraine Conservation Plan have been applied to the GSL generally, although there is a subcategory within the Countryside Management Area that identifies the area within the GSL that is neither on the Moraine nor ecologically significant (the Rouge Area). The approach to the Draft Master Plan and proposed uses generally meet or exceed these requirements. Two Special Study Areas within the Rouge Area have been identified and it is anticipated that these areas warrant future study in terms of their role within the natural corridor of the Rouge and Little Rouge and the potential uses that may be contemplated on them.

Table 2-1
Land Management Areas Rationale

MANAGEMENT AREAS	RATIONALE
Ecological Management Area (Existing and proposed areas)	These lands require preservation and restoration because they play a significant role in the ecological health of the watershed. Strategic transition of agricultural areas within the Ecological Management Area will serve to increase natural areas and biodiversity in the Duffins and Rouge watersheds. As more detailed information about the GSL is developed, the boundaries of this area may expand to encompass new features or to provide for strategic site specific ecological restoration not contemplated at the scale of this plan. It is anticipated that some agricultural uses may be compatible with restoration and continue for some time within the linkage areas. (Figure 2-4)
Countryside Management Area (ORM and Rouge Areas)	These lands will continue to be used for agricultural purposes, although in the short term (0-5 years) a process will be initiated to transition certain strategic lands including active agriculture to natural condition. This transition will depend upon a number of factors, e.g. the timing of regeneration efforts (natural and other) negotiations with leases etc. The nature and timing of these transitions will need to be studied and negotiated before they are implemented. In this regard, it will be important to work with the lessees to develop a rationalization of the uses and allocation of agricultural lands. In some cases, certain agricultural and recreational uses such as interpretation, education and trails development may be compatible with restoration. In addition, efforts will be made to transition some agriculture from large commercial fields to small, heritage field patterns, mixed crops, hedgerows, wildlife habitat and grass swales to help achieve the mixed rural countryside and open landscape character. (Figure 2-4)
Community Area	Altona is the only settlement within the GSL, and consultation has indicated that there are interesting opportunities and expectations for its future. It has been identified as a Special Study Area in the Draft Master Plan and it will need to be studied to determine its ultimate potential. (Figure 2-4)
Special Study Area	A number of areas have been identified on the Draft Master Plan as warranting additional study once the planning for a possible future airport has been finalized and demands on the GSL for recreation is more fully understood. (Figure 2-9 and Figure 2-10)





The **Ecological Management Area** was determined by using the TRCA data and analysis prepared for Transport Canada during 2003 and supplemented by the Duffins Watershed Strategy. It represents a landscape level evaluation of features that identifies core natural features and based on a number of evaluation criteria, establishes a framework of linkages that ideally will support biodiversity and ecological integrity as well as minimize the potential impacts of urbanization in the watershed. Such an approach ensures the sustainability of the watershed in the long term.

Once the impacts associated with the development of the airport can be better quantified, Transport Canada will need to consult with the TRCA and the Greater Toronto Airports Authority (GTAA) to amend the GSL Master Plan to ensure the sustainability of the airport within the watershed in the context of other proposed development and to ensure that the future development of an airport is not precluded or inappropriately constrained.

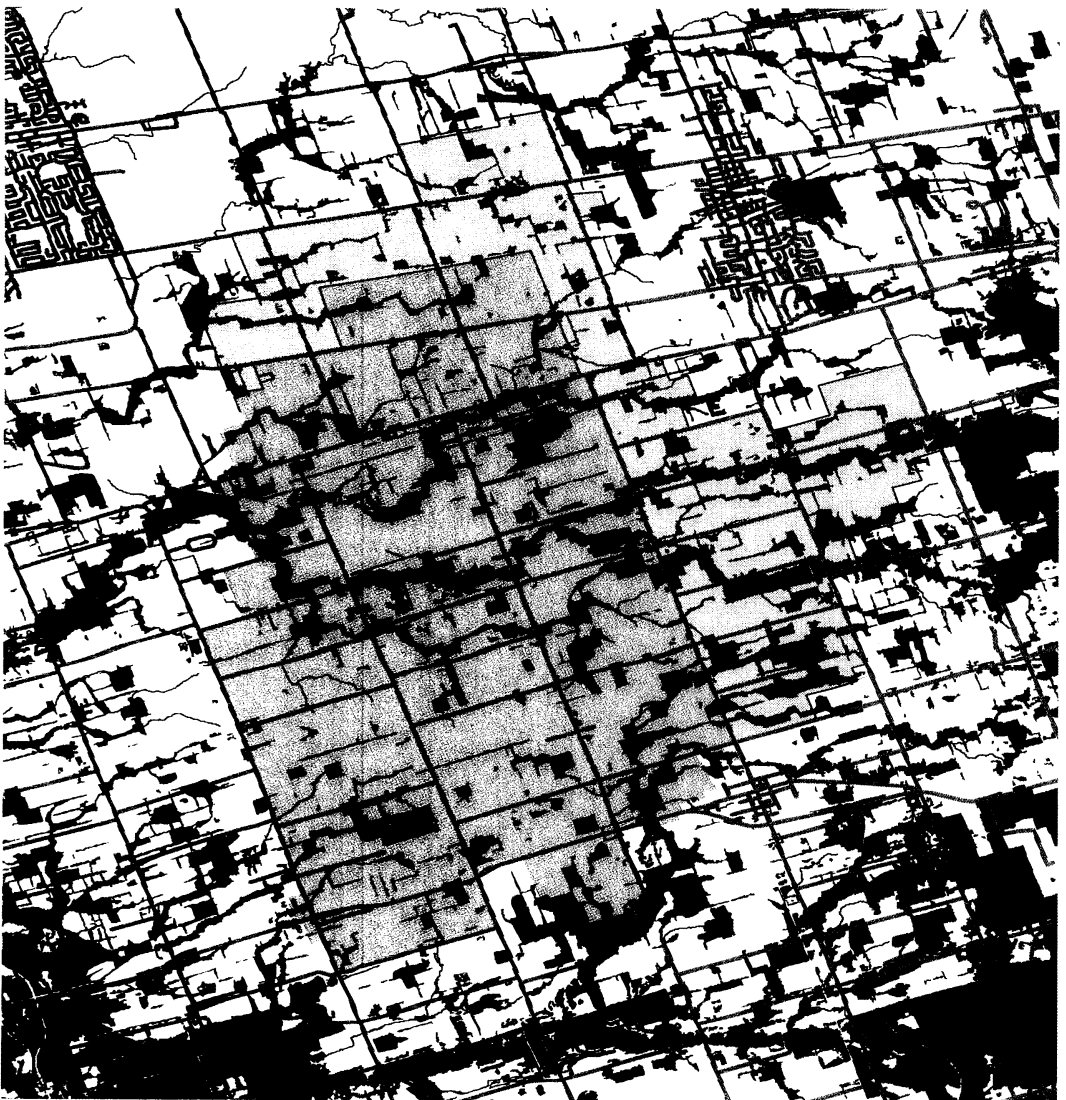
Along the Little Rouge River corridor, the Ecological Management Area will encompass 300 metres of adjacent land on the northern river edge, which is keeping with the plans for conservation of the ecosystem of the Rouge River in Markham's planning as well as that of the Rouge Park North Management Plan. In some cases, the boundaries of the Ecological Management Area may not represent the ultimate area to be protected. It is expected that the limits of the Ecological Management Area will be amended when the site level inventory and analysis of flora and fauna is completed by TRCA for the Pickering Lands Site (2004).

The Ecological Management Area will be enlarged in a series of stages. Identification of the Ecological Management Area and eliminating the extent of the core areas and portions of the linkage areas from agricultural production and other land uses is the first phase. Once more detailed site level information is available, the boundaries of the Ecological Management Area can be expanded and adjusted to include additional features or to incorporate priority areas for restoration and enhancement. Cultural and community values will be considered in the identification of these areas.

In total, the study area is approximately 2640 hectares in size, of which roughly 2090 hectares are currently in active agricultural production. Existing natural areas within the study area represent approximately 390 hectares of the total areas (Figure 2-3). The TRCA has identified a target ecological system that will require transitioning existing land uses to natural uses thus expanding the ecological system. The Management Areas map (Figure 2-4) depicts the target areas as part of the Ecological Management Area and they are described as Ecological Linkages.

In order to implement the envisioned ecological system, approximately 815 hectares of land will ultimately be transitioned from active agricultural production and about 50 hectares will be transitioned from other land uses. In total, approximately 865 hectares of land (agricultural and other uses) is proposed to be restored to natural uses over time, resulting in an ecological system (ecological management area) within the GSL that totals approximately 1255 hectares or almost 50% of the total land area. About 1275 hectares of land will continue to be available for agricultural uses after restoration of the ecological system.

In addition to the ecological management area shown in Figure 2-5 (Lands to be transitioned to Ecological Management Areas), the Draft Master Plan has identified *additional linkage areas* in consultation with TRCA, which illustrate a greater ultimate ecological system of approximately 60% of the GSL.

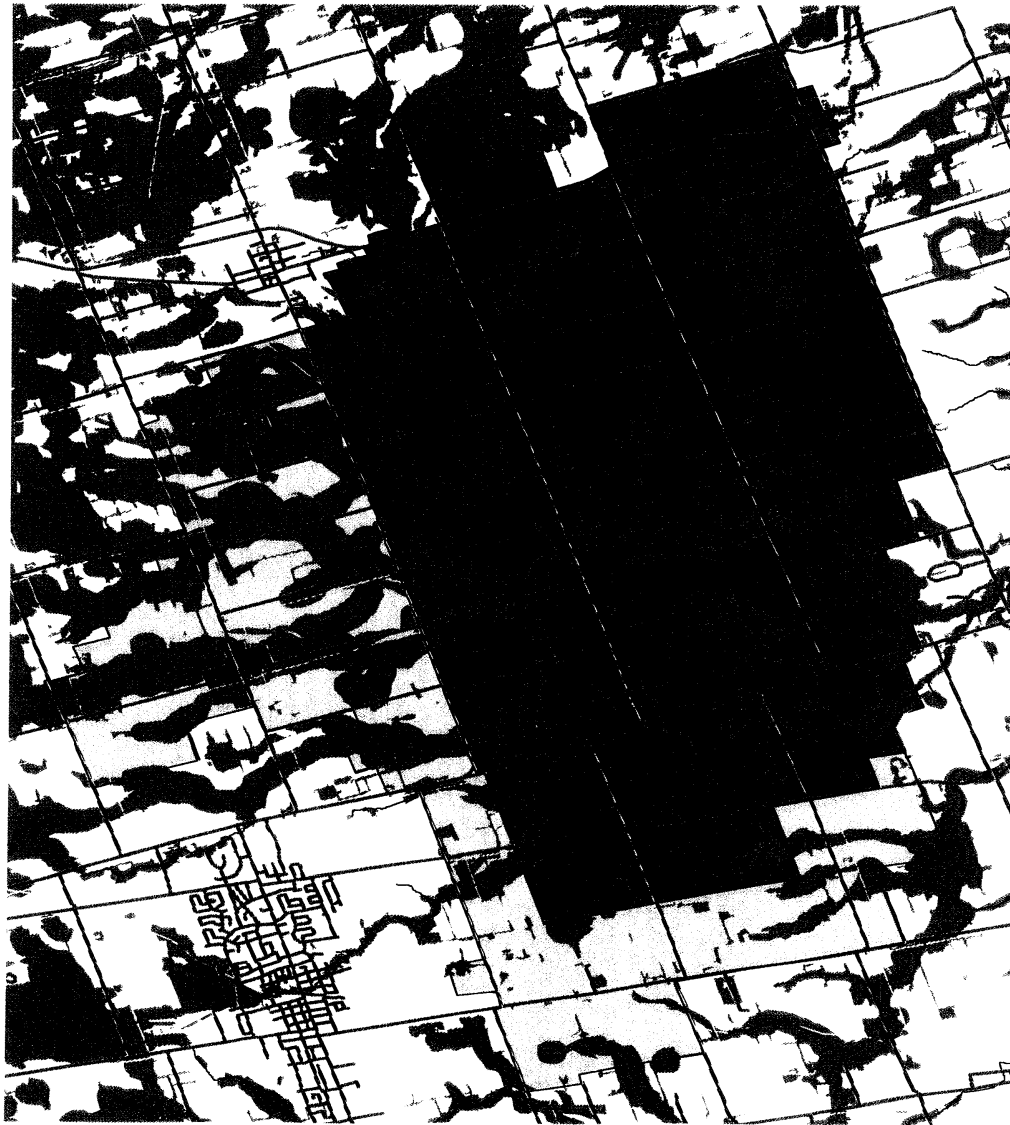


LEGEND

- Roads
- Watercourses
- Existing Natural Features
- Study Area
- Pickering Lands Site



Figure 2-3
Existing Natural Features



LEGEND

- Study Area
- Roads
- Community
- Watercourses
- Ecological Management Area
- Countyside Management Area
- Picketing Lands Site

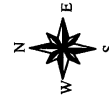


Figure 2-4
Land Management Areas



The **Countryside Management Area** is the area outside the limits of the **Community** and the **Ecological Management Areas** as is shown on Figure 2-5. Although there are a variety of planning documents that apply differently to jurisdictions and geographic areas within the Countryside Management Area, the function of the landscape is that of agriculture, and that function is not expected to change significantly over the short to medium term, with the exception of transitioning some lands out of production for ecological restoration and the introduction of recreational trails.

