City of Richmond

Report to Committee

To:	Parks, Recreation and Cultural Services Committee	**Date:**	May 21, 2002
From:	Mike Redpath Manager, Parks Programs, Planning & Design	**File:**	7200-01
Re:	**Terra Nova North-West Quadrant Landscape, Biophysical and Heritage Resources Study**		

Staff Recommendation

1. That the report: "Terra Nova North-West Quadrant Landscape, Biophysical and Heritage Resources Study" be received for information.

2. That staff be directed to undertake preliminary site management of invasive plants at portions of the Terra Nova North-West Quadrant site and that $30,000 from the existing capital project 40805 be utilized for this purpose.

M. Redpath

Mike Redpath
Manager, Parks Programs, Planning & Design

Att. 2

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Staff Report

Origin

In Fall of 2001, the City engaged a consultant team to conduct an inventory and analysis of the City owned lands in the Terra Nova Northwest Quadrant area. This report provides a synopsis of the consultant's findings and makes recommendations for a preliminary site management program. The consultant's executive summaries and maps are attached to this report. The full detailed document is available at the Parks Department.

Analysis

Background

The City has been actively assembling land in the Terra Nova Northwest Quadrant since the 1996 Referendum passing of By-law No. 6656 authorizing City Council to borrow money to acquire lands. To date 59.38 acres have been purchased with a number of properties still under consideration for acquisition. Some of the City owned properties are presently rented out on a monthly basis, others are vacant, and three properties have special tenancy arrangements with the City. The City has the option to develop the backlands of these three properties leaving the home site at the front of the property for the tenant's continued use until the term of agreement is completed.

The Study

In Fall 2001, a biophysical, heritage, and landscape character inventory and analysis was undertaken (Executive Summary Attachment 1). The intent was to gather information about the site that would help guide future park development. A team of consultants with expertise in each of these areas was hired to produce detailed inventories and analysis, map (attachment 2) and layer the information; collectively determine site capacity for public access; and establish agreed upon management and planning guidelines.

Study Highlights

The study produced a wealth of information about the site. These lands have many assets and there is an opportunity to create a legacy for generations to come. The highlights and challenges of each area are outlined below.

Environment

The biophysical inventory and analysis looked at vegetation, wildlife, soils and drainage, habitat sensitivity and the role of Terra Nova within the larger ecological context of the Lower Mainland.

Highlights

- Terra Nova Northwest Quadrant is part of the Greater Vancouver Fraser River estuary ecosystem that stretches from Point Grey to Boundary Bay,
    - It provides a food source and resting area for aquatic and migrating birds,
    - It provides a backshore habitat and buffer from the urbanized area for the wildlife in Sturgeon Banks
    - Together with Terra Nova Natural Area and Quilchena Golf Course, this land creates a substantial green belt connected to the marsh and the river
    - On site there is a rich diversity of habitats including open fields, ditches, mature treed areas, hedgerows, and landscaped gardens that support a variety of wildlife
    - 70% of the site is open grass area
    - The great blue heron and common barn owl are two species of conservation concern found on the site
    - One mature chestnut tree on private property just off River Road contains a minimum of 7 heron nests
    - The highest habitat sensitivity areas include portions of the old fields, the remnant slough, wooded areas, hedgerows, and the mowed and seasonally flooded fields
    - The habitat sensitivity decreases on the east side of the lands adjacent to the residential edge. This would allow for more active use and development .

Challenges

- Purple loosestrife, ivy, and blackberry are invasive plants at the site that need to be controlled. Even without knowing the final park program, some immediate action should be taken to control these plants where they have become very invasive before the assets are lost.
- Some of highest sensitivity areas such as the woodlots may also include heritage assets and are attractive for recreational use. A balance needs to be struck between conservation and public access

Heritage

Terra Nova Northwest Quadrant is a rural cultural landscape with an agricultural and industrial history reflected in its heritage features. It is a surviving pocket of historic and natural resources within a very unique setting that creates a strong sense of place. There is an excellent opportunity for interpretation of the many features and heritage character.

Highlights

- Prior to the arrival of non-native settlers, the Musqueam First Nation used the area and the network of sloughs for seasonal camps and transportation
- A remnant historic slough still exists
- The first non-native settlers arrived around 1868

- The subdivision boundaries established in 1890 are still very evident on the site by the hedgerows, drainage patterns, and treed wind shelter belts
- Remnant homestead landscapes provide a variety of interesting mature trees, orchards, and ornamental landscapes
- There are five buildings within the site listed on the Richmond Heritage Inventory. Two are owned by the City and the other three are clustered on one private property (the same property with the heritage tree and 7 heron nests)
- The relationship between heritage buildings and the residential landscape and the working landscape is still intact making the overall historic integrity of the area high
- Two canneries with resident workers were located here that together with the farmers created a unique community
- This site is located at the opposite side of the Island from Steveston and connected by the West Dyke Trail creating an opportunity for another historic destination along the Richmond Trails System.

Challenges

- Designing and programming the park to respond to and promote the unique heritage features and character and sense of place that already exists
- The need for further documentation and research into some of the heritage resources to determine the feasibility of maintaining and restoring them
- The reality that it can be costly to maintain and restore heritage features such as the buildings and the need to explore a variety of creative conservation options
- As with the sensitive environmental areas, a balance will need to be struck between public access and safety and maintaining the integrity of the site

Landscape Character

Landscape character describes the site's visual, spatial and aesthetic qualities that influences how we as humans respond to our surrounding environment. The natural environment and cultural environment are all part of landscape character.

Highlights

Seven distinct character types exist at the site that add variety and interest to our experience of the area. These character types include:

- Fields – old fields similar to Terra Nova Natural Area and maintained fields
- Residential yards – manicured and remnant homestead yards that are being overgrown
- Woodlots - originally planted and maintained but now naturalizing
- Hedgerow/thickets- usually following drainage and property boundaries
- Orchards-planted in formal linear rows; 3 existing orchards
- Perimeter areas –areas between the internal land and the river or Sturgeon Banks that provide views and access to the site

- Rural corridors- driveways, lanes, the roadways surrounded by vegetation that allow for access into the site.

Challenges:

- There are many opportunities to create a network of trails through the site to enjoy a variety of landscapes. The main challenge, as with the other two areas of environmental and heritage sensitivity, is to balance public access with maintaining the existing integrity and uniqueness of the site;
- Invasive vegetative species need to be controlled before these character areas are lost.

Analysis

This inventory and analysis is the first step in understanding the unique aspects of Terra Nova Northwest Quadrant that should be protected, enhanced and celebrated as a new asset to be added to Richmond's open space system.

No other site in Richmond offers this diversity and uniqueness of natural, heritage and landscape character in addition to its unique and attractive location and value as part of both a larger eco-system and recreational network.

In addition, the recently completed Needs Assessment by the Parks, Recreational and Cultural Services Division indicates that passive recreation, trails, interpretation and understanding of Richmond's natural and historic environment are valued by residents and considered a high priority for future open space programming and development.

The highest sensitivity, integrity and value in all categories of the study appear to be in the areas closest to the perimeter of the site along River Road , the West Dyke, Westminster Highway and a portion of the central open fields and shelterbelts. It appears that the overall site sensitivity and biophysical, heritage and character value becomes relatively lower further east towards the residential edge. This area could be considered for more active programming as the open space plan is being developed.

Next steps

There was such a wealth of information gathered through this study that further detailed review is still required by staff. Some of the proposed next steps include:

1. Begin a program of managing the invasive plants during the Fall and Winter of 2002;
2. Staff continue to review in detail the recommended management and planning guidelines proposed by the consultants;
3. Identify which areas require further detailed research and documentation. For example review the condition and historic integrity of the recently purchased Cold Comfort Farm, one of the pioneer's homes that is presently being rented out;
4. Continue acquisition of private property parcels;

5. After the review of the management guidelines determine if in the short term a portion of the site could be opened to allow for public access. For example, the western edge of the site is owned by the City and has some of the nicest rural character aspects on the site. A simple trail loop through this area could be created connecting back to the West Dyke Trail.
6. Identify an overall vision for the area and prepare a number of options outlining different public use options.
7. Outline and undertake a public consultation process.
8. Present vision, management recommendations and guidelines, park options, and public input to Council.
9. Develop a long term park plan to guide the development of this open space for years to come for Council approval.

Financial Impact

Staff is recommending preliminary management of invasive plants in the immediate areas of concern, the initial cost for this work to be undertaken is estimated at $30,000 for the first year. The existing Terra Nova North-West Quadrant capital project number 40805 is recommended as a funding source.

It is estimated that it will take 3 years of ongoing maintenance to gain control over the plants at approximately $10,000 per year. Because of the heavy work that needs to be done and the unknown site conditions in some areas, it is recommended that this initial site work be conducted by City crews with the appropriate expertise. It is feasible that some of the ongoing maintenance could then be conducted through partnership adoptions by volunteer environmental groups.

Conclusion

This report has been presented to update Council on the findings of the Terra Nova Northwest Quadrant Biophysical, Heritage, and Landscape Character Study. The results of the study indicate that this area is rich in diversity and a variety of assets that have created a unique and special place. The Terra Nova North-West Quadrant will be a valuable addition to Richmond's open space system for generations to come. The immediate concern is the need to control the invasive plant species. Staff is recommending that the City act quickly to manage these plants before some of site attributes and assets are lost.

C Silver for

Yvonne Stich
Park Planner

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ATTACHMENT I

TERRA NOVA NORTHWEST QUADRANT INVENTORY & ANALYSIS

EXECUTIVE SUMMARY
JUNE, 2002

Prepared For:
CITY OF RICHMOND COMMUNITY SERVICES DIVISION

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In the fall of 2001, a biophysical, heritage, and landscape character inventory and analysis of the Terra Nova Northwest Quadrant Lands was undertaken. Its purpose was to assist the City of Richmond in developing management and planning guidelines for this important site. This inventory and analysis is the first step in preserving, enhancing and celebrating the Northwest Quadrant Lands as a vital part of the City of Richmond's open space system.

Located in the northwest corner of the City of Richmond on the Middle Arm of the Fraser River, the Terra Nova Northwest Quadrant is a 27-hectare site with a wide variety of biophysical, heritage and landscape attributes. It is a valuable part of both the Fraser River estuary system, and a network of marine, intertidal and terrestrial ecosystems in the region. From a heritage perspective, the Northwest Quadrant is valuable for the remnants of a variety of settlement types and uses. It also has a diverse, unique set of landscape character types. There is strong potential for the development of a land use plan that protects and enhances these various site attributes, as well as providing a rich, varied experience for site users.