Within each of the proposed management areas, it is believed that the impacts resulting from the airport and changes in surrounding land uses as a result of the pressures for growth will challenge the ability of agriculture to be sustained in the long term. Agricultural viability would be enhanced by the addition of federal lands to the Green Space (Figure 2-10). The Draft Master Plan must provide the direction for promoting and supporting innovative forms of agriculture in the long term. At the same time, new forms of agriculture must be sustainable in terms of water usage and control of pesticide use. Performance criteria should be established in this regard. Again, cultural and community values will be considered in this process.

The Draft Master Plan presents the opportunity to explore and support innovative forms of agriculture as applied in the GSL over time, and aims to promote sustainable forms and practice of agriculture (e.g. non-excessive consumption of water and non-use of pesticides), as further identified in Figure 2-11 Land Use Evaluation Criteria.

In order to facilitate sustainability of agriculture within the GSL, the Draft Master Plan recognizes that a significant "critical mass" of agricultural lands are required. This may best be achieved in the western portion of the GSL, while agricultural use on the ORM lands may focus on different types of production and less on traditional cash crop farming.

Table 2-2 illustrates the expected changes that will occur with respect to each of the management areas over time and Table 2-3 summarizes the management approaches proposed for each of the land use areas. There will be a conflict between the objectives of the Ecological Management Area and continued agricultural use of the cleared lands. Figure 2-5 identifies those areas which would be taken out of active agricultural production and other uses and restored to more natural conditions over time. Given that the farmers have equipment and they are already on the land they are logical partners for re-establishing the linkage areas to natural conditions, which may include woodlot restoration, hedgerows, wildlife plantings, grassed waterways, and mixed grain and fields to support a rural landscape character and ecological goals for flora and fauna. Meadows are important natural features and provide essential habitat to birds and butterflies as well as being a food source for deer and small mammals.

The **Community Area** has been identified in this process as being locally significant. The village of Altona is the only community within the study area. The natural and cultural heritage as well as enhancement of community values will be considered in the detailed planning of this area while recognizing potential impacts of a possible future airport. The Draft Master Plan provides opportunities to explore innovative community planning and design approaches including heritage preservation, community based commercial development, "green" infrastructure and transportation systems and others while having sensitivity to the natural ecological systems.



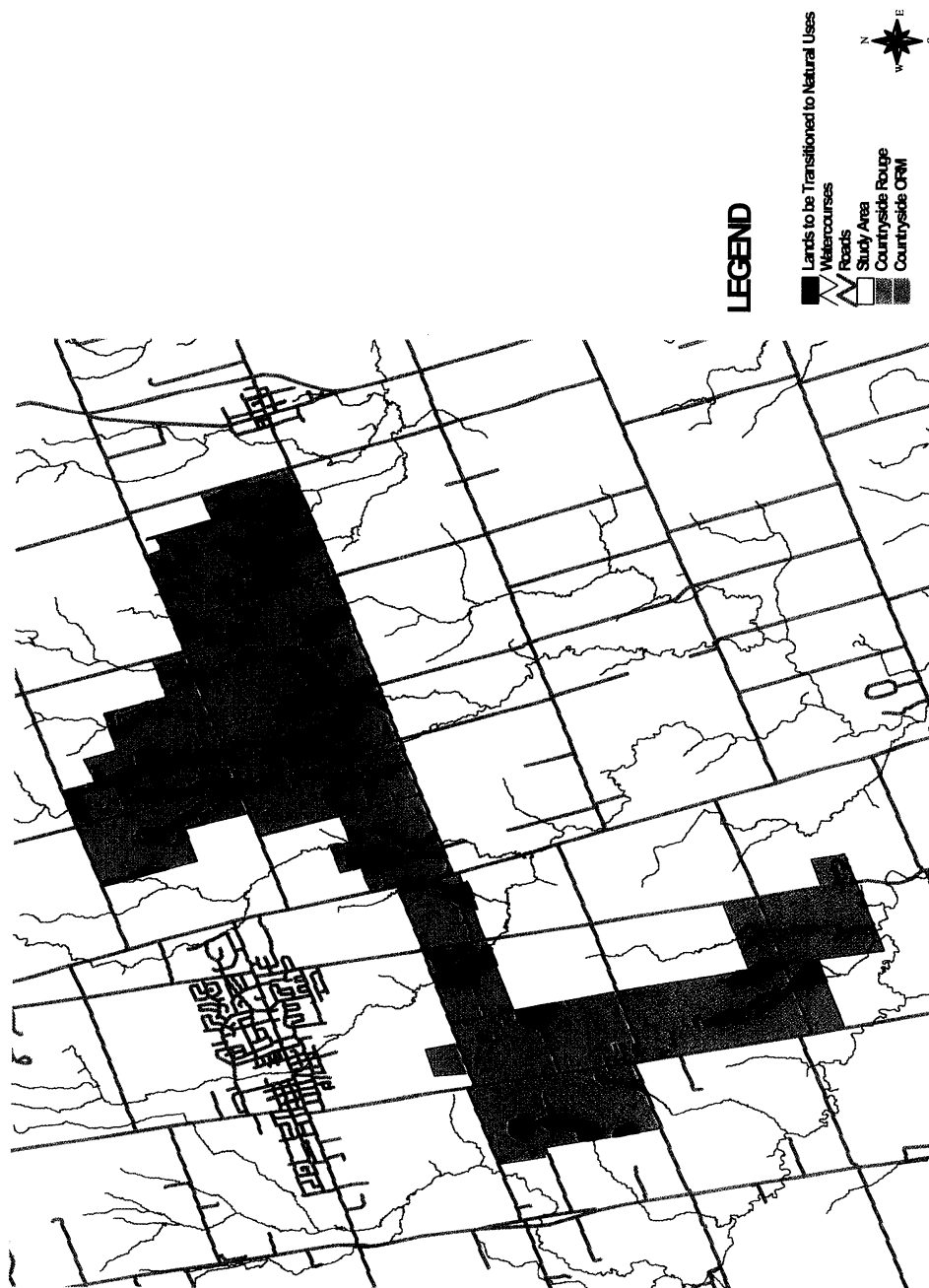
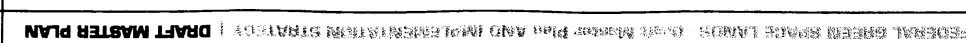


Figure 2-5
Lands to be transitioned to Ecological Management Areas



Note: It is important to recognize that until the reevaluation strategy is completed for Altona, that we uses projected herein are expressions of an **estimate** to see Altona restored to a more viable community. Whether or not this goal can be achieved cannot be known until such time as the airport planning is more complete and the strategy for Altona is developed in the context of the constraints represented by the airport.

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Table 2-3-1
Vision for Management Areas and Land Uses

Ecological Management Area(s) (Core and Linkage)	
Future Condition (Contemplated Uses)	Natural Core and linkage areas connected in a continuous pattern throughout the Green Space Lands. Cultural, community and natural heritage features protected, restored and enhanced. Trails and accessory uses located in non-sensitive linkage areas only thus protecting core areas. Ecological monitoring stations established, operated and maintained throughout the system.
Visitor Experience	Natural environment appreciation / habitat / wildlife viewing and protection. Recreation (non-motorized trail users – walking / hiking / X-country skiing / snowshoeing) providing visual contact with natural areas along trail system as well as other interpretive, educational and related activities.
Permitted Uses	Trail use, small-scale structures accessory to uses and resource management.
Type and Level of Visitor Use	Access to limits of core areas and minimal access to linkage areas. Majority of access restricted to existing Rights of Way within the Countryside Management Areas adjacent to the Ecological Management Area.
Type and Level of Infrastructure	Soft surface trails, small-scale structures accessory to passive recreation uses. No servicing.
Access Type	All access passive, non-motorized and restricted to trails. Parking is proposed at node points and not permitted along roads.
Type of Management	Resource management and trail/small structure construction and maintenance, permitting, restoration and enhancement of ecological systems, interpretive programs, and sensitive management of cultural resources. Lease agreements and transitioning uses.

See Figure 2-4 for Land Management Areas.



Table 2-3-2

Vision for Management Areas and Land Uses

Countyside Management Area	
Future Condition (Contemplated Uses)	Range of agricultural activities, passive (and eventually active) recreation uses. Preservation of existing natural and linkage areas. Community values would be integral to the planning for any of these features.
Visitor Experience	Countyside landscape appreciation, social, energetic, ecological, and diverse, as well as contemplative and peaceful.
Permitted Uses	Forms of agriculture that foster a heritage landscape character and emerging innovative forms of agricultural practice provided they are consistent with principles of conservation of water resources and non-use of pesticides. Walking / hiking trails, on-road cycling, picnicking and open-air markets and other events could occur. As demand increases, active uses such as well-managed on-trail cycling, roller blading and horseback riding in association with riding stables could be considered.
Type and Level of Visitor Use	Passive and eventually active forms of recreation that require continuous trails and regionally based public use opportunities.
Type and Level of Infrastructure	Private services (well, septic) Parking areas with washrooms, trails, furnishings, signage, features, planting, and other elements normally associated with large-scale parks.
Access Type	Must accommodate significant numbers and provide the gateway to less accessible areas that have been programmed for use.
Type of Management	Agricultural land management will focus on transition and practice of achieving a heritage agricultural landscape in the context of recreation planning, construction and maintenance. Lease agreements and transitioning uses.





Table 2-3-3
Vision for Management Areas and Land Uses

Community Area	
Future Condition (Contemplated Uses)	Community uses, gateway and interpretive facilities for tourism and Green Space (Park) services to be provided. Possible centre for relocated heritage structures as airport develops.
Visitor Experience	Cultural heritage, social, retail, rest and relaxation.
Permitted Uses	Commercial and retail uses, limited residential (dependent on Airport Draft Master Plan), local heritage interpretation, artisans, museums, restaurants, bed and breakfasts.
Type and Level of Visitor Use	Settlements would become the staging area for visitors, providing services not found in the park and providing an opportunity for the cultural interpretation of the area.
Type and Level of Infrastructure	Private services (septic, well), road, signage, parking, interpretive facilities, parks/gathering spaces.
Access Type	Full access.
Type of Management	Management models designed around the nature and type provided by municipalities.

The preceding strategy identifies a series of management areas and corresponding uses that are compatible to the management objectives in these areas. Once the Airport Master Planning process is complete, it is recommended that the following be confirmed:

- The final boundaries of the Green Space;
- Management zones within the Green Space based on the needs of the airport;
- The means of resolving airport and Green Space conflicts with respect to management goals and aerospace safety; and
- A framework for managing the airport in conjunction with Green Space.

The following table (Table 2-4), outlines the permitted uses within each of the management areas and sub-areas depicted on Figure 2-4.

Table 2-4 - Permitted Uses

USES	MANAGEMENT AREAS			
	Ecological		Countryside	Community
	Existing Natural Features	Linkage Areas		
Ecological use (non-human)	X	X		
Ecological restoration/enhancement	X	X	X	X
Fish/wildlife/forest management	X	X		
Conservation projects	X	X	X	X
Flood and erosion control projects	X	X	X	X
Agricultural uses		Short term only	X	
Existing transportation and utilities - Expanded facilities are to be in keeping with the vision, goals and objectives of the Master Plan.	X	X	X	X
Home businesses, Bed and breakfasts, and Farm vacation homes. Buildings will be planned, designed and constructed so as not to adversely affect the rural character of the Countryside Areas, and the ecological integrity of the Plan Area.		X	X	X
Low-intensity recreational uses, (non-motorized trail uses, nature interpretation and appreciation, bird-watching and existing camping uses.) Small-scale structures accessory to low-intensity recreational uses, such as trails, boardwalks, foot bridges, fences, decks and picnic facilities.		X	X	X
Small-scale commercial, industrial, and institutional uses. Buildings and structures will be planned and designed so as not to adversely affect the rural character and the ecological integrity.				X
Major recreational uses (golf courses, playing fields, campgrounds).	ONLY CONSIDERED WHERE THEY EXIST			
A range of residential, commercial, industrial and institutional uses.				
				X





2.5 Draft Master Plan Description

The Conceptual Draft Master Plan is illustrated in Figure 2-9. Figure 2-10 shows an expanded area of the Green Space, illustrating the potential for Green Space treatments into the area between Tenth Line/Reesor Road and York Durham Town Line. This is reinforced based on findings during the Draft Master Planning process, that the GSL study area boundaries as originally defined was too small an area, ultimately, to achieve sustainability objectives for the GSL Master Plan. Therefore, two versions of the Conceptual Draft Master Plan were created to demonstrate potentials through expansion of the GSL to include the residual airport study lands noted above.

The Draft Master Plan also recognizes the potential for the GSL planning approach to be extended further outside the present boundaries to make other critical natural system linkages and further reduce impacts on the sustainability and biodiversity of the natural systems within the watershed and wider region.

Ecological Management Framework

The Draft Master Plan for the Green Space Lands is based on the previous discussion in Section 2.4 of a sustainable basis for planning of the GSL and the expanded target natural system for the Duffins / Carruthers watershed and the regional target system provided by TRCA. In addition to the target natural systems, the Town of Markham requested that the federal lands adjacent to the Little Rouge River be protected as part of the Little Rouge corridor and that an additional linkage be provided to Majors Creek. The TRCA also identified a larger 'rounded-out' system that has been illustrated to expand existing natural features, provide east/west linkages between the watersheds, increase sustainability and biodiversity and provide the ultimate potential Ecological Management system for the GSL. This larger system will require further study to confirm.

The rationale for this larger "rounded-out" system is to provide:

- Sufficient environmental compensation for future urbanization in the Duffins watershed; and

- A regional open space system for existing and future urban development.

This system will also need to absorb some of the compensation for impacts that may result from the development and operation of an airport. To achieve the targeted ecological system, as previously discussed, some active agricultural lands will be gradually taken out of production and restored to a natural state in phases:

- Transition to non-tilled agriculture along swales in order to initiate key green corridors;

- Transition of non-tilled lands to passive naturalization (e.g. small fields, hedgerows, waterways and woodlot restoration) to establish vegetated natural linkages in designated areas and facilitate diversity in wildlife habitats;

- Transition of some active agricultural lands from intensive crops (e.g. corn and beans) to pasture and finally to re-naturalized areas over time (See Figure 2-7);

- Active planting of small trees and shrubs to facilitate naturalized habitat development in designated areas; and,

- Utilize non-opened road allowances (right of ways).

The proposed phasing of the Ecological Management Area is illustrated in Figure 2-6 – Existing Conditions, Figure 2-7 – Short to Medium Term and Figure 2-8 – Long Term.



Countryside Framework

Agriculture will continue to be a significant land use and major component of the GSL countryside framework, which is consistent with the vision for the Draft Master Plan. A major agricultural area is proposed to remain largely in the western area of the site due to its beneficial location for farming. Agriculture will also continue in the Oak Ridges Moraine area of the site as well, but to a lesser extent due to the extensive area of the targeted ecological system. While gradually reduced in land area and scale, future agricultural uses are envisioned to make the transition to achieve an enhanced countryside character that fosters a variety of emerging agricultural types appropriate in the near urban environment including:

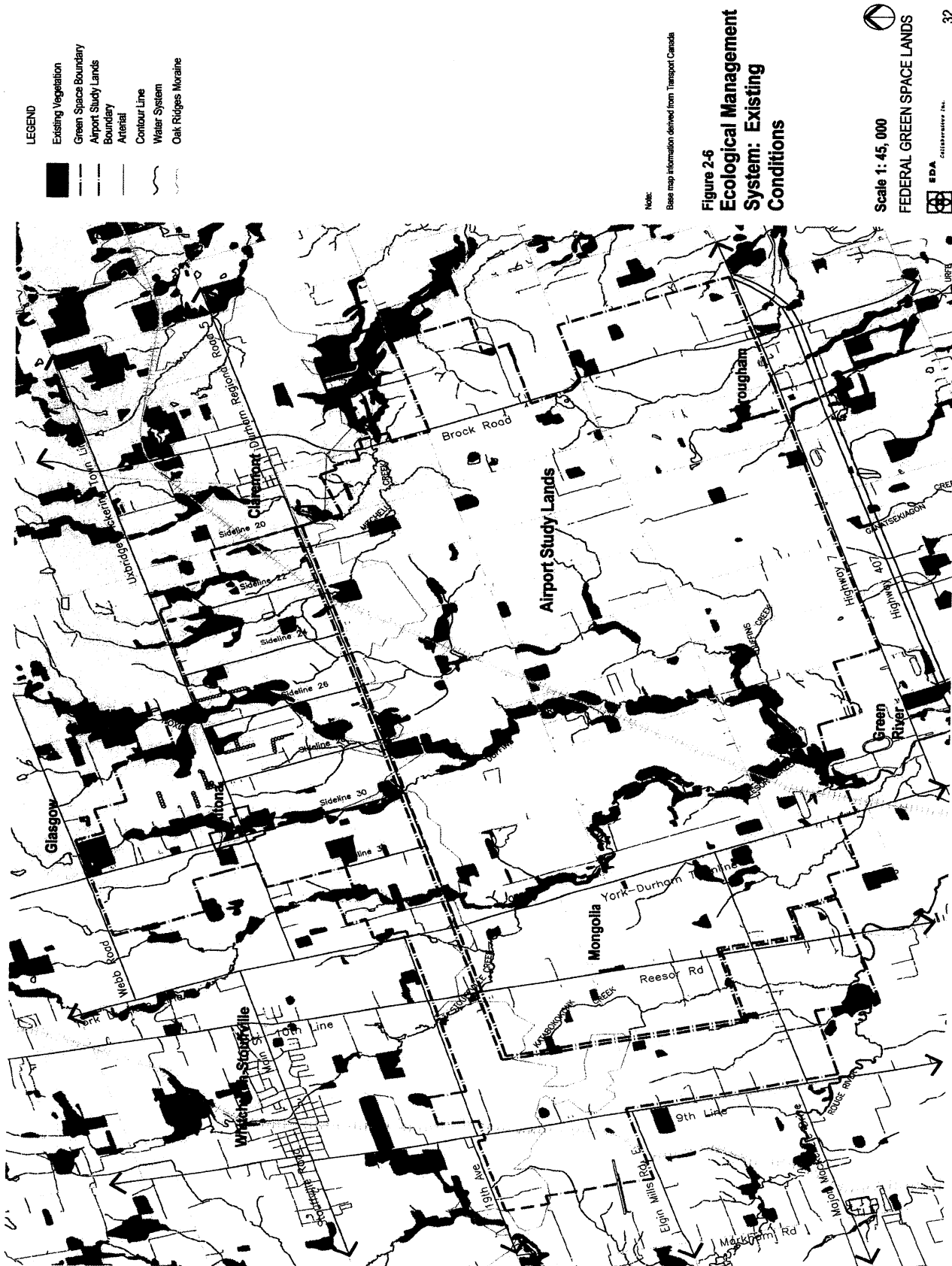
- Organic agriculture;
- U-pick and market gardening;
- Community gardening;
- Tree farm nurseries;
- Horticulture; and,
- Horse stables/ riding facilities.

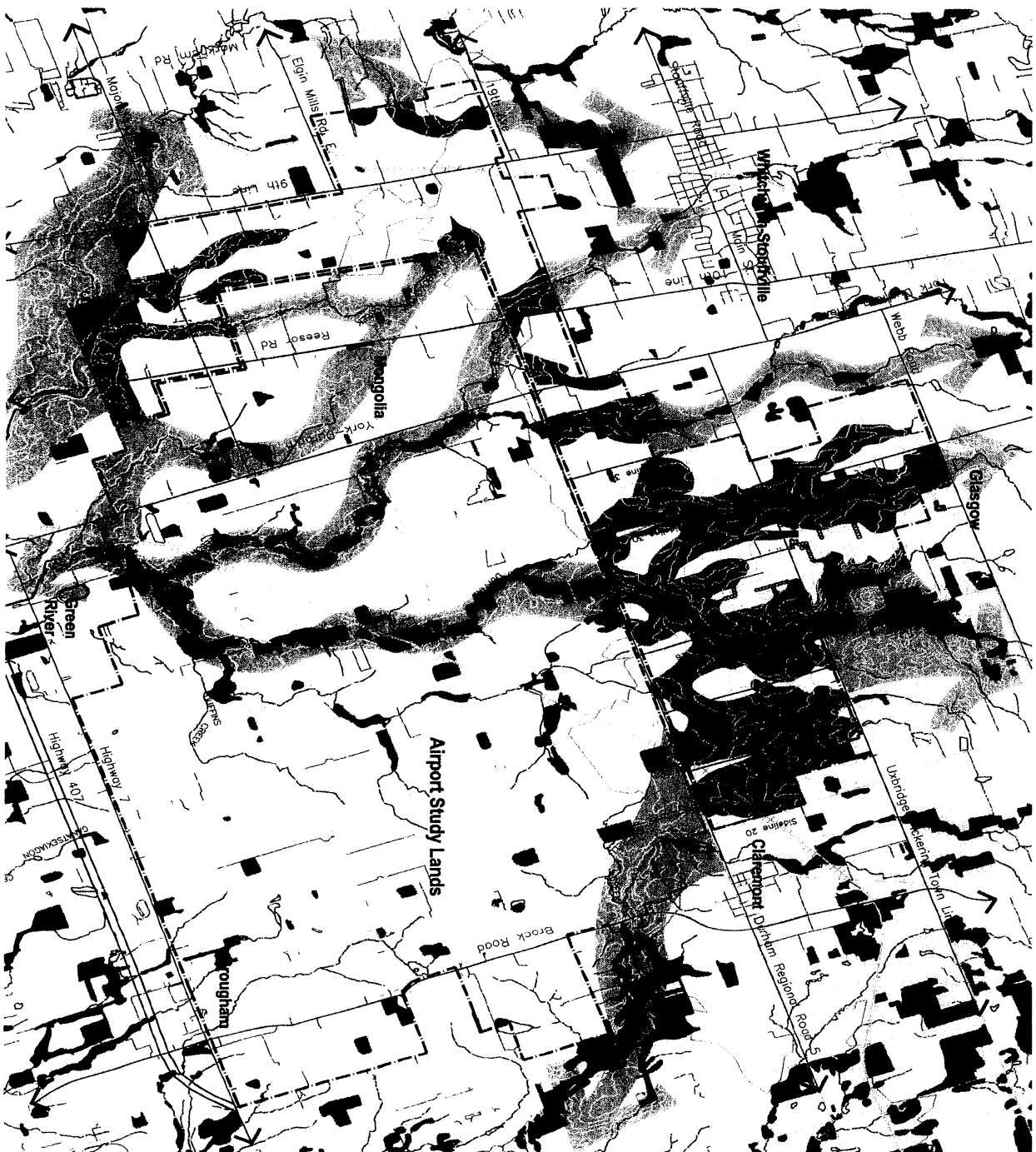
Types of use would need to be environmentally sustainable in terms of controlled water use and non-use of pesticides.

Cultural Heritage

The cultural heritage resources of the GSL encompass a variety of elements including locally designated heritage structures, farm clusters and countryside / cultural landscape composed of distinct field patterns, hedgerows, woodlots, surface drainage systems, fences and related features. It is recommended that these features remain in their present locations and be protected and enhanced. This will involve a variety of techniques that include maintaining tenancies, building restoration and related landscape treatments.

Cultural heritage features should be considered when evaluating the expansion of the Ecological Management Areas. In some cases, it may be appropriate to preserve these features in their current locations with appropriate mitigation or in other cases, relocation or demolition may be appropriate. The relocation of high quality buildings to the village of Altona may be appropriate as part of the overall cultural heritage strategy and the revitalization of Altona.