BIOPHYSICAL INVENTORY AND ANALYSIS

Ecological Context

The Terra Nova Northwest Quadrant plays a significant role in the ecology of the Greater Vancouver Region, as well as the Fraser River estuary ecosystem. It is part of a complex, interrelated network of marine, intertidal, and terrestrial ecosystems extending from Point Grey to Boundary Bay. The Terra Nova area is particularly important because it provides habitat diversity and serves as a backshore habitat to Sturgeon Bank. The combination of open fields, ditches, treed areas, landscaped gardens and hedgerows is rare in the City of Richmond and it provides a productive habitat for a variety of wildlife.

An estimated 70 percent of the historical natural habitat in the Fraser River delta has been lost due to dyking and agricultural land development. These farmlands today provide foraging and resting sites for large numbers of shorebirds, songbirds, waterfowl and wading birds. Waterfowl depend on these lands for food, while shorebirds may use farmlands when high tides cover the beaches or at times when food sources are not available along the shore. Wintering waterfowl, raptors, shorebirds and gulls feed and roost in upland areas during high tides or inclement weather. As these lands come under redevelopment, the remaining parcels of both active and abandoned agricultural land become increasingly important for wildlife.

The particular ecological role of the Terra Nova site is defined by the fact that it provides:

- bird habitat for shorebirds;
- a protective buffer for the intertidal marsh outside of the dyke, and roosting and additional feeding habitat for birds that feed in the adjacent intertidal areas;
- a diversity of habitats in a relatively urbanized region that provide habitat for bird populations displaced by residential development and small mammals that use them for cover and feeding.

Vegetation Inventory and Management

About 70 percent of the Terra Nova Northwest Quadrant's 21 hectares is classified as field grasses. The remaining 30 percent is comprised of small woodlot areas, orchards, blackberry thickets and cultivated yards. Woodlots provide the most structural diversity, containing three different layers of vegetation (trees, shrubs and groundcover). Orchards are important for their historical value and are also a food source for birds and other wildlife. Grass fields provide important wildlife habitat. A number of invasive species, if left unattended, will cause a decline in the vegetation values of the area.

Wildlife Inventory and Management

Bird species found in the Northwest Quadrant include waterfowl, passerines (songbirds), raptors and great blue heron. Mammals residing or frequenting the area include coyote, raccoons, mice, voles, shrews, ermine, and skunk. Amphibians and reptiles also occur at Terra Nova including garter snakes and tree frogs. At least two species of conservation concern (both blue listed) utilize the habitats of the area: great blue heron and common barn owl.

These species occupy "habitat niches", including woodlots (passerines, raptors, mammals), grass fields (waterfowl, raptors, great blue heron, mammals), thickets (passerines, mammals) and ditches (waterfowl, great blue heron, amphibians). To optimize the habitat for these species, management will be required including removal of invasive species, periodic mowing of old-fields, and allowing for the pooling of water on mowed fields in the winter for waterfowl use. Management considerations from should be guided by the area's value to blue-listed species, its habitat diversity, its corridor function for migratory birds, its value as alternate high-tide daytime habitat for species using the foreshore marshes, and its strategic location as a "piece of the habitat puzzle" in the area.

Soils and Drainage

Much of the Terra Nova area has been or is currently cultivated for agricultural purposes. The soils are mostly Class 1 (90%) with some Class 2 (10%). Class 1 land has no limitations to agricultural use while study areas with Class 2 soils have some limitations such as high ground water and high soil moisture. The Terra Nova properties are interspersed with north-south drainage ditches, as well as a large perimeter drainage ditch on the north and west side of the study area. A remnant of an historic slough also runs through the area. The soils were grouped

and mapped according to their characteristics and values. Some portions of the site have relatively undisturbed native soils (other than cultivation), which are uncommon in Richmond and therefore make them valuable from a landscape integrity perspective. These areas would require significant resources to improve drainage and to enhance soil physical properties for uses such as sports fields, walking or riding trails, or permanent structures. Other areas have had the original soils altered usually through fill placement, removal or mixed with fill. These sites are usually where buildings or other development have been located.

A preliminary investigation of potential hydrocarbon contamination sources was undertaken. It revealed that there are three above ground fuel storage tanks and five barrels; the City of Richmond should conduct a more detailed environmental investigation of these.

Habitat Sensitivity

In order to assess the habitat sensitivity of the area, several criteria were developed including: rarity/uniqueness, species richness, structural diversity, resilience and vulnerability to human disturbance. The study area was divided into 19 habitat units based on a combination of vegetation types and wildlife utilization. Seven of the areas were rated as having high sensitivity. These included old-fields, remnant slough, woodlots, and mowed field/seasonally flooded fields. Low to moderate rated sensitive areas included blackberry thickets, yards, some old-field portions, orchards, and perimeter ditch.

Environmental Management Recommendations

- *Control invasive vegetation (i.e., ivy, purple loosestrife and blackberry).*
- *Maintain old-field biophysical values and minimize impact on wildlife use (voles and raptors) by restricting trail access to appropriate locations. Periodic mowing of old-field will be required to maintain habitat values.*
- *Protect large, mature trees and groups of trees (woodlots) for wildlife values and manage trees to retain values (i.e., remove invasive species).*
- *Conserve native soils by avoiding fill or other alterations.*
- *Wherever possible, avoid access through treed areas; keep access to edge of treed areas and use fences if necessary.*
- *Maintain hedgerows for wildlife.*
- *Avoid contamination of water quality in ditches and retain vegetation along the landward side of the main perimeter drainage ditch.*

HERITAGE INVENTORY & ANALYSIS

The Terra Nova Northwest Quadrant is a rural cultural landscape with an agricultural and industrial history, both of which are reflected in its heritage features. The built structures, natural environment, cultivated landscapes and historical associations all contribute to a unique sense of place.

Historical Background

The Musqueam First Nation provide the first evidence of human settlement in this area, probably for food gathering and use of the Terra Nova slough complex as a means of transportation. The first non-native settlers arrived around 1868, and subdivision of the land commenced shortly afterward, appearing to be complete by c.1930. The boundaries and initial subdivision for Terra Nova originated with the Crown grant of Lot 4 in 1890. These boundaries still define the area today. Early settlers dyked, ditched and settled the land, and worked in the fisheries industry. There were two canneries, now no longer existing, within the Northwest Quadrant.

Historic resources in the study area include evidence of First Nations peoples, the Terra Nova and Alliance cannery sites, the pattern of agricultural fields and related homesteads, and heritage specimen trees and tree groves.

Heritage Value and Heritage Character

Character defining elements include the materials, forms, spatial configurations, uses, and meanings that together comprise the heritage value of a historic place, and which must be retained in order to preserve its heritage value. Following is a condensed list for the Northwest Quadrant:

- The site's geographical location
- The site as an evolved vernacular landscape
- The dyke and ditches as human responses to the natural conditions of the area
- Broad historic settlement patterns which are still discernable on the site
- The presence and relationships between the farming, fishing and cannery
- Traces of the original building cluster pattern are still discernible
- Current circulation patterns that relate to historical ones
- Significant views in almost all directions
- Spatial experiences on the site, including both openness and enclosure
- Vegetation patterns from different time periods still identifiable on the site
- Continuity of use as agricultural, rural and residential lands
- Association of the site with broad historic patterns in Richmond
- Site symbolism and the attachment of people to landscapes which hold local significance and meaning

Site Integrity

Since the Northwest Quadrant site as a whole has a high level of historic integrity, this evaluation should be used only to identify areas where the development of park features would have less of an impact on the heritage resource. All areas of the site should be subject to the heritage principles and guidelines as outlined in the heritage review, and should be considered to have potential for historic interpretation.

Heritage Resources and Park Planning

The implications of heritage resources on site planning for the Northwest Quadrant include determining how heritage values and character defining features can influence the site design, and how the site can be developed without impairing those values and features. There must be a proper fit between existing heritage landscapes or structures and planning, design, character, programming, and management of the study area.

Heritage Management Recommendations:

- *Wherever possible and feasible, the historic character defining elements of the site should be retained, enhanced and interpreted.*
- *Maintain heritage buildings and landscapes (e.g., residences, orchards, agricultural fields, gardens, boundaries, circulation routes, historical sloughs) and explore a variety of conservation options that respect their heritage values.*
- *Detailed documentation and research should be carried out for the heritage resources on site as planning and design proceeds.*
- *All conservation, management and maintenance work should conform to accepted heritage standards.*
- *Interpretation of the historical evolution, significance and features of the study area should be a key component of future development and management.*
- *Interpretive programming should be integrated into the park planning and design processes and with the proposed trail system, and a multi-faceted interpretive plan developed.*
- *Encourage the public to come forward with memories, stories, photographs and other information that will increase knowledge of the site's history.*

LANDSCAPE CHARACTER INVENTORY & ANALYSIS

Landscape character assessment is the description of a site's visual, spatial and aesthetic qualities. Assessing character aids in sound development or management that can enhance the best aspects of the site. Following is a list of the criteria that were used in the landscape character assessment:

- openness/enclosure
- quality of views
- edge definition
- relationship between landscape and buildings
- slope/surface variation
- influence of surrounding scenery
- rock/soil/vegetation variety
- drainage
- ease of access
- potential interpretive value

Landscape Character Types: Descriptions of Types in Northwest Quadrant:

Seven distinct landscape character types were identified within the study area: Field, including old fields and maintained fields; Yard, including old homesteads and occupied residences; Woodlot, including formerly maintained areas that are now wooded; Hedgerow/Thicket, including hedges and shelterbelt tree plantings; Orchard, including overgrown and maintained orchards; Perimeter Areas, including areas between the interior of the study area and the shore to the north and west; and Rural Corridor, including lanes defined by surrounding vegetation.

Analysis Of Potential Land Use

The potential for various types of land use was assessed, including passive recreation, active recreation, agricultural use, interpretive development, and site access. To aid in this, the site was divided into 19 "landscape units". A number of general comments can be made regarding development opportunities and constraints in the study site:

- there is good potential for a low-impact public trail system through the study site, aligned for the most part north-south, with properties and vegetation patterns, and easily accessible due to the flatness of the site;
- there is good potential for variety along trail routings, due to landscape character types, as well as framed views of mountains;
- the perimeter areas and rural corridors provide good access to the interior of the site;
- potential development & interpretive themes include: landscape stewardship, naturalization and rejuvenation; environmentally sensitive site development; agriculture; fishery industry; arboretum; history of settlement of Richmond;
- the most interesting parts of the site are probably also the most environmentally and culturally sensitive;

- east-west trail alignments are hindered (at least in the short- to mid-term) by private land holdings;
- the lack of existing utilities or services is a potential constraint to some types of development;
- new development has the potential to have a negative impact on sensitive vegetation, wildlife, remnant natural topography.

Landscape Character / Public Access And Use Recommendations

- *Develop a low-impact, accessible main trail system routed through a maximum variety of landscape characters, and linking with the perimeter areas (River Road and Westminster Highway) to maximize easy access. Trails should be designed to have minimum impact on the biophysical attributes of the study area.*

- *Maintain views—both within the site and to features outside the site in trail development, and enhance them where possible.*

- *Include the canopied lanes in Landscape Units 5 and 17 as part of the low-impact trail system, and the impressive collection of specimen trees should be interpreted.*

- *Develop at least one of the fields in Unit 8 or 9, as well as the orchards—particularly in Landscape Unit 10, and possibly in Unit 7, as working sites for agricultural interpretation and demonstration. The historical pattern of agricultural settlement should also be interpreted.*

- *Consider using the Beumann residence and yard in Unit 11 for public access as well as adaptive re-use of the buildings, while preventing access to the woodlot to preserve its habitat value.*

- *Develop and maintain an area (potentially a field area within Units 8 or 9) for informal active recreation that is adjacent to the main trail system.*

- *Continue to acquire remaining private property parcels within the study area over the long term and plan development to accommodate those acquisitions if and when they occur.*

SUMMARY: GUIDING PRINCIPLES

After the inventory and analysis of the biophysical, heritage and landscape aspects of the Northwest Quadrant Lands was completed, the study team came together to produce an overall analysis for the study area. One of the end-products of this analysis was a set of specific guidelines for public access and use, that deal with the study area on a site-by-site basis (see Table 1.1). These guidelines, as well as the more general recommendations listed at the end of each subsection of this summary, have informed the following set of overall Guiding Principles, that are intended to guide future site planning, design, site use and management.

- *The study area's historical integrity and values should be acknowledged and enhanced;*
- *The unique set of landscape characteristics that result from the diverse aesthetic, ecological and historical values of the study area should be respected;*
- *Ecological features and functions should be maintained and enhanced, and the role of this area within the broader ecological context of the Fraser River Estuary and the international Pacific Flyway should be recognized;*
- *Interpretation of historical and ecological features should be encouraged;*
- *Public access and uses that are respectful of the study area's ecological, historical and landscape values should be encouraged;*
- *The study area should be connected internally and to the surrounding community through an accessible trail system;*
- *Site planning and design should be based on the study area's ecological, historical, landscape and recreational attributes and values, and should ensure the area is managed for long-term benefit.*

NEXT STEPS

The following short-term steps are recommended in order to further the management of the study area.

1. Control invasive species on the site, particularly the ivy on specimen trees, purple loosestrife in the old fields and blackberries in the orchards.
2. Remove old drums from properties that may pose a contamination hazard.
3. Take necessary steps to preserve significant heritage features that may need stabilization or repair.
4. Continue to negotiate the acquisition of adjacent properties.
5. Identify an overall vision or plan that lays out public use concepts for the site.

Table 1.1.
Terra Nova Northwest Quadrant: Combined Assessment & Specific Guidelines for Public Access and Use

L'scape Unit	Biophysical Attributes Summary	Heritage Values Summary	Landscape Character Summary	Public Access & Use Guidelines
1	• good all season habitat for passerines • coyote denning reported • blackberries should be managed (max. 25% coverage of site) • soils have been significantly altered from native soils	• original crown grant boundary and subdivision lines evident • ditch and dyke present • site remains recall original building cluster • hedgerows and fence lines as demarcation of lots • agricultural fields present • vegetation associated with original homestead • original access still present • important views/vistas • evidence of second layer of use	• spatial variety creates good trail potential • some potential for informal active recreation • potential interpretation of connection between buildings/landscape, plant succession/naturalization • derelict structures may be fragile/dangerous	• plant native shrubs and trees to enhance wildlife values • remove blackberry growth (to no more than 25% blackberry coverage of unit) • develop trail connecting to River Road and Unit 17 to south, following existing (and historical) alignment, and maximizing spatial interest and views • interpret former building footprints, connection between buildings and landscape, naturalization
2	• **very good old field (highest vole runway abundance in entire area) provides excellent raptor habitat** • trees and hedgerows provide cover for wildlife • significant native soils	• original subdivision evident • Terra Nova slough which has historical associations • agricultural fields present • hedgerows, fence lines and vegetation as demarcation of lots	• potential for agricultural use • poor drainage may be a hindrance to development	• maintain old-field biophysical values and minimize impact on wildlife use(voles and raptors) by restricting trail access to east edge of field • conserve native soils by avoiding fill • maintain trees and hedgerows for wildlife habitat • periodic mowing of old-field will be required to maintain habitat value • develop low-impact trail along old slough alignment • interpret historic slough; seek to acquire portion of slough on private property for future trail, interpretation
3	• large grouping of mature trees provide good wildlife habitat (birds, amphibians and small mammals) • well developed shrub and herb layers	• original crown grant boundary and subdivision evident • site remains recall original building cluster • hedgerows and fence lines as demarcation of lots • ditches present • vegetation and access present and associated with original homestead • structure from later occupation	• spatial variety creates good trail potential • potential interpretation of connection between buildings/landscape, heritage trees • specimen trees need care • trail safety/perception of safety in more enclosed areas may have to be addressed	• protect large, mature trees for wildlife values • manage trees to retain values (i.e., remove invasive species) • avoid access through treed area; keep access to edge of tree area and use fences if necessary • develop low-impact trail. maximizing spatial interest and connecting to Unit 1 and River Road • interpret former building footprints, heritage trees

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L'scape Unit	Biophysical Attributes Summary	Heritage Values Summary	Landscape Character Summary	Public Access & Use Guidelines
4	• residential lawn and yard	• new residential development follows original pattern • original access and traces of building cluster • ditches present • important views and vistas	• potential for connection and/or service access from interior of site to River Road	• no major constraints on public access; • could serve as site entrance/ service area or buffer for high environmental values in Unit 5
5	• large grouping of mature trees provide good wildlife habitat (birds, amphibians and small mammals) • well developed shrub and herb layer	• original subdivision evident • vegetation associated with original homestead and as boundary demarcation • cannery ownership/lease • original access • ditch and dyke present	• spatial variety, views create good trail potential • potential interpretation of connection between buildings/landscape, heritage trees • specimen trees need care • neighbouring private property needs to be respected • trail safety/perception of safety in more enclosed areas may have to be addressed	• **protect large, mature trees for wildlife values** • manage trees to retain values (i.e., remove invasive species) • avoid new trails/access through treed area; keep access to edge of trees • use existing access road for low-impact trail connection between River Road and site interior • interpret historical relationship between cannery industry and residences, orchard remnant
6	• developing old field with adjacent hedgerow provides wildlife habitat for raptors and mammals	• original subdivision present • agricultural fields present • fence lines as demarcation of original lots • ditches present • barn remnants on site	• potential for agricultural use • poor drainage may be a hindrance to development • could provide open space contrast to trail in Unit 5	• maintain and enhance hedgerows for wildlife and heritage value • develop open space trail connection with Unit 5 • one of the site units that could be developed for agriculture
7	• established orchard and hedgerows • good all-season habitat for passerines (breeding, migration, wintering)	• original subdivision present • original settlers' dwellings and original building cluster remain • unique architectural style • front/rear yard and vegetation associated with original homestead • fences as original lot demarcation • historic access and circulation • orchard remnants (largest in site), small-scale elements present • ditch and dyke present • association with stage line/post office and cannery	• moderate spatial variety creates good trail potential • potential interpretation of connection between buildings/landscape, specimen trees • potential to renovate existing orchard • derelict structures may be fragile/dangerous	• maintain hedgerows for wildlife value • enhance and interpret front garden/house/back field typology • reuse historical buildings if structurally feasible; interpret old post office and stagecoach route • protect, interpret, and possibly re-establish orchard trees • maintain hedgerows (for historical and wildlife values) • develop trail, maximizing spatial interest and views