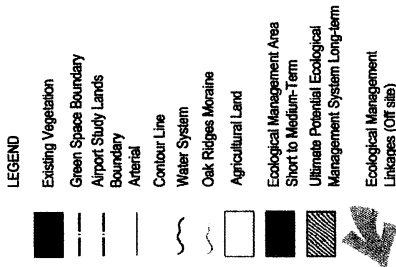


- LEGEND**
- Existing Vegetation
 - Green Space Boundary
 - Airport Study Lands Boundary
 - Ecological Management Area Short to Medium Term
 - Agricultural Land
 - Contour Line
 - Water System
 - Oak Ridge Moraine
 - Ecological Management Linkages (Off site)

Note:
Base map information derived from Transport Canada

Figure 2-7
Ecological Management System: Short to Medium Term

Scale 1:45,000
FEDERAL GREEN SPACE LANDS
EDA

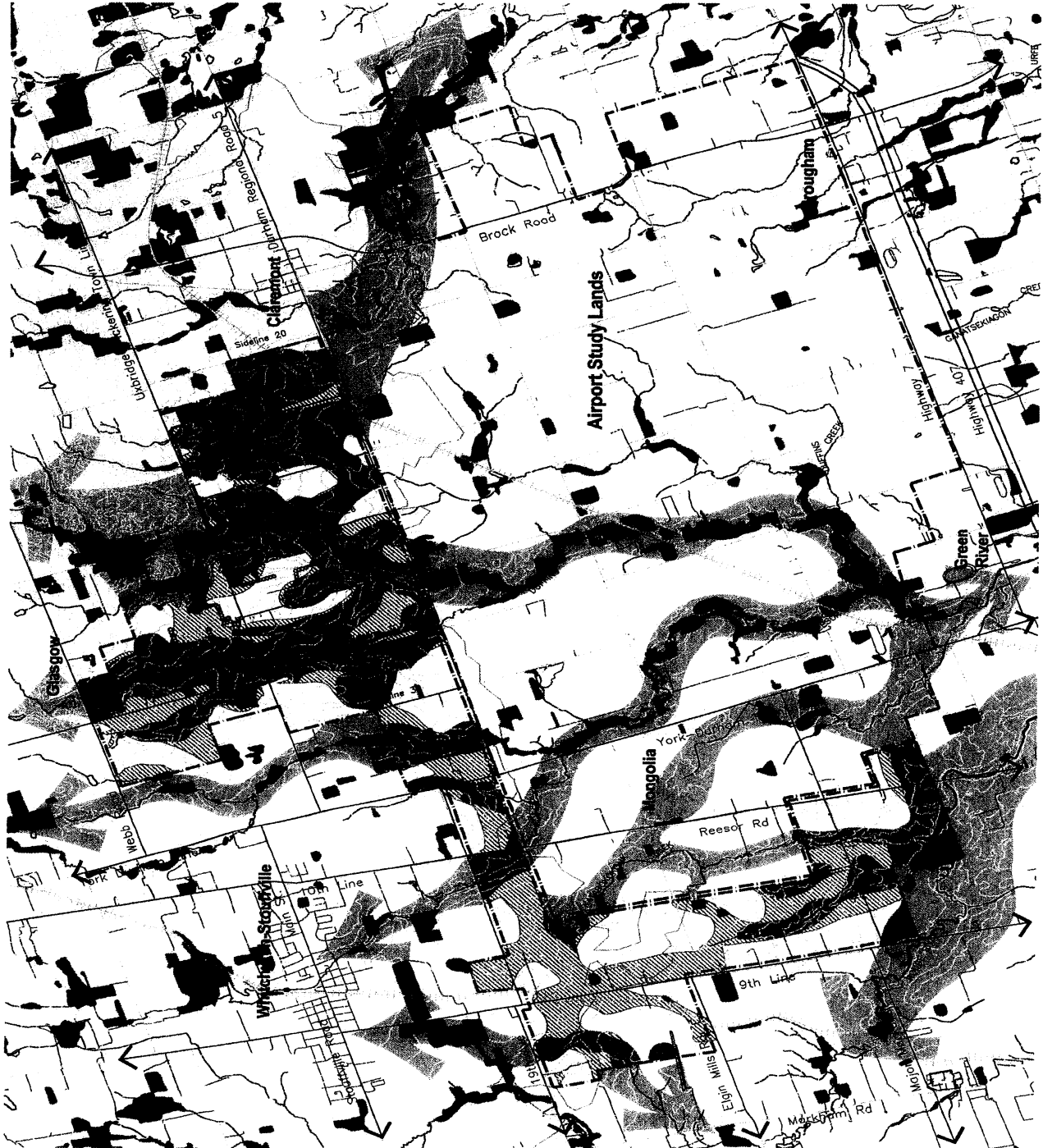


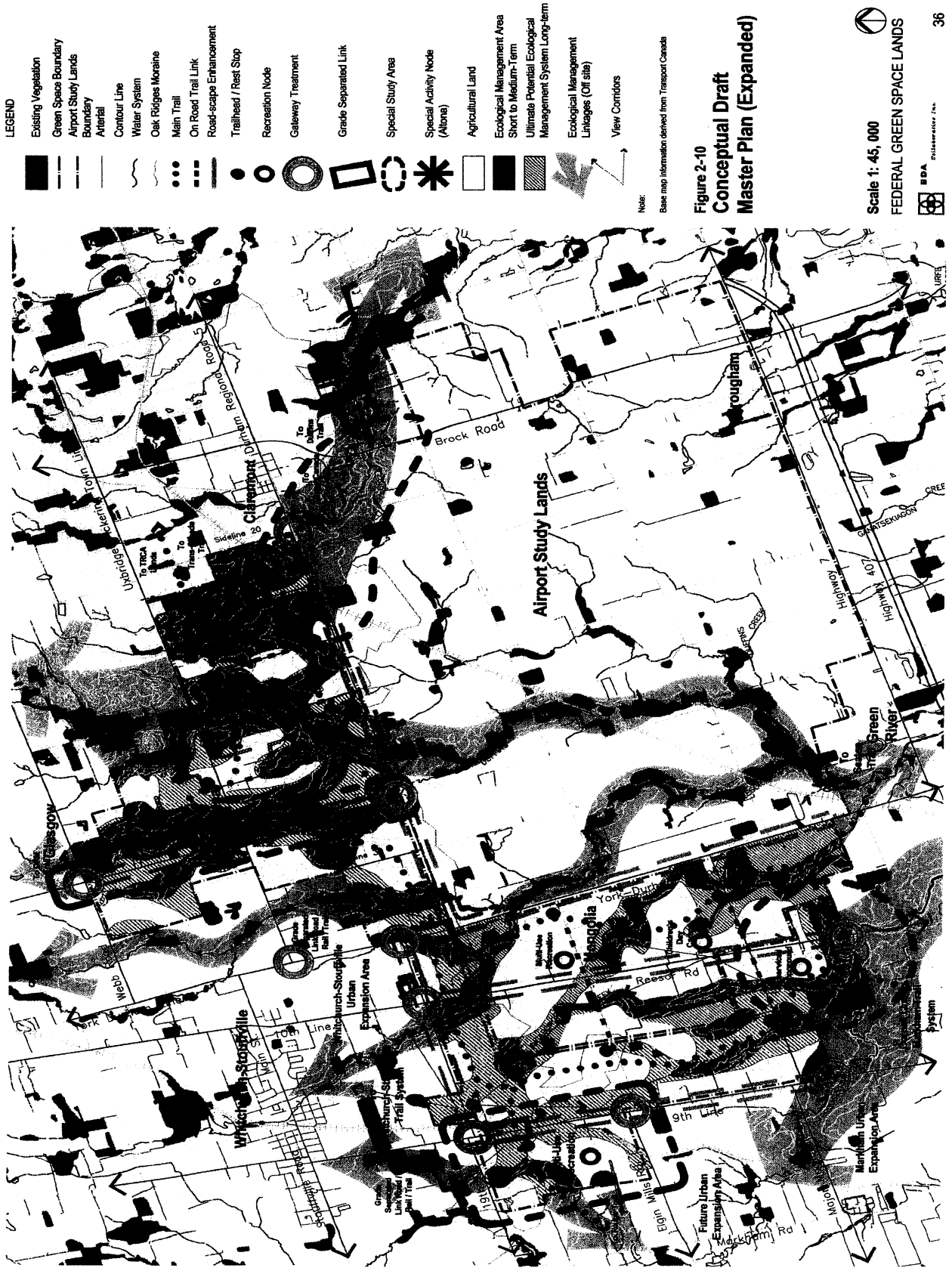
Note:
Base map information derived from Transport Canada

**Figure 2-8
Ecological Management
System: Long-Term**

Scale 1: 45, 000
FEDERAL GREEN SPACE LANDS

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Green Space Transportation Strategy

The proposed transportation system will be planned in accordance with principles of "smart transportation" and with the existing and proposed regional transportation systems as well as regional and municipal official plans. It is recognized that the future transportation system must take into account the growth occurring in the surrounding regions and municipalities as well as the possible future airport requirements. Capacities and routes will be determined by the regions, municipalities and GTA studies. It will be important, however, that the concept of "context sensitive design" be adopted for the roadscape treatments through the GSL. This approach will help ensure the protection and enhancement of the countryside character of the GSL.

Consistent with this proposed framework, the two key north-south roads through the GSL are the York/Durham Townline and the Ninth Line. These roads are planned to expand to meet future regional and possible future airport transportation needs. However, the form and design of the roads through the GSL should be addressed in a Green Space transportation strategy (see Section 3.1.5), which will utilize environmentally sustainable principles, reflect the nature and purpose of the lands and retain the countryside character that is protected within the Draft Master Plan. These roads should receive extensive roadside planting and detailed cultural landscape and site development that reflects the countryside character of the GSL.

The east-west roads through the western portion of the site include Major Mackenzie Drive and Elgin Mills Road. These roads connect across and within the GSL and ought to be designed in keeping with the countryside character context.

The main east-west road, Durham Road 5, is a heavily traveled route that passes along the south side of the northern portion of the GSL. Again, this road is expected to increase in traffic volume, but should be designed consistent with the countryside context.

The sideline roads running north from Durham Road 5 are expected to remain at their current scale and character if not required for airport development or municipalities. Additional roadside planting is recommended where appropriate and in the form that is characteristic of the area (roads lined with large deciduous trees). Several of these roads are currently unopened rights of way or only partially opened as roads. These un-opened rights of way provide opportunities for additional trail links. The trails system is discussed in the next section.

The regional transportation plans identify a future grade separation at the rail line that crosses the Ninth Line, south of Stouffville. The planning of this grade separation should include and recognize the need for a trail link / land bridge to link the two adjoining GSL land areas east and west of Ninth Line. Another bridging connection is required at the narrowest part of the GSL on the York / Durham Line north of Durham Road 5. While this is the narrowest part of the GSL, it acts as a hinge for the entire GSL, where the western Rouge Park area connects with the northern ORM portion of the site. Because of its significance as a major gateway to the GSL and the entire federal lands, this narrow link requires strengthening through the consideration of significant open space and trail connections across the York/Durham Townline in this location.



Trail System

The trail system is one of the key structuring devices and public use opportunities within the GSL. The GSL is strategically located between several significant existing and planned trails:

- Rouge Park Trail system to the west;
- Oak Ridges Moraine Trail to the north;
- Seaton Trail to the south;
- Trans Canada Trail to the north and east;
- Duffins Creek Trail to the south-east;
- Lake Ontario Waterfront trail to the south;
- Other municipal trail systems (Markham, Stouffville, Pickering, etc.)

The GSL trail system represents the critical "connective tissue" that will link these trails to form a cohesive inter-regional trail system.

The trail system is composed of a multi-use main trail through the GSL site that ties these regional trails together. It is envisioned in the early stages that the main trail will accommodate hikers and walkers. In future and as use increases to include cyclists, separation of these users may be necessary.

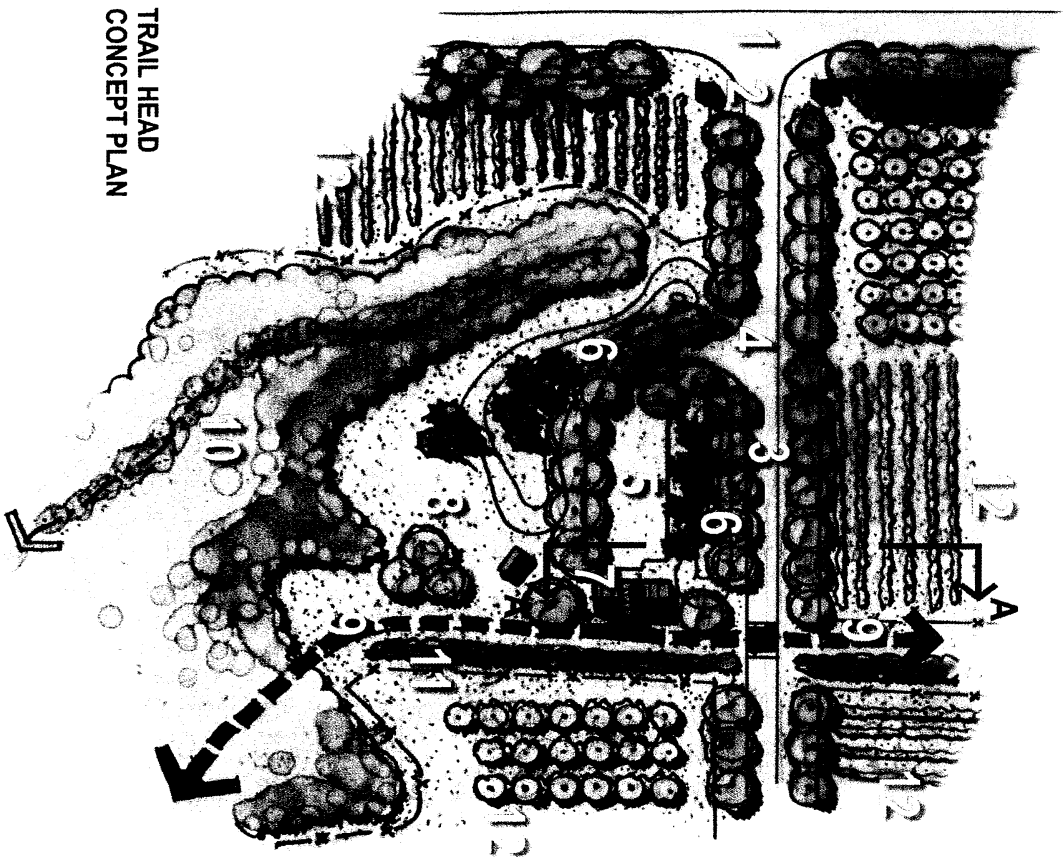
Trails will be sited to avoid core ecological areas. Trails may be located in ecological linkage areas, but designed to minimize disruption to the form and function of the linkages.