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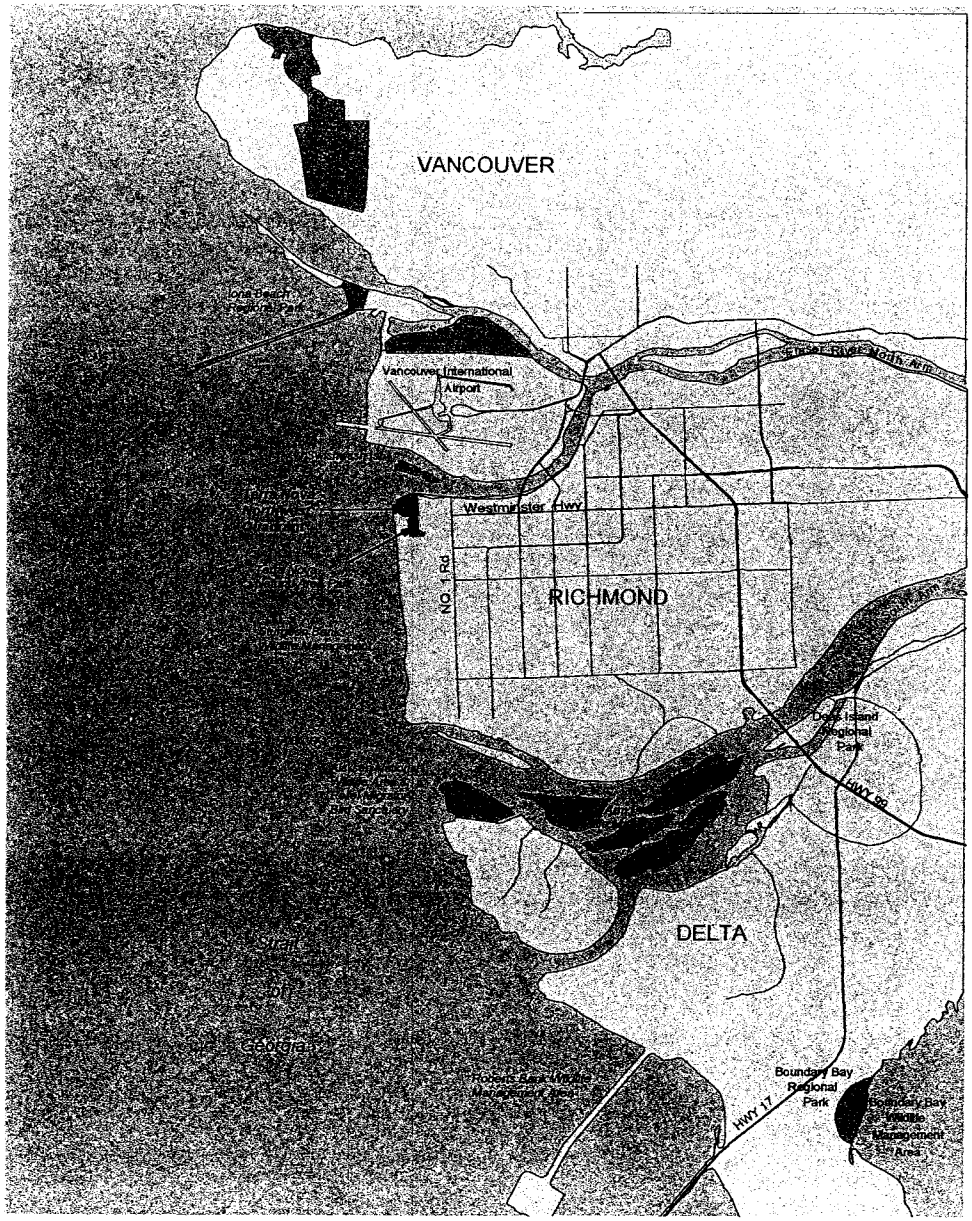
L'scape Unit	Biophysical Attributes Summary	Heritage Values Summary	Landscape Character Summary	Public Access & Use Guidelines
8	• old field dominated by purple loosestrife • good hedgerows for wildlife • purple loosestrife should be controlled	• original crown grant boundary and subdivision present • agricultural fields • important views/vistas	• potential for agricultural use; • potential for unprogrammed active recreation or equestrian facilities • adjacent private residential development a potential development constraint	• maintain hedgerows for wildlife • control purple loosestrife and ensure that future uses and access do not contribute to its spread (i.e., seeds in the soil transported on the boots of community gardeners) • interpret historical development pattern of clusters of residences along dyke with deep, narrow fields behind • develop trail, open space for informal active recreation • one of the best site units (along with Unit 9) for potential agricultural development
9	• developing old field with abundant vole runways in places	• original crown grant boundary and subdivision present • agricultural fields • original access remains • vegetation associated with original homestead	• potential for agricultural use; • potential for unprogrammed active recreation • adjacent private residential development a potential development constraint	• retain trees and encourage hedgerows for wildlife • remove blackberries from field • interpret historical development pattern of clusters of residences along dyke with deep, narrow fields behind; use historic driveway alignments for trail access • develop some open spaces for informal active recreation • one of the best site units (along with Unit 8) for potential agricultural development
10	• hazelnut trees provide some food and habitat value for small mammals and birds	• original subdivision evident • post 1940 orchard maintains agricultural	• good potential for agricultural/interpretive development • potential interpretive connection to Buemann residence • spatial interest creates good trail potential	• enhance wildlife and aesthetic values by planting groundcover • develop low-impact trail, maximizing spatial interest and views • interpret connection between residence and orchard • develop orchard for demonstration • develop buffer between unit and adjacent private land
11	• large grouping of mature trees provide excellent wildlife habitat; heavily used by birds • owl and other raptor roosting area	• original subdivision evident • pattern of development after construction of Westminster Highway after c.1940 • vegetation associated with residence	• potential interpretive connection to Buemann residence • spatial variety creates good trail potential • yard and woodlot need ongoing maintenance	• prevent public access to woodlot portion of unit • develop trail in maintained yard only; interpret connection between buildings and landscape • reuse building if structurally feasible (semi- or non-public use, to minimize impact on woodlot)

L'scape Unit	Biophysical Attributes Summary	Heritage Values Summary	Landscape Character Summary	Public Access & Use Guidelines
12	• mowed field that is seasonally flooded in winter • provides important waterfowl habitat in winter • good hedgerow provides habitat for birds and small mammals	• original subdivision evident • agricultural fields present • ditch present • hedgerows as boundary demarcation • important views/vistas	• potential for unprogrammed active recreation or equestrian use • potential for agricultural use • drainage a potential development constraint	• maintain as actively mowed/seasonally flooded field for wildlife and historical values (original open field development pattern behind residences) • retain hedgerows for wildlife use • some open space can be used for informal active recreation; access to be restricted in winter months when fields are flooded/used by waterfowl
13	• residential lawn and yard	• original subdivision evident • pattern of development after construction of Westminster Highway after c.1940 • vegetation associated with residence	• potential for connection and/or service access from interior of site to Westminster Highway	• could serve as site access/service area • building could be reused if structurally feasible
14	• residential lawn and yard	• original subdivision evident • pattern of development after construction of Westminster Highway after c.1940 • vegetation associated with residence	• potential for connection and/or service access from interior of site to Westminster Highway	• could serve as site access/service area • building could be reused if structurally feasible
15	• mix of old field, trees, shrubs and hedgerows provides excellent wildlife habitat for passerines, raptors and small mammals • spirea and blackberries need managing	• original subdivision present • agricultural fields present • ditch present	• potential for passive and/or informal active recreation	• develop low-impact trail along edge with Unit 12, maximizing spatial interest and views • access should be restricted in winter months when fields are used by waterfowl • retain woodlot trees and hedgerows for wildlife value • control spirea and blackberry encroachment
16	• mix of old field and hedgerows provide some wildlife habitat for birds and small mammals • potential for old field management • significant native soils	• agricultural fields present • evidence of second layer of use	• framed views create open space trail potential • equestrian use would fit prior use of land • potential for agricultural use	• conserve native soils by avoiding fill and other major disturbances • some open space can be used for informal passive or active recreation • develop open space trail connecting to Unit 17/River Road/Westminster Highway, maximizing views
17	• large grouping of mature, unique trees that provide very good wildlife habitat at all times of year • highest diversity of plant species in study area	• agricultural fields present • evidence of second layer of use • re-use of internal circulation pattern by subsequent inhabitants • trees and fences define circulation and boundaries	• excellent potential for trail along treed driveway • potential interpretive/arboretum development	• develop low-impact trail along existing driveway, connecting to Units 1, 16, Westminster Hwy., maximizing spatial interest and views • prevent access off of trail, to avoid trampling of tree root structures • retain, protect and interpret collection of mature, unique trees • tree management required (i.e., removal of invasive species)

L'scape Unit	Biophysical Attributes Summary	Heritage Values Summary	Landscape Character Summary	Public Access & Use Guidelines
18	• residential lawn and yard	• agricultural fields present • evidence of second layer of use • new residential development follows original pattern • ditch and dyke present	• potential for adaptive re-use of residential buildings • potential interpretation of connection between buildings/landscape	• no biophysical constraints on public access or use • reuse building if structurally feasible • interpret connection between building site, old access bridge, and landscape • consider trail connection to River Road at old access bridge
19	• perimeter drainage ditch has a variety of grasses and shrubs and provides good wildlife habitat • while foreshore area was not specifically included in this study it is well documented as a highly productive intertidal marsh area and is coded red by FREMP	• ditch pattern a response to low-lying topography and wet soils • dyke a response to river floods, and its construction changed the shape of the landscape • ditches and dyke represent a city-wide historical pattern • original circulation patterns are still evident • foreshore has natural heritage features, important views/vistas, and is the location of original cannery site and its historical associations • original settlement was oriented to the river which creates a site boundary • Westminster Highway was previously Road No. 19, gazetted 1916, and terminated at the east boundary of site until c.1940	• dyke provides potential connections/views into and from the study area • Westminster Highway's spatial character creates good trail potential	• Avoid contamination of water quality in ditch and retain vegetation along the study properties side of ditch (south and east edges of ditch) • provide linkage, through River Road and Westminster Highway, around private properties between internal trails • preserve and enhance views into the study area and outward to river and Sturgeon Bank • interpret cannery history, historical access to interior of site, wildlife in foreshore, airport to north • manage pedestrian/vehicular conflict • develop west end of Westminster Highway as "country lane"; establish connection between study area and nature park to south



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KEN SUMMERS BIOLOGICAL SERVICES: Wildlife Inventory

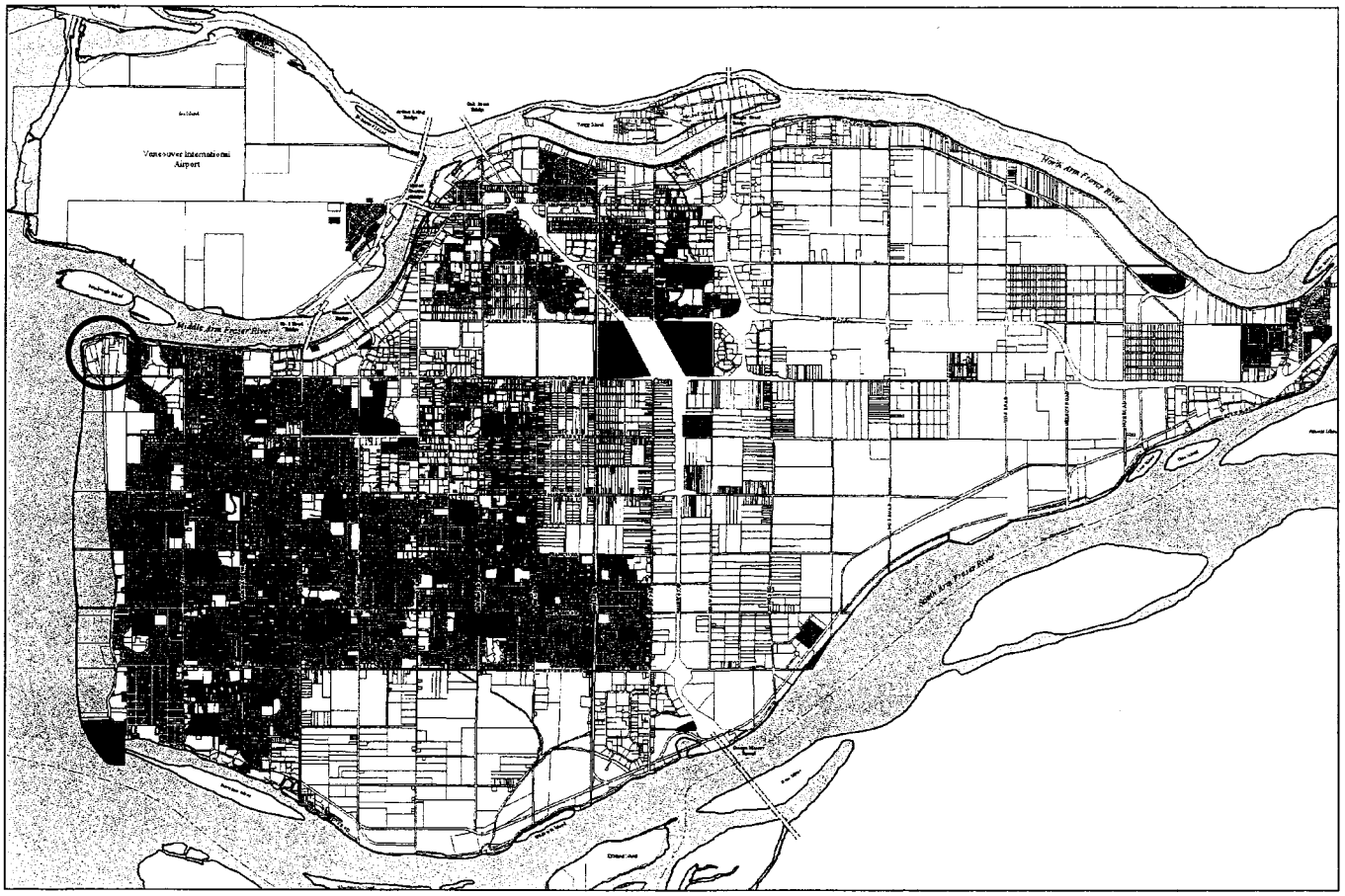
ROBERTSON ENVIRONMENTAL SERVICES LTD.
Vegetation Inventory

GIS INNOVATIONS INC.: GIS Services, Graphics

0 1 2 3 km
0 1 2 miles

June, 2002

TERRA NOVA NORTHWEST QUADRANT **ECOLOGICALLY IMPORTANT PROTECTED AREAS IN REGION** **Plate 1**



LEGEND

Open Space and School Sites within Richmond

Terra Nova Northwest Quadrant

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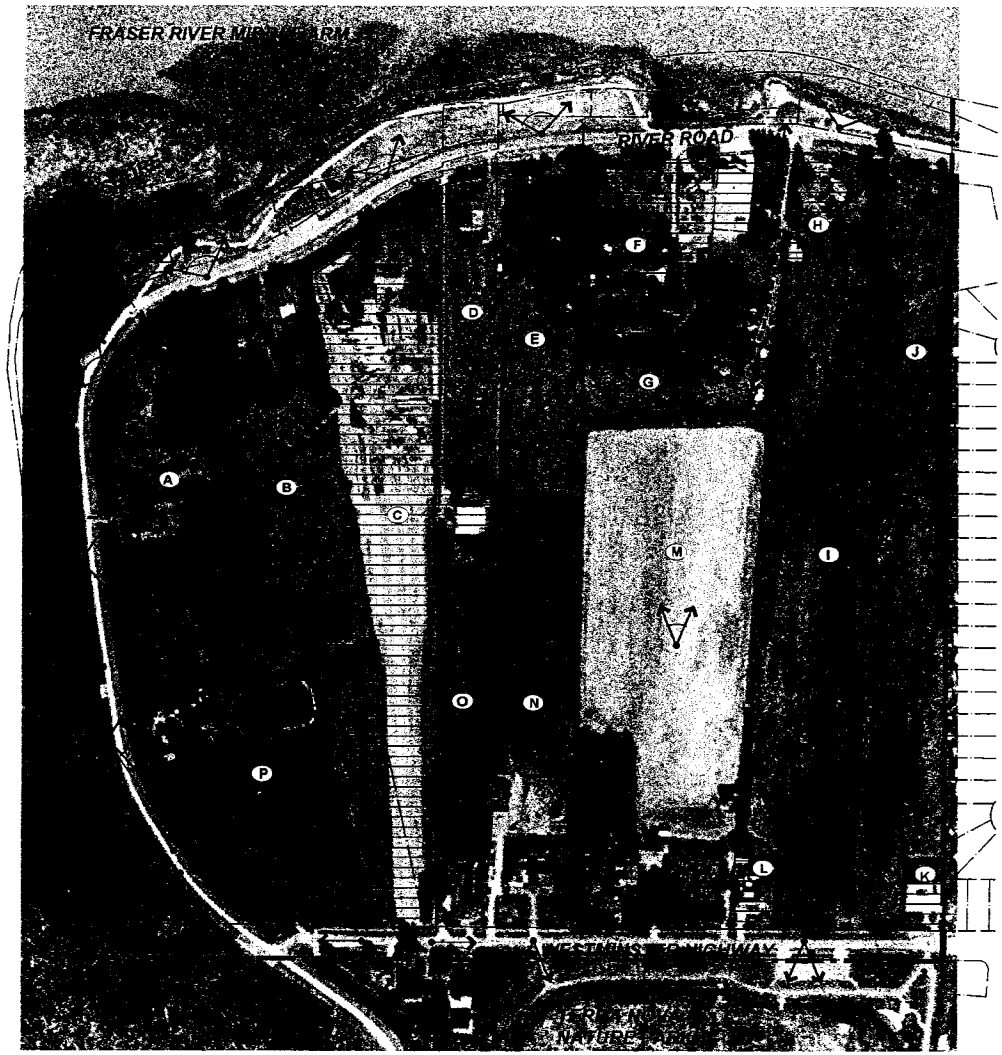
0 1 2 km
0 0.5 1 mile
June, 2002

TERRA NOVA NORTHWEST QUADRANT: *Inventory & Analysis* **OPEN SPACE CONTEXT** **Plate 2**



LEGEND

- STUDY BOUNDARY
- PROPERTY LINES
- PRIVATE PROPERTY
- EXISTING INTERNAL TRAILS
- SIGNIFICANT VIEW
- (B) EXISTING PROPERTY

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0m 50m 100m
0' 150' 300'

June 2002

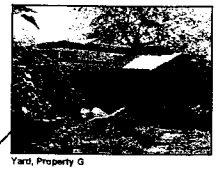
TERRA NOVA NORTH WEST QUADRANT: Inventory & Analysis **STUDY AREA & EXISTING CONDITIONS** **Plate 3**

Old field habitat showing encroachment of purple loosestrife and aster species, Prop. A

Old field habitat with coyote path, redtop and reed canary grass, Property E

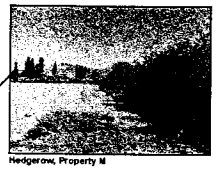
Woodlot, Property E

Old apple trees overrun with blackberry, Property G

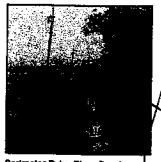


Yard, Property G

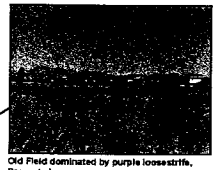
Blackberry Thicket, Property A



Hedgerow, Property M



Perimeter Dyke, River Road

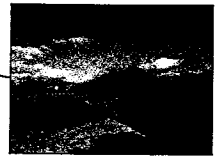


Old Field dominated by purple loosestrife, Property I

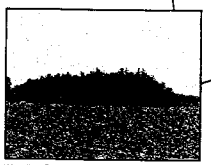
Slough seepage with purple loosestrife in background, old field, Property B

Mown Field, Property M

Woodlot, Property P



Open ditch along hedgerow, Property M



Woodlot, Property M

Hazelnut Orchard, Property M

LEGEND

VEGETATION TYPES

- BT — Blackberry Shrub Thicket
- Hedge Row
- LA — Lawn
- MF — Mowed Field
- OF — Old Field
- OR — Orchard
- SS — Slough Seepage
- Hardhack Thicket
- Woodlot
- YA — Yard

WATER FEATURE ditch, slough, marsh, pond, or low area

STUDY BOUNDARY

PRIVATE PROPERTY

Image Sources:
Ken Summers, Robertson Environmental Services (Ken McNeish),
Sharp & Diamond Landscape Architecture & Planning

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0m 50m 100m
0 150' 300'

June 2002

TERRA NOVA NORTHWEST QUADRANT: *Inventory & Analysis*

VEGETATION

Plate 4

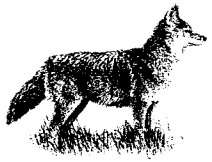
Great Blue Heron

HABITAT UNIT 19
Dyke Ditches:
-Good breeding and/or wintering value to species of waterfowl and some other wetland birds (herons rails, blackbirds)
-Good opportunity for public viewing of wildlife.

HABITAT UNITS 3 & 5
LOTS B & E
Residential Trees:
Grove of large, mature, and diverse trees have excellent wildlife values for birds and potentially for amphibians, small mammals and medium sized mammals.

HABITAT UNIT 6
Lot E
Developing Old-Field:
-Vole runaways abundant
-Coyote Trails.
-Old-field developing well
-Proximity to treed areas increases values to wildlife of both habitats

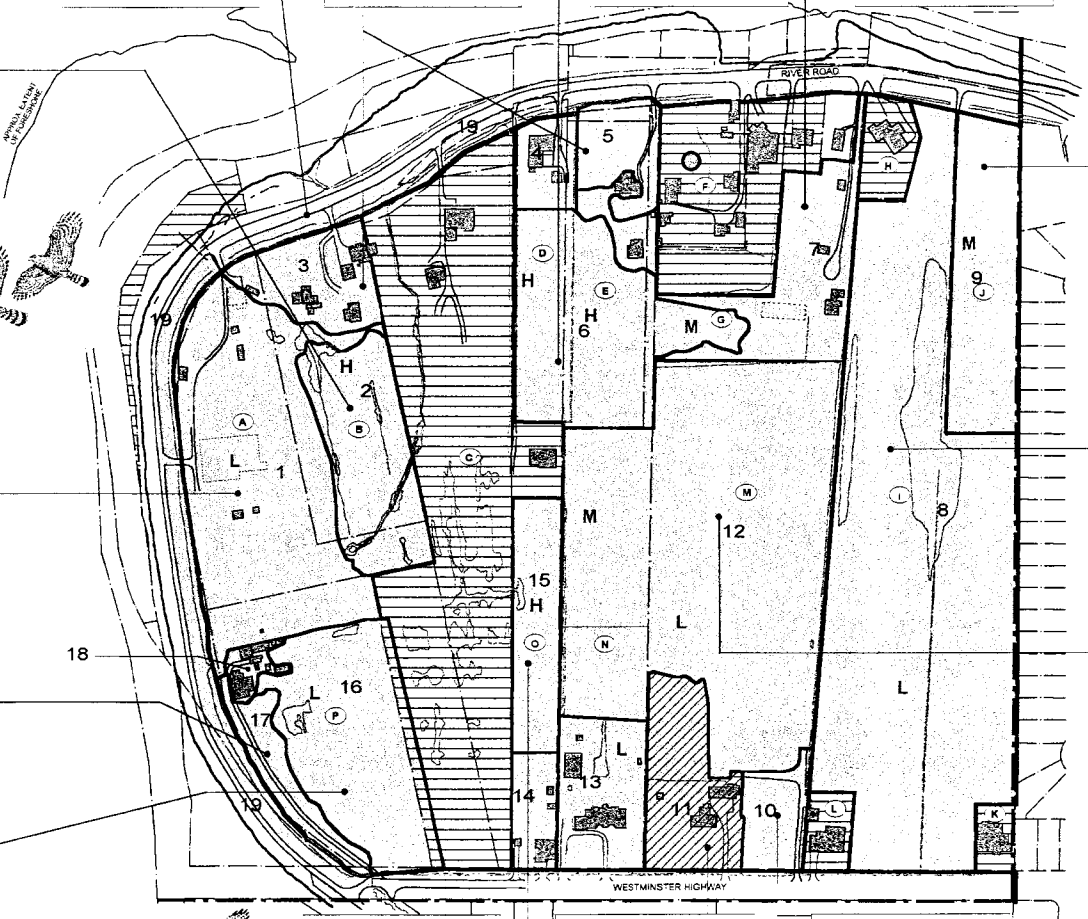
HABITAT UNIT 7
LOT G
Shrub/Orchard:
-Good all-season habitat for passerines (breeding, migration, and wintering)