Trailheads are strategically located near GSL gateways to enable visitors to access the trail system quickly upon entering the lands. Each trailhead will provide several basic components:

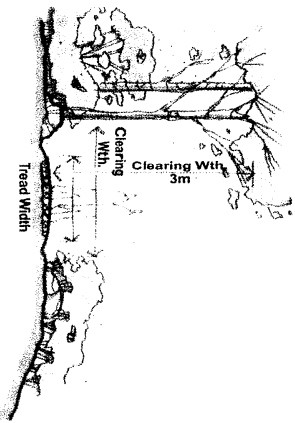
- Small gravel surface parking area for approximately 25 cars;
- Identification, directional and interpretive signage;
- Fencing to separate the public uses from adjacent agricultural uses;
- Rest rooms and fresh water source;
- Picnic tables and waste receptacles.

The typical trailhead is illustrated in Figure 2-11 – Typical Trail Head Schematic.

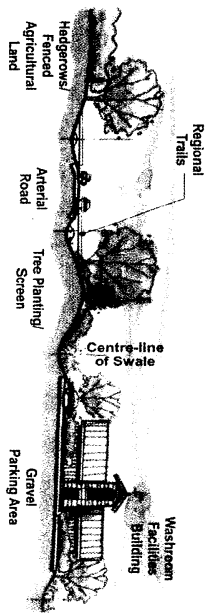
The potential addition of lands between the York/Durham Townline and Tenth Line/Reesor Road that are determined as not being essential for the airport site works, provide the opportunity to add a second major north-south trail link to complete a large loop in the system on the west side. Several smaller trail loops are possible when existing rural on-road sections are used to link between the main trail segments. By using the on-road sections, a finer grain loop system provides the opportunity for a variety of shorter 20-minute walking loops between the longer main trail segments. Smaller scale hiking and interpretive trails through designated parts of the Ecological Management Areas augment the variety of trail experiences on the site.



TRAIL HEAD
CONCEPT PLAN



SECTION-Walking Trail



SECTION A-A- Trail Head

LEGEND

- 1 Arterial Road
- 2 Entrance Gateway Feature/Signage
- 3 Secondary/Tertiary Road
- 4 Trail Head Signage/Entrance to Parking
- 5 Gravel Parking Area w/20 to 25 Cars
- 6 Buffer Planting/Berm
- 7 Washroom Facilities Building w/ Interpretive Signage/Orientation Map
- 8 Open Space Picnic Area w/Shelter and Tables
- 9 Multi-use Recreational Trail
- 10 Enhanced Green Corridor/River Valley
- 11 Hedge Row and Fencing at Property Line
- 12 Agricultural Land/Orchard/Pick-your-own

Figure 2-11

Typical Trail Head Schematic



2.6 Special Study Areas

While the Master Plan provides an overall conceptual plan for the GSL, there are several areas that will require further study due to a range of detailed considerations. Four special study areas are identified on the Draft Master Plan for future detailed study:

Altona Revitalization Planning Area

- Due to its unique character and potential for special uses such as cultural heritage preservation and enhancement, small scale commercial, recreation and educational uses;
- Existing heritage settlement;
- Proximity to existing and proposed Ecological Management Areas;
- Village planning and design strategy should be considered.

Block West of Ninth Line (north of Elgin Mills Road East)

- Due to its excellent road access on three sides and rail access;
- Relationship to proposed grade separation at Ninth Line / rail line;
- Proximity to future urban development in Markham and Stouffville;
- Existing airport uses; and,
- Relatively low ecological significance.

Rouge Park "Gap" Area (south of Major Mackenzie Drive / west of Tenth Line/ Reesor Road)

- The "Gap" is an essential link along the Little Rouge;
- Integral relationship with the Rouge Park North lands;
- Rouge Park is initiating preparation of a management plan for the Park Areas along the Little Rouge;
- Proximity to the Cornell community of Markham.

Mitchell's Creek

- Opportunity to link the GSL with East Duffins watershed south of Clarendon through the airport study lands of the Pickering Land Site;
- Potential linkages to Trans Canada Trail and other regional trails.

Public Use - Recreation and Tourism

A variety of sustainable recreation and tourism uses are envisioned in designated areas of the GSL. The trail system previously noted is the most significant structuring device and most immediate public use opportunity. This system will link a variety of recreational and tourism opportunities in the future.

Recreational development is envisioned to be consistent with regional scale recreation needs that complement rather than duplicate municipal recreation facilities. Appropriate recreational activities may include:

- Hiking, walking and interpretive trails;
- Bird watching;
- Children's day camps and possibly overnight camps;
- Horseback riding / equestrian centre;
- Picnic grounds; and
- Educational, ecological/ environmental/ sustainable development facilities.

These and other potential recreational uses are contemplated where they exist as well as other existing heritage building clusters and former farmstead sites in the Countryside Management Area. These existing sites often provide an appropriate setting for such uses and are located at intervals along existing roads that allow adequate buffering within the Countryside Management Area.

Sustainable tourism development is also consistent with the established vision for the GSL. The attractive countryside character provides numerous appropriate opportunities for sustainable tourism development in the Community Area, while recognizing potential impacts of a possible future airport:

- Bed and breakfast;
- Farm markets;
- Country Inn / Spa;
- Restaurants;
- Artists workshops / studios;
- Specialty retail; etc.



2.7 Performance-based Sustainability Criteria

While this study has anticipated a range of potential uses, it is impossible and inappropriate to predict and prescribe all future uses. As uses are identified and proposed, they should be evaluated not only against the Green Space vision and objectives, but also according to a set of performance-based sustainability criteria. These criteria will need to be detailed by the future advisory body (possibly GSSAC). The criteria would follow a comprehensive model of sustainability and evaluate physical, social and economic environments. As both existing uses and potential uses are contemplated for the GSL, the determined set of criteria would be applied to distinguish whether the use is appropriate and meets the goals and objectives of the GSL. In this manner, it is not necessarily the type of use itself that is permitted on the site which is emphasized, but rather how this use *performs* in relation to the GSL sustainability principles. The performance based sustainability criteria are intended to reinforce the stewardship basis for planning.



2.8 Conceptual Draft Master Plan

The Conceptual Draft Master Plan for the Green Space Lands is illustrated in Figure 2-9- Conceptual Draft Master Plan and Figure 2-10- Conceptual Draft Master Plan (Expanded). This plan identifies the key long term structuring components of the GSL:

- Ecological Management Area / green space system;
- Regional Green Space Linkages (off-site);
- Countryside Management Area / agricultural lands;
- Trail system / trail heads / rest stops;
- Regional trail links (off-site);
- GSL entrance gateways;
- Potential recreation / tourism nodes;
- GSL roadway treatments;
- Special study areas.

While the Conceptual Draft Master Plan provides the framework, the plan also requires a description of the various qualities and character envisioned. Figure 2-12- Development Program and Landscape Character summarizes in graphic format the key environmental qualities and visual character of the Draft Master Plan for the GSL.

This conceptual framework provides the necessary plan components to move forward with a range of implementation actions aimed at realizing the vision for the GSL.

2.9 Phasing Strategy for Development

The plan for the GSL will not be achieved "overnight". A step-by-step plan for implementation must include a range of considerations, not the least of which is having a more complete understanding of the implications of airport development on the GSL. However, it is also important that some tangible development is realized quickly that results in some clear short term public benefits.

The GSL presents significant opportunities for the development of a strong regional green space system and a variety of non-urban recreational activities. Several key functions are important in achieving immediate development results for the GSL:

- **Identity:** Clear GSL identity through development of a graphic-mark system and way-finding / signage program at entrance gateways, boundaries and arrival nodes;
- **Gateway:** Clear gateways that mark entrances to the GSL;
- **Access and Circulation:** Trailheads and basic trail system that provide opportunities for appreciation of the GSL lands and resources;
- **Arrival / Interpretive Node:** One main arrival / interpretive site, possibly at Altona, that provides visitors with a basic understanding of the GSL, its resources, potential and significance within the GTA;
- **Information/ Site Map:** Preparation of a site map illustrating the overall site boundaries, roads, trail system and activity nodes and resource points of interest;
- **Tree Planting Program:** Initiation of a dual function tree planting program – one aimed at enhancing the Ecological Management Areas and the other aimed at improving the countryside / roadside character of the GSL;
- **Marketing Program:** Let people know what is happening and how they can participate in realizing the VISION.

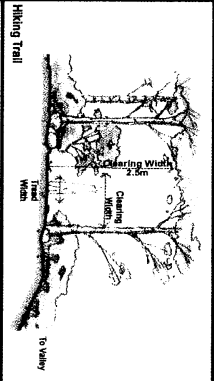
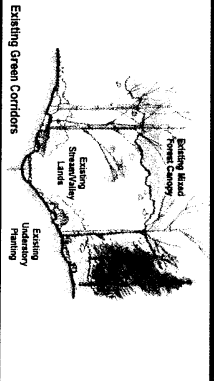
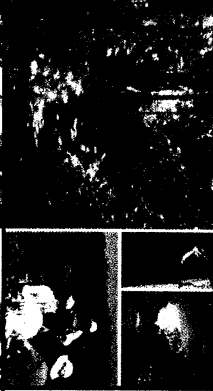
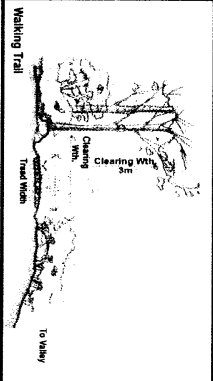
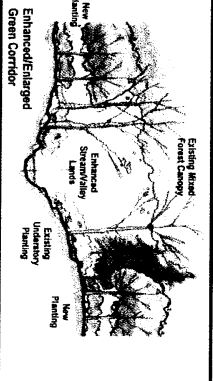
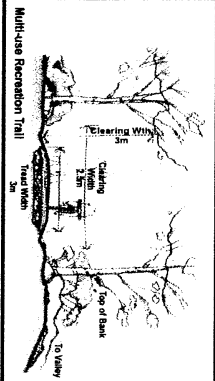
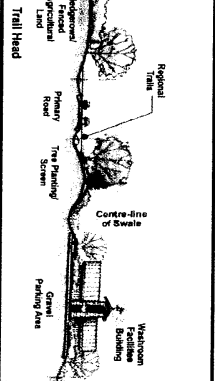
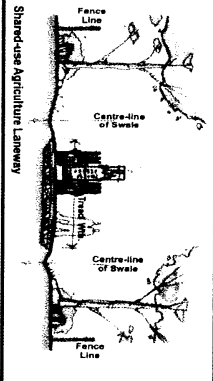
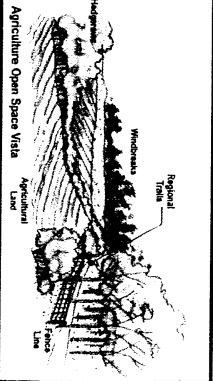
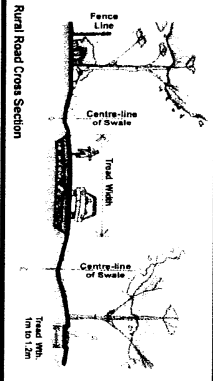
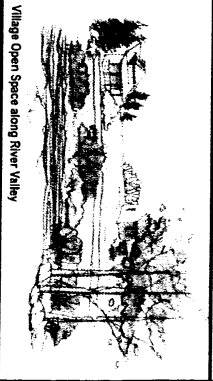
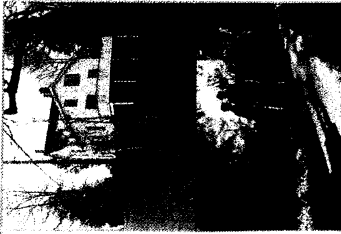
MANAGEMENT ZONE	SUB AREA	POTENTIAL FACILITY/ACTIVITY	TRAIL NETWORK	OPEN SPACE CHARACTER
ECOLOGICAL MANAGEMENT AREA(S) (Core and Linkage)	Natural Core Area			
	Natural Linkage Area			
COUNTRYSIDE MANAGEMENT AREA (Rouge and Oak Ridges Moraine)	Recreational Use Area			
	Agricultural Use Area			
COMMUNITY MANAGEMENT AREA	Settlement Areas			

Figure 2-13
Development Program and Landscape Character





3.0 ACTION PLAN FOR IMPLEMENTATION

This section outlines a series of projects and funding required for implementing the Draft Master Plan. Others may be identified once the plans for the airport are finalized and detailed studies are completed. Section 3.1 outlines the implementation planning projects. Associated costs total approximately \$2.8 million with the majority of the expenditure in years one to five. Section 3.2 provides a recommended timeline for these studies. Section 3.3 provides preliminary estimates of the major capital costs related to actual implementation of the overall Green Space Master Plan. Associated costs total approximately \$20 million. Section 3.4 identifies the key short term implementation priorities and costs. Associated capital costs total approximately \$2.5 million and are included in the above \$20 million estimate.

No estimates have been made with respect to the medium/ longer term governance and administrative budgets associated with the GSL. These costs will be further defined when the Green Space planning is more complete; on the ground implementation has begun; and future governance structure and management requirements are better understood. Ideally, revenue gained from property management and other changes can off-set additional expenses in support of the Green Space Master Plan.

3.1 Implementation Planning Projects

The Draft Master Planning process identified a number of projects that will be required to implement the Draft Master Plan. These are summarized under three major headings:

1. Governance and Management

- Governance Model;
- Property Management Model;
- Partnership Strategy;
- Marketing Strategy.

2. Planning Integration and Strategies

- Integrated PLS Draft Master Plan;
- Special Study Areas, including developing a Revitalization Strategy for Altona, Block West of Ninth Line, South Rouge Park Area, and Mitchell's Creek;
- Green Space Transportation Strategy;
- Agricultural Management Plan;
- Airport Mitigation Strategy.

3. Detailed Planning and Design

- Detailed Concept and Design for Trails System and Recreation Facilities;
- Ecological Monitoring Plan;
- Local Heritage Structures and Cultural Heritage Evaluation;
- Ecological Transition Study.

Each of the proposed projects is described in greater detail in the following sections, which outline the general intent of the project, potential costs and a proposed schedule for when the project will be implemented.

Significant federal funding will be required to initiate and implement the projects outlined. It is also anticipated that the existing management framework of Transport Canada staff and an ongoing role for an implementation coordination advisory body (possibly GSSAC) will be maintained until such time as the preferred management model is implemented. The following projects are both short and long term. The intent or general terms of reference have been provided, however it is likely that they will change as a result of more detailed information being provided on the development of the airport site.



GOVERNANCE AND MANAGEMENT

3.1.1 Governance Model Project

ESTIMATED BUDGET REQUIREMENTS FOR PROJECT: \$375,000

SCHEDULE –Year One to Year Three

Planning for the GSL has identified a larger, unifying vision of sustainability for the PLS in the context of sustainable watershed planning that would create numerous opportunities on site and beyond. Potential long term governance models identified to date for governing the development of the GSL include a Commission or a Crown Agency. However, consideration should be given to interest expressed by other groups including the Rouge Park Alliance. Each of these and possibly other options would have to explore the necessary authority to manage and develop the Green Space Lands taking into consideration that:

- Transport Canada must remain the lead federal agency;
- Flexibility is needed to manage cross-jurisdictional issues and establish long term formal relationships with partners for things like by-law enforcement, servicing, research and planning, development of recreation facilities and other day-to-day issues for the GSL; and
- A mechanism is needed to establish a stable source of funding.

The necessary formal authorities associated with either governance option will require detailed analysis in order to establish the preferred option. Numerous details associated with the authority itself will also need to be determined to ensure that the GSL will be managed effectively over the long term. It will be the responsibility of Transport Canada to undertake and implement the Governance Model Project.

The following are key elements that need to be considered in the Governance Model Project in order to select the preferred model:

Scope and Authority

Establish the name, purposes, scope of all or certain powers (geographic and jurisdictional). Specific details regarding the structure of the preferred entity (entities) itself would need to be established, including: the name; size; process of appointment and representation; (e.g. levels of government, geographic areas, or skill sets). These sections would also establish the particular mandate, roles and authority. Provision would be made for establishing a Chair, voting procedures, and the possibility of technical or advisory committees. The power and responsibilities to hire staff, administer the Governance Model and keep records would also be included.

Management Plan

The entity (entities) would be charged with implementing the approved plans, including any required prohibitions, restrictions and other management plan contents. The Governance Model would also establish the requirements for public and agency consultations and input. A process for periodic plan review and approval of management plan revisions would be included, as would the ability to develop plans, programs and projects to implement the overall management plan.

Financial

Given the sizeable asset and financial arrangements involved in the implementation of the Draft Green Space Master Plan, any entity would need to address numerous financial requirements. First, financing would be required, possibly including annual allocations, or an initial endowment fund, or perhaps a share in the profits from running the airport. Second, management plan implementation financing and partnership arrangements would need to be authorized, which could include charging fees or other levies and dedicating lease and other revenues to specified purposes or funds. Any specialized tax arrangements or allocations also could be addressed.

Accountability Mechanisms

The Governance Model would need to set out a variety of accountability mechanisms. These might involve: requiring implementation to be consistent with the approved management plan and the scope and authority of the established entity; following public and agency consultation processes and information sharing; and providing annual reports and ensuring auditing and other financial accountability measures.

Legal Authorizations

New legislation is only one means of addressing any required new authority, filling in the gaps (if any) in current legislation, or making exceptions appropriate to the specific circumstances faced on this site. Legislative change might authorize the scope of dealing with federal lands and interests, including acquisition, disposition and shared ownership. It could specify leasing, contract, delegation, partnership and related authorities. It may address interactions with other federal and local agencies and legislation.





3.1.2 Property Management Options Project SCHEDULE – Year One to Year Three

The Property Management options that have been explored within the Draft Master Plan are as follows:

1. Status Quo;
2. Sell buildings and related improvements and long term leases on the lands;
3. Long term leases on the land and the buildings.

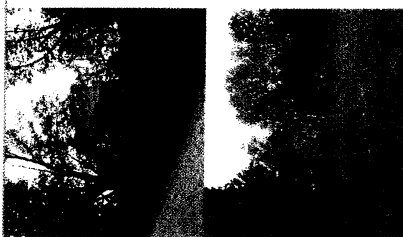
The Draft Master Plan developed a preliminary financial analysis of the options concluded that from a revenue perspective the **status quo is not a viable option** given a net present value of the rental income would represent a deficit of \$48 million over 20 years. The sale of buildings would result in a one-time revenue of about \$5.6 million. The lease of agricultural land is estimated to result in revenue of approximately \$280,000 per annum. Longer term leases between 20 years and 40 years were considered, with the recognition that the longer the term, the greater the willingness of the lessee to invest in the property.

Longer term leases meet the objective of Transport Canada to encourage positive stewardship of buildings and land.

There are a number of outstanding issues that need to be resolved prior to the implementation of a preferred Property Management Model including:

1. Using the NEF contours to determine which uses will be appropriate on which properties in order to be compatible with the NEF. Determine which properties will be able to be used for residential uses and those which will possibly be appropriate for commercial or industrial uses in keeping with the uses proposed in the Draft Master Plan.

2. Maintaining federal transportation interests through lease agreements and easements on title or possibly other mechanisms that may be determined feasible by the federal government.
3. Ensuring that leases and/or the sale of structures reflect the constraints of NEF contours and other airport impacts with respect to use and occupancy.
4. Identifying those lands that are to be phased out of current use as part of the ecological restoration plan and adjusting the leases accordingly.
5. Identifying the desired Best Management Practices for agriculture and incorporating them into the lease agreements.
6. Identifying the best vehicle for ensuring property maintenance standards in addition to voluntary stewardship that would hopefully evolve out of longer leases on land and/or the sale of structures.
7. Land appraisals have been completed based on current conditions. These values may be improved as the marketability of properties is improved with greater certainty as to the long term land use.
8. Sale of structures, which includes residential dwellings and related improvements.
9. Community values are to be considered.





3.1.3 Partnership Strategy SCHEDULE – Year One to Year Three

Until such time as the long term governance model is identified and implemented, the existing model will need to develop and maintain the necessary partners to undertake and implement the project. It is estimated that a full time staff member would undertake this project as part of their job description (among other duties). It is expected that the level of effort directed toward developing partnerships and securing funding through those partners would represent approximately 1/4 of the staff member's time and that it would include the following responsibilities:

1. Researching and maintaining a list of funding sources (private and public).
2. Preparing and tracking funding applications.
3. Preparing presentations to potential funding sources.
4. Identifying the "fit" of projects with funding sources and securing Transport Canada funding to match program funds if required.
5. Developing and maintaining a pool of volunteers for various projects.
6. Developing and maintaining a source of "in kind" contributions from agencies and individuals that would be available for projects.



3.1.4 Marketing Strategy SCHEDULE – Year Three to Year Five

Once the preferred property management model is selected, it will be necessary to "get the word out" to prospective lessees or homebuyers as to the status of the GSL and the nature and type of development that will be permitted on the GSL. In order to create an appealing image for the Green Space Lands and improve certainty over the quality of life on the lands a marketing strategy should be undertaken. The marketing strategy would:

1. Create signage that reflects the unique character of the GSL.
 2. Develop and disseminate literature on the Green Space, its uses and the vision for the lands to promote interest and participation.
 3. Seek to improve the perception of what it would be like to live and/or recreate in the Green Space.
- Estimated capital costs are \$40,000.





PLANNING INTEGRATION AND STRATEGIES

3.1.5 Integrated PLS Draft Master Plan Project

SCHEDULE – Year One to Year Five

There are a number of elements that will need to be considered for the Pickering Lands Site as a whole, once the Airport Master Plan is finalized including, but not necessarily limited to the following:

1. Facilitating the ecological connections along Mitchell's Creek corridor, Stouffville Creek and between the Rouge and Duffins watersheds.
2. Using the TRCA model of impact assessment in order to establish the extent of mitigation that will be required for the airport to be sustainable on a watershed basis. The extent of mitigation shown in the Draft Master Plan illustrates the mitigation required to compensate only for the urbanization of the watershed in the next 20 years.
3. Identifying the extent of environmental compensation and/or mitigation for airport impacts that will require the use of GSL, and revising the Draft Master Plan accordingly.
4. Identifying an ecological restoration and management strategy for the entire Pickering Lands Site.
5. Determining the potential points of conflict between the GSL Draft Master Plan and the Airport Master Plan and resolving those conflicts.
6. Developing a strategy for those lands that will not be required for airport uses and integrating them into the GSL Draft Master Plan or developing a separate management strategy for those lands.
7. Developing a strategy for managing competing or conflicting uses between green space and the airport in terms of the application of the AZR on Green Space Lands.
8. Developing base line conditions for future ecological monitoring of development and operational impacts associated with the airport.

3.1.6

Special Study Areas, including developing a Revitalization Strategy for Altona, Block West of Ninth Line, South Rouge Park Area and Mitchell's Creek

SCHEDULE – Study over Year One to Year Five; Implementation Phased

Throughout the Draft Master Plan process, revitalization of Altona has been identified as being important. Altona lies within the boundary of the Pickering Lands Site and planning with respect to land uses has been suspended until there is greater clarity as to the nature of impacts associated with the airport which are being established through the Airport Master Planning process of the GTAA. The ORM Conservation Plan, Regional Official Plan and the local Official Plans do not recognize Altona as a settlement area. The revitalization of Altona will take into consideration the potential impacts of a possible future airport. The plans for Altona must therefore be staged. In keeping with the vision for the Draft Master Plan, revitalization of Altona should be reflective of the highest standards in sustainable planning and development.