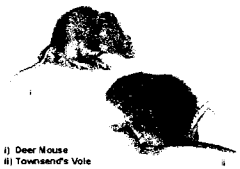
Coyote

HABITAT UNIT 2
Lot B
Developing Old-Field:
-Very high vole runway abundance (highest seen at Terra Nova)
-mature diverse hedgerow to west and trees to north provide perching and shelter habitats and possible nesting/breeding habitats, for predators using this field

Cooper's Hawk



HABITAT UNIT 9
Lot J
Developing Old-Field:
-Voles very abundant
-Blackberry border needs control
-To maximize wildlife values, hedgerows need improvement. Reed canarygrass and blackberry need control.



i) Deer Mouse
ii) Townsend's Vole

HABITAT UNIT 1
Lot A
Blackberry Area:
-Coyote denning reported
-Good all season habitat for passerines (breeding, migration, wintering)
-Meadows within blackberry increase the areas value considerably by providing edge and ground feeding/ dwelling opportunities.
-Vole presence in one meadow checked (South end) appears low.
-Large expanses of pure dense blackberry have moderate to low wildlife values.

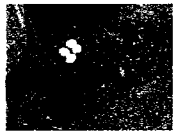
HABITAT UNIT 8
Lot I
Loosestrife Field:
-Vole abundance low (although barrier frequented this site during the field work)
-Moderate value to seeding eating birds during fall and winter.
-Intensive management required to maximize wildlife values (because of need for weed control).

HABITAT UNIT 12
Lot M
Mowed Field:
-Minimal wildlife values for dry field
-Vole abundance very low in largest field
-Canada geese grazing
-Snow geese grazing in fall and winter
-Provides waterfowl habitat when seasonally flooded.
-Potential to enhancement wildlife value through field renovation.

HABITAT UNIT 17
Lot P
Treed Driveway
-High value to many groups of birds at all times of the year.

HABITAT UNIT 16
Lot P
Recently Abandoned Field:
-Vole abundance low
-Wildlife use generally low at present
-Potential for increased use with more diverse mix of grass species (i.e. with renovation).

Common Barn Owl



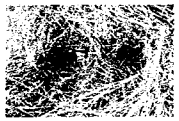
Dead Voles in Owl's Nest

Red Tailed Hawk

HABITAT UNIT 15
Lot O
Mowed Field
-Vole runways abundant
-Good interspersion of field and shrubs, but shrub encroachment needs control
-Hedgerows providing excellent passerine and raptor (accipiter) habitat

HABITAT UNIT 11
Lot M
Woodlot:
-Heavily used by birds including raptors (2 owl spp. accipiters).

HABITAT UNIT 10
Lot M
Orchard:
-A considerable amount of passerine use observed, possibly as a spillover from Unit 11.
-Wildlife value would increase if a herbaceous groundcover were established



Vole Burrows

LEGEND

HABITAT INVENTORY

L	Low Vole Runway Abundance
M	Moderate Vole Runway Abundance
H	High Vole Runway Abundance
9	Habitat Units (See Biophysical Sensitivity Sheet)

Unit	Habitat Type
-	Blackberry Thicket with Old Field Patches
2	Old Field and Remnant Slough
3	Woodlot
4	Yard
5	Woodlot
6	Old Field
7	Yard/Blackberry/Old Orchard
8	Old Field
9	Old Field
*10	Hazelnut Orchard
*11	Woodlot
*12	Old Field/ Seasonally Flooded
*13	Yard
*14	Yard
*15	Old Field
*16	Old Field and Remnant Slough
*17	Woodlot
*18	Yard
*19	Perimeter Ditch

Great Blue Heron Nest Area

Common Barn Owl Roosting Area

WATER FEATURE
ditch, slough, marsh, pond, or low area

STUDY BOUNDARY

PRIVATE PROPERTY

Image Sources:
Eder E. Fields. *Mammals of British Columbia*. Vancouver: Lone Pine Publishing, 2001.
Robbins et al. *Birds of North America*. New York: Golden Press, 1966.
Ken Summers

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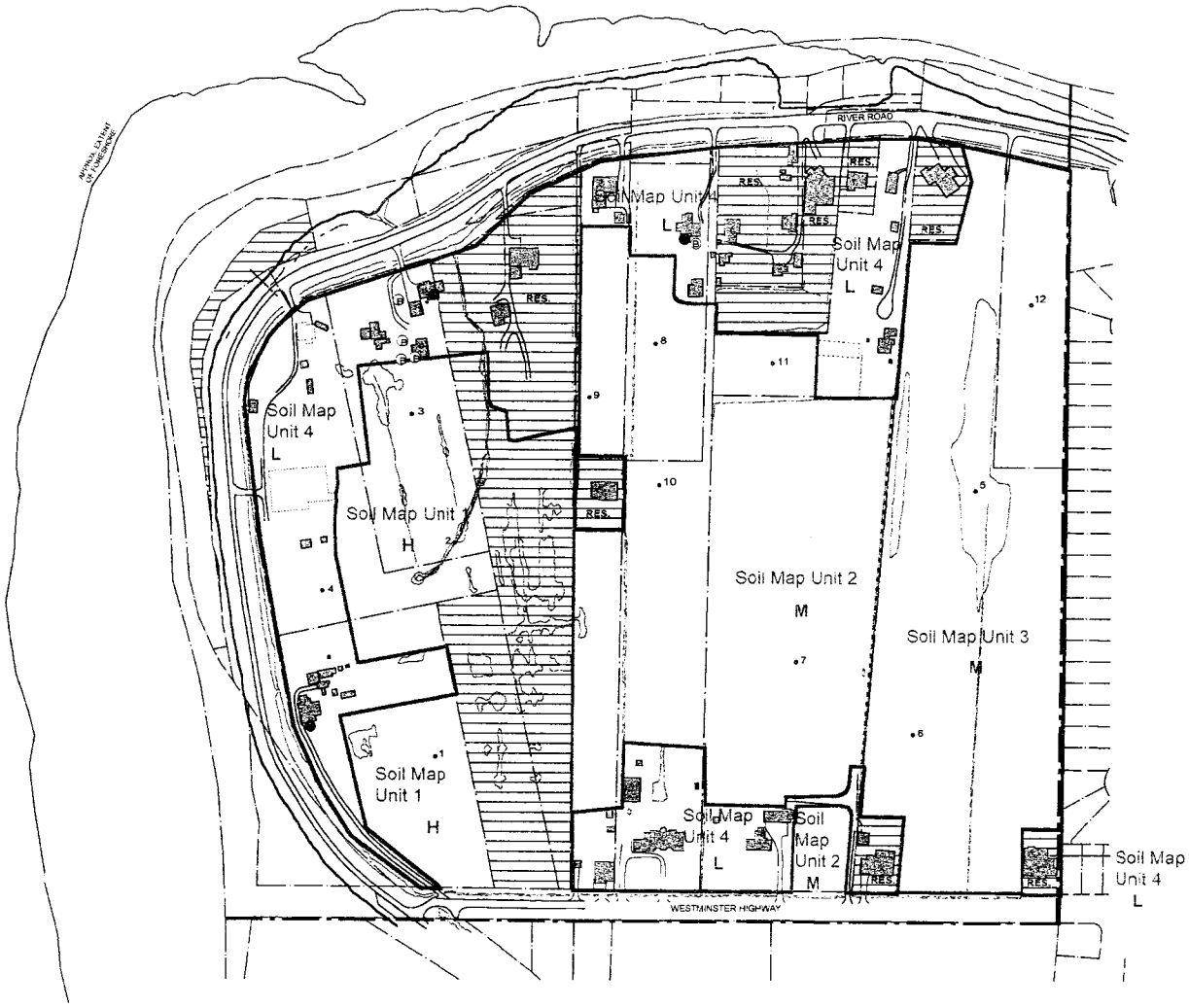
0m 50m 100m
0 150' 300'

June, 2002

TERRA NOVA NORTHWEST QUADRANT: Inventory & Analysis

WILDLIFE HABITAT

Plate 5



LEGEND

SOIL MAP UNIT	SOIL VALUES RATING	
Soil Map Unit 1 - Orthic Gleysol	H	High
Soil Map Unit 2 - Rego Gleysol	M	Medium
Soil Map Unit 3 - Orthic Gleysol 10% - Rego Gleysol 10% - Rego Humic Gleysol 80%		
Soil Map Unit 4 - Significantly Altered Soils	L	Low

- ABOVE GROUND FUEL STORAGE
- BARREL
- 5 SOIL INSPECTION SITE
- SOIL MAP UNIT BOUNDARY
- ESTIMATED SOIL MAP UNIT BOUNDARY
- WATER FEATURE ditch, slough, marsh, pond, or low area
- STUDY BOUNDARY
- PRIVATE PROPERTY

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0' 150' 300'