The strategy for Altona should at a minimum include:

1. Defining the nature of revitalization envisioned for Altona (size, nature of uses, timeframes for use, scale and relationship to Draft Master Plan).
2. Identifying the servicing constraints with respect to sewage and water and the limits that they would place on development.
3. Determining the most desirable land uses that would revitalize the community and be compatible with airport uses.
4. Develop a Draft Master Plan and design guidelines for the community.
5. Identify performance standards for all new development in terms of appearance and ecological sustainability.
6. Develop a framework for implementing the strategy.

Other Special Study Areas have been identified, including: Block West of Ninth Line, South Rouge Park Area and Mitchell's Creek. These areas are not wholly confined within the GSL boundary, but serve as important interface areas for further study. While we have identified the strategy for Altona, the details of the other three study areas have not yet been outlined. However, the budget estimate is inclusive of all four Special Study Areas.



3.1.7 Green Space Transportation Strategy and Roadscape Plan

SCHEDULE – Year One to Year Five

The development of an airport as well as urban growth in the area will place demands on the local and regional road infrastructure. An overall transportation strategy for the PLS including the GSL will be undertaken by the GTAA. The Draft Master Plan for the GSL identifies a series of objectives for roads within the GSL, and recognizes potential issues that will ultimately need to be addressed in future road upgrades to ensure that the Green Space maintains its countryside character, agricultural and recreation functions. A regional strategy for transporting people to and from the airport in a way that minimizes the need to expand existing roads within the Green Space would ensure that the vision for the Green Space can be realized and maintained over time. To date, the Transportation Base Case (GTAA, 2003) has identified the likely transportation network over a series of years and includes: an expanded Lawrence and Hudson Railway; an expanded Stouffville GO Line; improvements to the Ninth Line between Stouffville Road and Major Mackenzie; and an expanded York/Durham Townline (to four lanes by 2032).

The regional and municipal official plans and transportation planning, together with the GTAA's regional transportation study will form the basis for the Green Space Transportation Strategy. The Green Space Transportation Strategy should be developed to:

1. Accommodate the need for pedestrian access between different areas of the GSL and how to facilitate that access.
2. Consider the impact of proposed node points in the Draft Master Plan, which will have parking and access to the Green Space.
3. Consider the impact of expansions on the ecological strategy for restoration of the GSL.
4. Maintain the rural character of the GSL in terms of the road design.
5. Consider the impact of maintaining the balance of GSL roads not identified as requiring improvements within the Transportation Base Case Study as being maintained in rural cross section and gravel surfacing.
6. Consider, identify and evaluate the impact of potential east-west local road closures to facilitate the vision for conserving the rural character of the landscape.

3.1.8 Agricultural Management Plan

SCHEDULE – Year One to Year Five

The Draft Master Plan promotes emerging, innovative and alternative agricultural uses, techniques and practice on the GSL to support ongoing viable productive farm operations. These needs are balanced by the recognition of their potential demands on the environment including the need for water and the use of pesticides. The sustainability of agriculture on the lands will depend on maintaining transportation links to the north and east for farm traffic and to ensure that potential conflicts between recreational and agricultural uses are minimized. There are a number of issues that need to be addressed and implemented, including, but not necessarily limited to:

1. Enhancement of the heritage farm / countryside landscape in terms of field patterns, hedgerows, habitat linkages, as part of the overall GSL objectives for ecological and landscape sustainability.
2. Ensuring Best Management Practices through land use standards outlined in lease agreements.
3. Managing transitions from active agriculture to ecological restoration. Those areas to be taken out of production will need to be identified and the leases amended to reflect the reduced hectares.
4. There is a possibility that farmers could be paid to implement planting and other forms of restoration, (because they have the equipment on site). It is expected that should the airport be developed, much of the ecological restoration will be part of the mitigation strategy for the airport and funded accordingly. Agreements could be developed with farmers to transition the land uses from agricultural to natural in those areas identified as linkage areas on Figure 2-5 in Section 2.0.
5. Recognizing the need for integration of a trail system including securement of trail access through easements and lease agreements, fencing and signage, establishing trail heads with parking and facilities as well as ensuring non-motorized use and related management considerations.
6. Ensuring that agricultural uses do not attract birds and are consistent with the land use guidelines identified in the Airport Zoning Regulations being enacted for a future Pickering Airport and thereby conflict with future airport operations.



**DETAILED PLANNING AND DESIGN****3.1.10 Detailed Concept, and Design for Trails System and Recreational Facilities****SCHEDULE – Year One to Year Five**

The Draft Master Plan encompasses a very large area and is structured to direct future planning, but it does not provide the level of detail that is necessary to construct trails or to prepare cost estimates for construction. It will be necessary to complete more detailed designs for the Draft Master Plan that:

1. Are at a scale which is suitable for taking off accurate areas for calculating construction costs.
2. Provide details on viable materials and methods of construction.
3. Clearly illustrate the design of structures (bridges, buildings, fences, decks, gazebos and shelters).
4. Provide sufficient detail on the existing conditions to develop design details that address site specific conditions (topography, soils, surface water etc) and ensure public safety. Surveys of areas in which development is proposed will be necessary to establish finished grades and to quantify the materials required to construct the design elements.
5. Specify the locations of all planting as well as the size, species, and planting methods.
6. Specify the constructions standards to be met.
7. Specify location, type, details and timing of restoration initiatives.
8. Develop a phasing strategy for development including early short term implementation actions.
9. Preparation of Screening EA for the Green Space project (to be completed by Transport Canada).

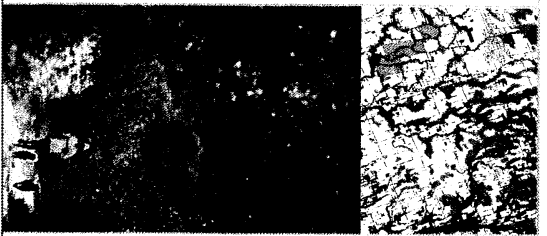
There are also projects that may be initiated and completed in the short term (0-5 years), as outlined in Section 3.1.13 short term Implementation Projects.

3.1.9 Airport Mitigation Strategy on GSL**SCHEDULE – Year One to Year Five**

The Draft Master Plan has accepted the TRCA vision for utilizing the GSL for ecological restoration that will ensure the sustainability of proposed urban development in the Duffins watershed. Once the plans for the airport are closer to being completed, and the necessary mitigation to ensure sustainability is identified, it will be necessary to:

1. Update the ecological linkage areas within the GSL to reflect the additional areas required to be in natural cover to ensure that the airport development is sustainable.
2. Develop a strategy for prioritizing ecological restoration based on criteria determined in consultation with the TRCA.
3. Mitigation for the airport may be in the form of funding/compensation or in terms of physical works on the GSL. The nature and extent and timing of physical works on the GSL should be managed in the context of the goals and objectives of the Draft Master Plan if done by others, or more ideally, the works should be turned over for implementation through the Green Space Project.
4. Consultation with the GTAA following completion of the Draft Airport Master Plan will be important to ensure the following areas of interest are well coordinated and incorporated into the final Green Space Master Plan:

- PLS Transportation Strategy and requirements;
- Land Uses;
- Boundary of GSL;
- Governance of Airport Study Lands and relationship to GSL governance;
- Agricultural uses.



3.1.11 Ecological Monitoring Plan SCHEDULE – Year One to Year Three

In order to determine ecological health and the success of the restoration plan that forms an integral part of the land management strategy, it is necessary to establish the baseline conditions for the GSL (currently being done by the TRCA) and to set up monitoring stations to monitor the long term effects of urbanization and airport development on ecological systems.

In addition, the monitoring program can provide the information necessary to determine the effectiveness of restoring the ecological systems within the landscape. The land management strategy and Draft Master Plan are aggressively ecological in their focus, which is in keeping with the Duffins Watershed Strategy. The Watershed Strategy projects that restoration on and off of the PLS will be required to ensure that urbanization is sustainable. Monitoring within the GLS and possibly the PLS will provide the basis for assessing the system as a whole and the effects that external influences have on the GSL.

The TRCA has developed models for evaluating impact and testing restoration concepts on a watershed basis. The details of this project should be worked out in consultation with them to determine the "fit" within larger watershed initiatives and to develop a partnership for developing and implementing a monitoring program.

It is estimated that there will be a capital cost for monitoring equipment and annual costs associated with collecting and evaluating data. These costs can be attributed to the airport development and in fact may form part of their impact compensation.

Estimated ongoing costs for monitoring is \$25,000 per year. Capital cost initial investment of \$50,000.

3.1.12 Local Heritage Structures and Cultural Heritage Evaluations SCHEDULE – Year One to Year Five

While there are numerous buildings on the site that have been designated by local municipalities, there are no buildings within the GSL that are "designated heritage" by the Federal government. The structures that are found throughout the landscape are integral parts of the rural character and some are valuable from a local heritage perspective. The Draft Master Plan therefore recommends that a study be undertaken reflecting Best Management Practices to:

1. Identify locally significant structures and landscapes in the GSL or possibly within the entire PLS.
2. Determine whether those structures which have been identified as being locally significant can continue to be used *in situ*, or if they need to be moved to another location to be used.
3. Establish areas within which residential uses can continue and develop conceptual layouts for buildings within the existing vacant properties that maintain or enhance the rural character of the area.
4. Determine the costs and methods associated with moving the structures and identify potential partners or mechanisms to remove the financial burden of their moving from Transport Canada.
5. Identify other elements of rural character and the means to preserve or enhance that character.
6. Provide sketches and visual representations of the nature of rural character that is desirable and outline a concise means of securing that character within the framework of the Draft Master Plan.
7. Identify archaeological and cemetery sites and the means to preserve or enhance these areas.
8. Review municipal and other heritage listings and criteria to establish consistency with criteria and methodology for listings.





3.1.13 Ecological Transition Study SCHEDULE – Year One to Year Two

The ecological transition study is necessary in order to ensure a transition from existing conditions to implement the Master Plan. This will require review of a range of considerations including, but not limited to :

1. Further level of "ground truthing" and research to form the basis for a detailed transition plan.
2. Investigation of appropriate, innovative planting and naturalization techniques to support the early transition of lands.
3. Vegetation management issues related to invasive species and other related issues.
4. Identification of compatible and supportive agricultural practices relative to ecological protection.
5. Identification of a detailed implementation timeline.



3.2

Preliminary Capital Cost Review

1. Trail System

Walking Trail (1.5 m granular surface)

Basis for Costing		Trail Item		Unit	Unit Cost	Width	Units / Km.	Cost / Km.
Clearing / Grubbing				sq.m.	\$ 4	2.5	2,500	\$10,000
Grading				sq.m.	\$ 5	2.5	2,500	\$12,500
Granular Surface				sq.m.	\$ 15	1.5	1,500	\$22,500
Seed / mulch				sq.m.	\$ 4	1.0	1,000	\$ 4,000
Subtotal								\$49,000
Say \$ 50,000								

Length of trail: 30 km @ \$50,000/km = **\$1,500,000**

Note: No allowance for bridges, culverts and / or other special features.

Trailhead

Basis for Costing:

Parking	25 cars @ \$1,500	=	\$ 37,500
Fencing		=	\$ 10,000
Building		=	\$200,000
Signage		=	\$ 7,500
Picnic Tables		=	\$ 15,000
Subtotal		=	\$270,000

Number of trailheads 12 @ \$ 270,000 = **\$3,240,000**

Signage

Basis for costing:

Large interpretive	\$ 3,500 / unit X 12	=	\$ 42,000
Small interpretive	\$ 2,000 / unit X 12	=	\$ 24,000
Directional	\$ 1,000 / unit X 24	=	\$ 24,000
Trail markers	\$ 250 / unit X 60	=	\$ 15,000

Subtotal = **\$ 105,000**

TRAIL SYSTEM	
Contingency (10%)	= \$484,500
TOTAL COST- TRAIL SYSTEM	= \$5,329,500



2. Gateways

Basis for costing:

Signage	=	\$ 20,000
Walls/ Fencing	=	\$ 10,000
Planting	=	\$ 5,000
Subtotal	=	\$ 35,000

Number of gateways: 9 @ \$ 35,000

= \$315,000

Contingency (10%)

= \$ 31,500

TOTAL COST- GATEWAYS

= \$346,500

3. Arrival/ Interpretive Node

Basis for Costing:

Building, exhibits and site development

= \$5,000,000

TOTAL COST- ARRIVAL/ INTERPRETIVE NODE

= \$5,000,000

4. Roadway Tree Planting

Basis for costing:

Single row of trees on both sides of road at 9.0 meter on centre

1000 m @ 9 m O.C. = 111 trees X 2

= 222 trees/ km.

Contractor price

Deciduous tree species – 70 mm caliper

= 222 trees/ km.

Length of roadways to receive treatment

30 km X 222 tree / km

= 6,660 trees

Cost of trees 6,660 tree X \$ 200

= \$1,332,000

Contingency (10%)

= \$133,200

TOTAL COST- ROADWAY TREE PLANTING

= \$1,465,200

5. Naturalized Greenways

Basis for costing:

50% of proposed green space area to be planted / 50% naturalized.
Tree whips / shrubs to be planted in clusters at an average of 1.0 m O.C.

Average number of plants per hectare = 5,000 / ha. @ \$1.00 = \$5,000.

Number of hectares to be planted:

Short Term	600 ha. X 50% = 300 @ \$5,000	=	\$ 1,500,000
Medium Term	600 ha. X 50% = 300 @ \$5,000	=	\$ 1,500,000
Long Term	1700 ha. X 50% = 850 @ \$5,000	=	\$ 4,250,000

Subtotal

Contingency (10%)

TOTAL COST

= \$ 7,250,000
= \$ 725,000
= \$ 7,975,000

In addition to the foregoing capital cost estimates, the following capital costs noted in Project Study 3.1.4 and 3.1.11 are estimated at \$90,000.

6. Grade Separated Links

No basis for costing at this time

7. Recreation nodes

No basis for costing at this time

8. Restoration of Heritage Structures

No basis for costing at this time

PRELIMINARY	CAPITAL	COST	ESTIMATE	=
	\$20,116,200			





3.3 Short Term Implementation Projects

ESTIMATED BUDGET REQUIREMENTS FOR PROJECT: \$2.5 million

SCHEDULE - One to five years

Though detailed designs and associated work will need to be completed for the Master Plan, there is a level of work that may be implemented in the short term, including:

1. Construction and restoration projects, including initiating key sections of the trail system(s) within the first few years of project implementation, without necessarily requiring detailed design of associated facilities that may be required in the fullness of time.
2. Initiating ecological restoration on the GSL, including ecological planting and re-naturalization.
3. Initial signage and marketing program.
4. Roadway tree planting.



3.4 Potential Federal Partners

The vision for the GSL is consistent with Canada's federal department policies on sustainability. In 1997, the first round of sustainable development strategies from federal agencies was tabled in Parliament. The strategies are updated at least once every three years. Federal departments are putting increased emphasis on developing a coherent approach for sustainable development by working together and coordinating their efforts in eight key areas:

- Sustainable government operations;
- Knowledge and information/sustainable development indicators and reporting;
- Productivity through eco-efficiency;
- Sustainable development in the international context;
- A federal sustainable development strategy for the North;
- Sustainability at the community level;
- Social and cultural aspects of sustainable development; and,
- Sustainable development and healthy Canadians.

Sustainable development strategies include actions that departments and agencies can take in day-to-day operations to prevent pollution, reduce consumption and waste, and remain environmentally friendly.

The following federal agencies may be approached to be potential partners in various projects on the GSL:

- Natural Resources Canada;
- Environment Canada;
- Transport Canada;
- Agriculture and Agri-Food Canada;
- Health Canada;
- Finance Canada; and,
- Industry Canada.



3.5 Other Potential Partners

A number of agencies may be brought in as potential partners to undertake projects that reflect the sustainable goals and vision of both the Green Space Lands and of federal agencies. The greatest opportunity exists under the auspices of the Ministry of Natural Resources. The MNR oversees the functioning of over 40 stewardship councils in Ontario. Specifically for the Green Space Lands, the Durham Land Stewardship Council undertakes projects of a wide variety and often acts as a liaison between agencies and finally, bringing communities and volunteers together to undertake projects which may include:

- Resource Management;
- Education and Outreach Programs;
- Conservation and Preservation Programs;
- Rehabilitation Programs; and,
- Committees and Stewardship Representation.

This agency, operating through the MNR at the provincial level, would become a vital link between federal agencies, Transport Canada, and local agencies to ensure that the GSL are a model and example of sustainability presently and into the future. A number of agencies operating at the provincial level may provide opportunities for stewardship and are listed below.



3.5.1 Federation of Canadian Municipalities

Their mission is to serve and work with Canadian municipal governments to improve quality of life through sustainable community development. The Centre for Sustainable Community Development offers financial services and resources to Canadian municipal government to improve environmental performance and reduce greenhouse gas emissions.

3.5.2 Conservation Council of Ontario

The Conservation Council of Ontario (CCO) is a non-government, charitable organization with a mandate to promote cooperation for a healthy environment in Ontario, Canada.

Membership includes both provincial organizations and individual members who support our goal of a healthy environment, and are committed to incorporating environmental values into their own activities, and who wish to work together to promote a province-wide, cooperative approach to solving environmental problems.

3.5.3 Toronto and Region Conservation Authority

The goal of the Toronto Region Conservation Stewardship Program is to give watershed residents the knowledge and tools to become effective caretakers of our environment.

The TRCA's Stewardship Program also provides technical support and financial incentives to rural land stewards to encourage long term commitments to improving ecosystem function and sustainability.

The TRCA's Stewardship Programs are funded in part by the federal government, the Regions of Peel and York and the City of Toronto.

3.5.4 Rural Clean Water Program

The Rural Clean Water Program (RCWP) is a grant available to rural landowners who wish to reduce the amount of pollution leaving their properties and entering watercourses. The program is funded through Environment Canada's Great Lakes Sustainability Fund and the Agricultural Environmental Stewardship Initiative targets rural landowners in the York, Peel and Durham Regions.





3.5.5 Infrastructure Canada (through Municipal Building)

As part of a commitment to Canada's growth and the quality of life of all Canadians, the Government of Canada launched a physical infrastructure program in 2000.

In partnership with provincial, territorial and local governments, First Nations and the private sector, the Infrastructure Canada Program (ICP) is helping to renew and build infrastructure in rural and urban municipalities across Canada.

The ICP's first priority is green municipal infrastructure – projects that improve the quality of our environment and contribute to our national goals of clean air and water. Priority projects target water and wastewater systems, water management, solid waste management and recycling.

Other program priorities include local transportation, roads and bridges, affordable housing, telecommunications and tourist, cultural and recreational facilities. The Canada-Ontario Infrastructure Program agreement specifies a minimum 40 per cent of the total value of all approved projects must be invested in green municipal infrastructure.

To ensure the infrastructure needs of rural communities are considered, a minimum 15 per cent of total approved costs for all projects in Ontario must be invested in projects proposed by rural municipalities.

Secondary priorities for the Canada-Ontario Infrastructure Program include cultural and recreational facilities, infrastructure supporting tourism, rural and remote telecommunications, high-speed Internet access for local public institutions, local transportation and affordable housing. Partners include:

- Industry Canada;
- Canada-Ontario Infrastructure Program;
- Ministry of Agriculture, Food and Rural Affairs; and,
- Ministry of Culture, Tourism and Recreation.

3.5.6 Oak Ridges Moraine Foundation

"The Oak Ridges Moraine Foundation has been established to fund activities such as land securement, research, monitoring, public education and private land stewardship. It also supports the creation of a continuous trail system through the Oak Ridges Moraine, accessible to people with disabilities.

The Foundation is a non-profit corporation. Its roles include:

- funding land securement and conservation easements among willing sellers and buyers to protect environmentally sensitive sites;
 - funding stewardship programs to encourage landowners on the Moraine to improve water quantity and quality, improve forest cover and enhance buffers for wetlands, rivers, streams and kettle lakes;
 - supporting the creation of a continuous trail system by funding the purchase of access points and the construction of facilities, bridges and interpretive centres, and by supporting maintenance, restoration and stewardship on key lands; and,
 - funding scientific research and public education programs.
- Funding for the Foundation is coming from a combination of public and private sources. The provincial government has committed \$15 million in cash and a substantial donation of land toward a partnership fund. The federal government and the private sector have been challenged to participate."
- (www.mah.gov.on.ca)





3.6
LOCAL

Potential Partners – REGIONAL AND

There are a number of local governments, agencies and groups which potentially have an interest in the lands, and whom have the technical resources and skills with which to assist in the management of the GSL. Each of the potential local/regional partners have various management skills and areas in which their capabilities would be most useful.

3.7

Greater Toronto Airports Authority

The Greater Toronto Airports Authority (GTAA) has been asked by Transport Canada to determine the need for a future regional reliever airport in the PLS. Detailed planning and analysis is well underway and a draft Airport Master Plan is anticipated in 2004. If an airport on the PLS is deemed by the Federal Government to be necessary, the GTAA is the organization that will plan, develop and operate the facility as part of its responsibility to serve the aviation needs of the Greater Toronto Area.



Conclusions

The completion of the Draft Master Plan is an important accomplishment. The GSL is a key component in the long term ecological sustainability of the Rouge and Duffins watersheds as well as providing recreational, agricultural and educational opportunities into the future. The location of the GSL will result in it being one of the largest public green spaces within a future GTA that may extend as far north as Barrie. There is no doubt that as the landscape around the GSL develops and changes that new pressures will be brought to bear on the lands. The Draft Master Plan sets out a long term vision and framework within which future uses can be contemplated. It is a flexible document that recognizes and reflects the unique natural and cultural environments in which the GSL resides, as well as providing the means to adapt to different or increased pressures for recreation over time.

The philosophy of sustainability is strongly reflected in the vision and the Plan. These values are also reflected in planning documents in all levels of government. There will be the need to change over time, but change will need to be in conformity with a vision that intends that the countryside character and environment remain for the healthy pleasure and enjoyment of future generations.

This Plan envisions many partners and has identified many projects that will need to be completed in order to implement the Plan over a period of time. Given that the concept of sustainability is firmly entrenched in planning policy there are numerous opportunities for partners to participate on the project and to express their desire for a sustainable future for Canadians.

Key Findings

The key findings of the Draft Master Plan are:

1. Based on the Duffins Watershed Strategy (TRCA, 2003), the GSL will be essential to creating a significant natural system and biodiversity that would help ensure ecological sustainability within the watershed as well as reduce potential impacts of the construction and operation of an airport within the PLS.
2. Transport Canada is recommended to act as the lead federal agency in managing all of the lands within the PLS. The Airport Master Plan and the GSL Draft Master Plan will need to be reconciled to identify and address key areas of potential conflicts and to develop a strategy for managing conflicts in use to ensure that the future development of an airport is not precluded or inappropriately constrained.
3. It is recognized that federal funding will be required to implement the Draft Master Plan, since it is unlikely that the GSL will be self-sustaining based solely on income from leases and/or the sale of buildings.
4. Arrangements should be made to permit revenues generated within the GSL to be directed from general revenue to the Green Space Project implementation.
5. There is a need for preparation of an appropriate governance model since the Draft Green Space Master Plan is a project that is not specifically contemplated within the mandates of existing federal departments. Existing plans and programs do not provide stable sources of funding that are sufficient to develop a Green Space of this scale over a long period of time. Subsequent studies will identify the necessary authorities that need to be put into place.



*Key Findings/ continued*

6. The Draft Master Plan identifies a series of steps to be undertaken in the planning and development of the recommended property management framework. Several options should be investigated including long term leases and/or sale of buildings in combination with long term leases or a variation of this arrangement. This finding is based on community needs, real property sustainability as well as financial viability. The existing management framework will however need to remain in place until the implementation strategy of the Draft Master Plan is complete.

7. A major initiative is required in the GSL to protect existing natural resources and create new, enlarged natural ecological system linkages that will complete the connection of Lake Ontario with the Oak Ridges Moraine as well as link the Rouge and Duffins watersheds. The creation of the ultimate natural system will involve transition of strategic land areas including agricultural lands.

8. Agricultural uses will be maintained on the GSL to protect and enhance the rural countryside character. This will involve protection of key agricultural land areas and encouragement of innovative and emerging forms of sustainable agriculture that are consistent with Best Management Practices including conservation of water and non-use of pesticides and other appropriate requirements.

9. Protection of cultural heritage resources including structures, cultural landscapes and settlement clusters will be encouraged on the GSL. This will involve a combination of techniques including protection of heritage structures in their existing location, relocation to designated areas such as the village of Altona as part of a revitalization plan or appropriate documentation and removal.

10. Public use on the GSL will be encouraged through development of a recreational trail system, interpretation and educational facilities as well as compatible tourism activities and facilities in appropriate locations.

11. A transportation strategy for the GSL will be part of a larger transportation plan for the entire Federal Pickering Lands Site undertaken by the GTAA. Regional, municipal and airport needs will be considered. However, the principles of "Context Sensitive Design" will be applied within the GSL to recognize its special countryside character and related considerations.

12. Implementation of the Draft Master Plan for the GSL will involve a variety of partnerships with other federal, provincial and local partners with the range of skills, expertise and ability to access funding.

13. Implementation of the Draft Master Plan will be accomplished through a series of projects that have been identified and by completing the necessary detailed site work and studies required to undertake development of the GSL.