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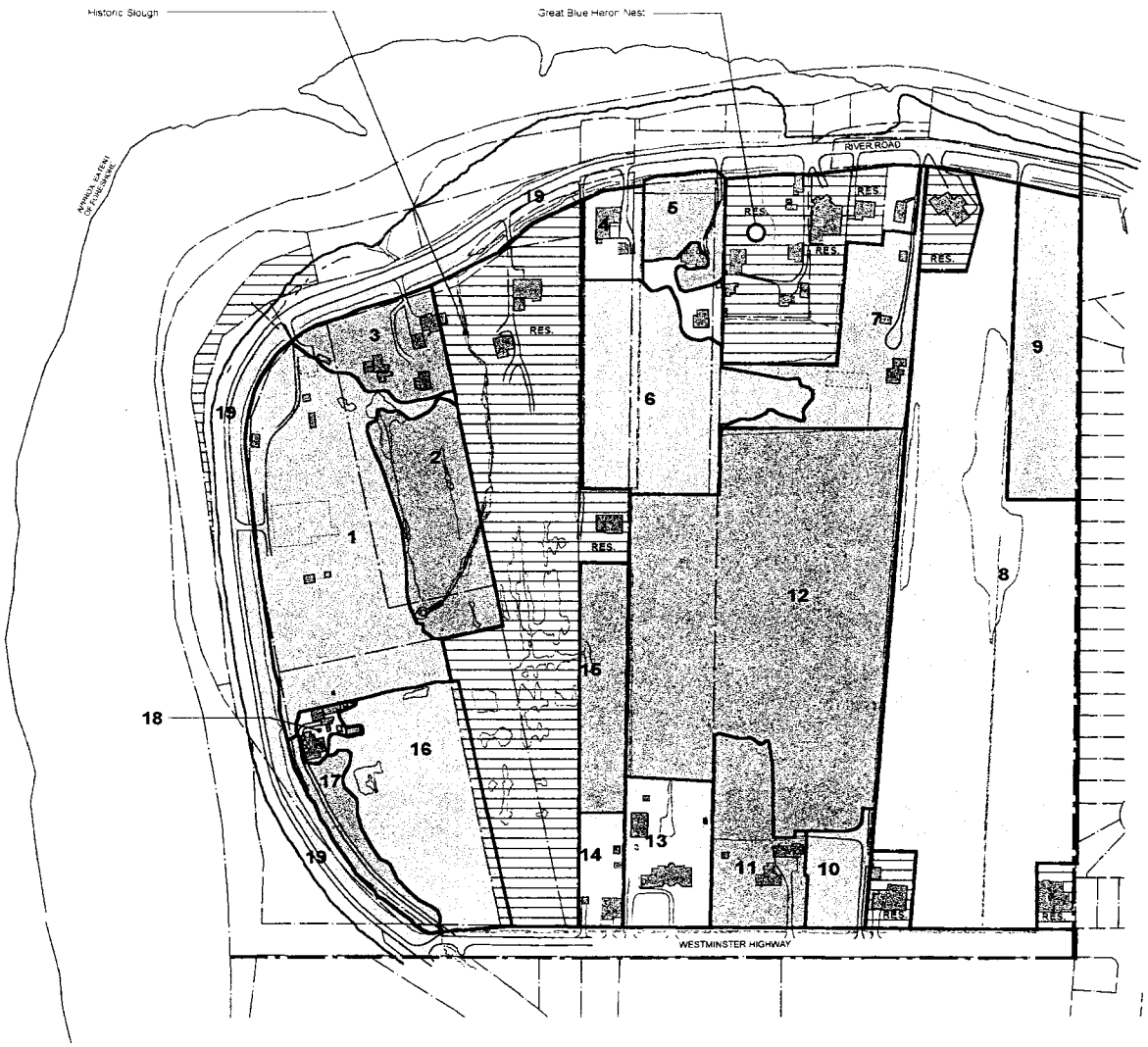
TERRA NOVA NORTHWEST QUADRANT: Inventory & Analysis

SOILS & DRAINAGE

Plate 6



LEGEND

HABITAT UNITS & OVERALL SENSITIVITY RATING

- 9 — H High
- 9 — M Moderate
- 9 — LM Low Moderate
- 9 — L Low

Unit	Habitat Type
1	Blackberry Thicket with Old Field Patches
2	Old Field and Remnant Slough
3	Woodlot
4	Yard
5	Woodlot
6	Old Field
7	Yard/Blackberry/Old Orchard
8	Old Field
9	Old Field
10	Hazelnut Orchard
11	Woodlot
12	Old Field/ Seasonally Flooded
13	Yard
14	Yard
15	Old Field
16	Old Field and Remnant Slough
17	Woodlot
18	Yard
19	Perimeter Ditch

WATER FEATURES: DITCH, SLOUGH, MARSH, POND, LOW AREA

STUDY BOUNDARY

PRIVATE PROPERTY

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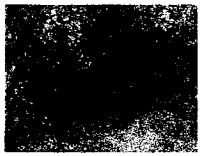
0m 50m 100m
0' 150' 300'

June, 2002

TERRA NOVA NORTHWEST QUADRANT: Inventory & Analysis

HABITAT SENSITIVITY

Plate 7



Entry to Parsons House. This vegetation is part of the original pattern seen in aerial photographs dated1938.

These conifers lining the entry drive of the Gordon property have been documented as being painted in 1913.

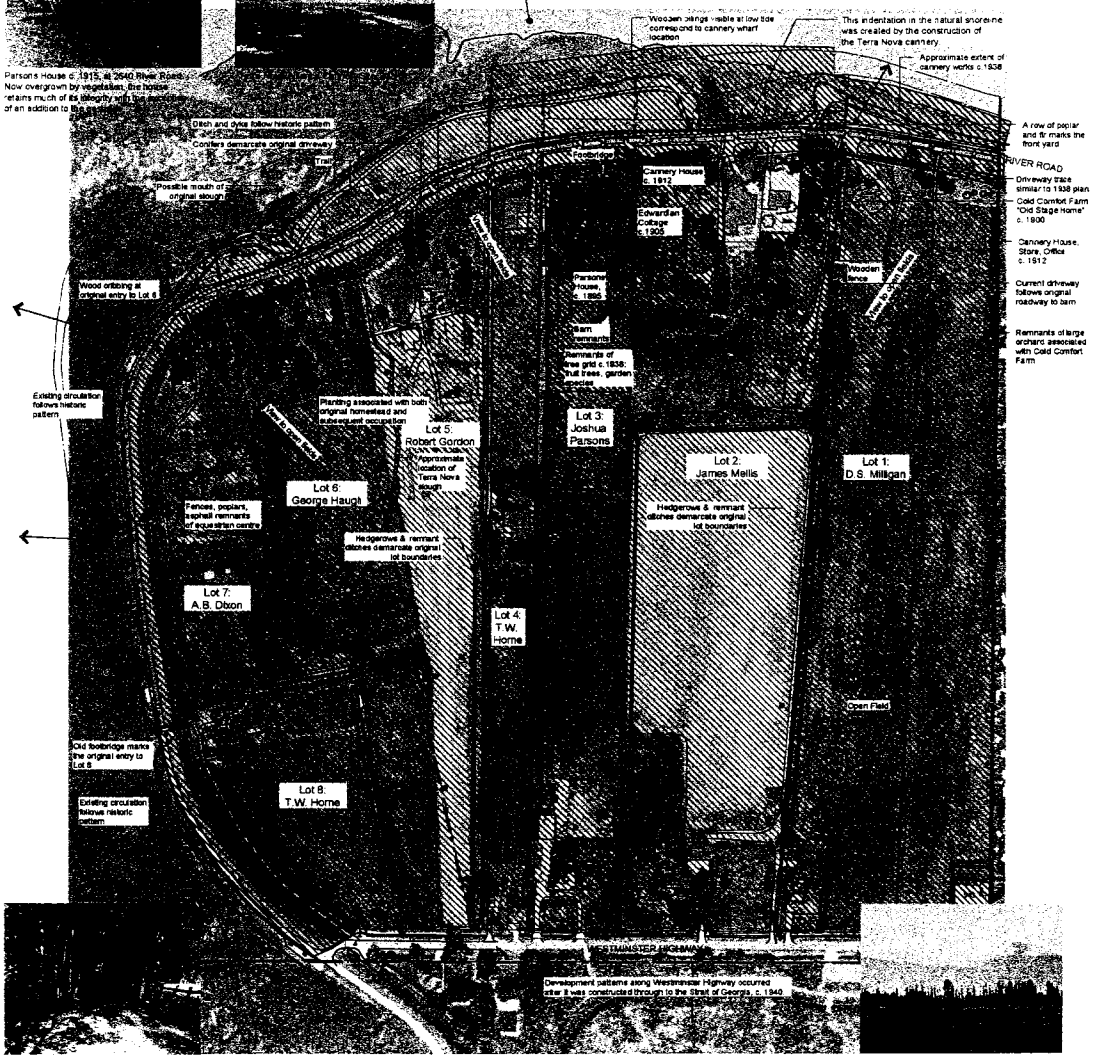
Existing path, Lot 7. Although the current path dates from the 1950's, it follows the original internal circulation route of the Dixon homestead.

Garage on Lot 6 dating from the second layer of occupation, around 1950.

Old bridge indicates the original entry into Lot 8.

View north from Lot 8
Fence line from later occupation.

Parsons House c. 1915, at 2640 River Road. Now overgrown by vegetation, the house retains much of its integrity with the exception of an addition to the rear.

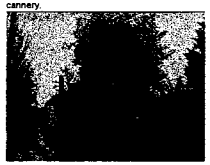


Driveway into Lot 8 (Area P) follows original homestead field access road.

Tree lines are an historic vegetation characteristic which may indicate boundary demarcations within and around the site.

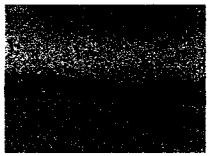
Cold Comfort Farm/Old Stage Home c.1900
2640 River Road. Original home of Terra Nova Stage Line operator James Mellis.

Cannery House and Store c.1912, 2760 River Road, part of the original grouping of buildings on a portion of Lot 2 related to the Terra Nova cannery.



Cannery House c. 1912, 2740 River Road. The variegated holly appears on the heritage tree inventory.

Edwardian Cottage c.1905, 2680 River Road. This house is located on part of lot 2 acquired by the Terra Nova cannery.



View north to the rear of Cold Comfort Farm showing the historical patterns of agricultural field and homestead vegetation.

View west along Westminster Highway.
Although gazetted in 1916, the road was not constructed through to the Gulf of Georgia until around 1940.

LEGEND

HERITAGE BUILDINGS:

- Homestead dwellings
- Cannery related buildings

- EXISTING RESIDENCES
- ORIGINAL ACCESS ROADS (1938 PLAN)
- FENCE LINES
- 1890 SUBDIVISION LINES
- SIGNIFICANT VEGETATION PATTERNS
- STUDY BOUNDARY
- SIGNIFICANT VIEWS
- HEDGEROWS
- DITCHES
- SIGNIFICANT TREES

RELATIVE INTEGRITY:
Because the site has retained much of its integrity overall, the relative integrity of the individual parts is presented as a decision-making tool for park planning.

- Higher integrity
- Moderate to high integrity
- Moderate integrity
- Low to moderate integrity
- Lower integrity
- Low integrity with potential for interpretation

PROJECT TEAM

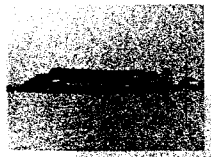
CITY OF RICHMOND COMMUNITY SERVICES DIVISION
QUADRA PLANNING CONSULTANTS LTD.
SHARP & DIAMOND - LANDSCAPE ARCHITECTURE & PLANNING
▶ DENISE COOK - CULTURAL RESOURCE PLANNING
EVECO CONSULTANTS LTD
KEN SUMMERS BIOLOGICAL SERVICES
ROBERTSON ENVIRONMENTAL SERVICES LTD.

0m 50m 100m
0' 150' 300'

June, 2002

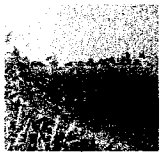
TERRA NOVA NORTH WEST QUADRANT: Inventory & Analysis **HERITAGE: EXISTING CONDITIONS/SITE INTEGRITY** **Plate 8**

Joshua Parsons house c. 1915 looking west. This house still exists in its original location on Lot 3. (Hugh Ross fonds, Richmond Archives)



Terra Nova cannery from the Middle Arm c.1906 (Hugh Ross fonds, Richmond Archives)

Terra Nova 1915
(Hugh Ross fonds, Richmond Archives)



Terra Nova c. 1915, possibly the Duncan Rowan home. This photograph was probably taken from the dyke with the main drainage ditch in the foreground.
(Hugh Ross fonds, Richmond Archives)

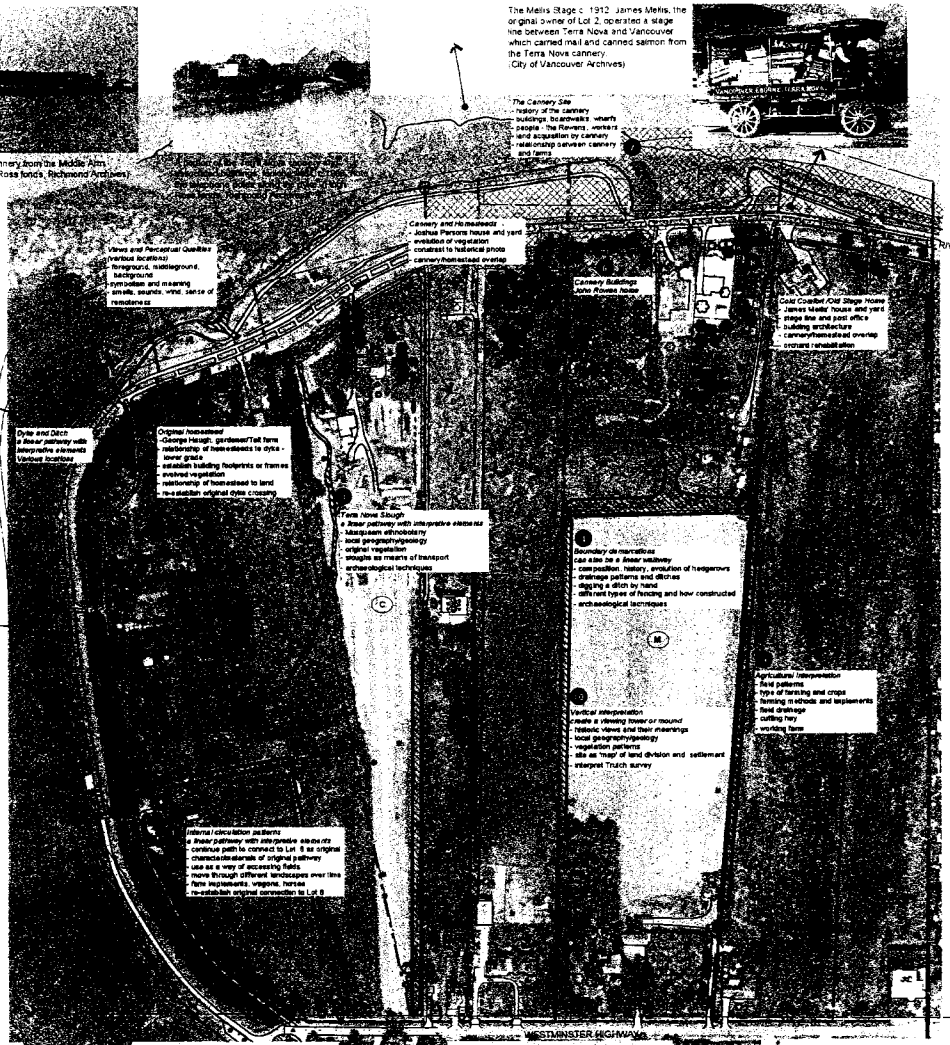
Home of Duncan Rowan, owner/founder of the Terra Nova cannery, c. 1890-95. Said to be "near the cannery", it was located on a portion of Lot 2 (James Mellis' property) that was transferred to Rowan in 1893. (Hugh Ross fonds, Richmond Archives)

Garden on Robert Gordon's property, Lot 5
The date and exact location of the photograph are unknown. (Don Gordon papers)

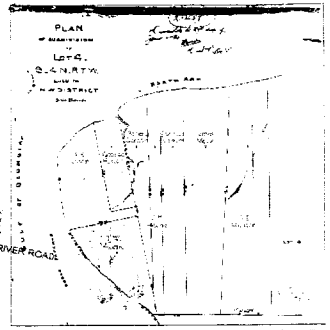
View of the dyke, foreshore and cannery looking west, c. 1918

Robert Gordon property, date unknown, looking south from the dyke

Robert Gordon property, date unknown. The conifers lining the driveway still exist. (Don Gordon papers)



The Mellis Stage c. 1912. James Mellis, the original owner of Lot 2, operated a stage line between Terra Nova and Vancouver which carried mail and canned salmon from the Terra Nova cannery.
(City of Vancouver Archives)



Plan 457 dated 1890 showing the eight-lot subdivision from Hugh Youdall's Crown Grant. Names of the original owners have been added.

LEGEND

- STUDY BOUNDARY
- EXISTING HERITAGE BUILDINGS
- HOMESTEAD BUILDING FOOTPRINTS c. 1936 (schematic only)
- APPROXIMATE EXTENT OF CANNERY BUILDINGS AND WORKS c. 1936 (schematic only)
- SIGNIFICANT VIEWS
- POTENTIAL INTERPRETIVE LOCATION

Heritage Character

Heritage character is determined by the unique combination of a site's qualities and features which make the built, cultural, natural and associative values of the landscape come alive. Terra Nova has a rich history of settlement, farming, fishing and the canning industry. This area is a cultural landscape that has evolved over time and human activity through its pattern of settlement, evidence of land cultivation and people's relationship to the river.

Character-defining elements include:

Significant geographical location at the mouth of Fraser River
Early settlement patterns visible in the landscape
Buildings as evidence of the cluster pattern of homestead development
The relationship between the cannery development and the farming community
The openness of the historic landscape
Significant views
Vegetation patterns related to settlement and land use, and their evolution over time
Association with broad historic patterns in Richmond: settlement, the development of agriculture, the construction and demise of the cannery operation, the evolution into a rural residential area, the relationship to the Fraser River

Site Interpretation

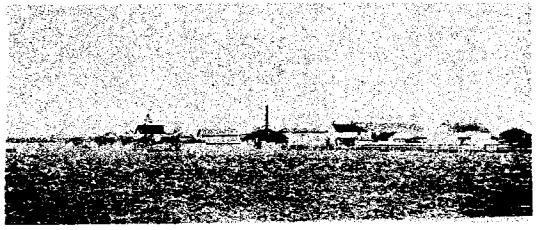
The interpretive plan must be designed to enhance the visitor's understanding of the place, and to integrate interpretive elements into park planning, wayfinding and design. It should consider creative alternatives to encourage people to interact with the site. It should coordinate the stories of heritage, the landscape, natural processes, and changes that have occured over time to become a subtle yet important part of the recreational experience.

Possible themes for interpretation:

Pre-contact and Geological History
Early Settlement Patterns, Early Surveyors and the Trutch Survey
Homesteads - Stories, People and Daily Life
The Cannery Site and its Relationship to the Farming Community
Local Agriculture
The Natural Landscape
Layering and Evolution of a Cultural Landscape
Views and Perceptual Qualities
Dyke, Ditch and Foreshore

Methods of interpretation:

Develop the interpretive method best suited to the level of integrity of the site:
a. interpretation placed on the landscape, such as signage or markers, to interpret what still exists (high integrity)
b. interpretation carried into the landscape such as maps or guides (high or moderate integrity)
c. interpretation built out of clues in the cultural landscape (low integrity)



View west to the Robert Gordon property, Lot 5, c. 1918. At the right is the Gordon house and barns, to the left the buildings of the Terra Nova cannery. This photograph illustrates the close proximity of the cannery to the homesteads and farms. (Don Gordon papers)

Robert Gordon property c.1912, looking south. Pear trees planted by Robert's wife Annie still exist on site. This photograph also illustrates the pattern of orientation to the river and setback from the dyke similar to most of the early homes

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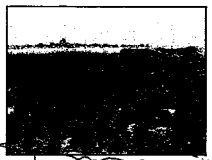
0m 50m 100m
0' 150' 300'

June, 2002

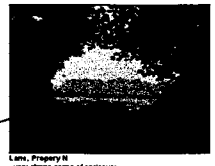
TERRA NOVA NORTH WEST QUADRANT: Inventory & Analysis — **HERITAGE: CHARACTER AND INTERPRETATION** — **Plate 9**

Homestead Areas, Property A
- wooded character, scattered open areas
- remnant paddock fences; no existing buildings
- pioneer woody species in some areas
- edges between homestead & old agricultural fields not strongly defined

Woodlot: Property E
- overgrown, densely forested site
- mostly exotic tree species, heritage yew and English oak specimens
- strong sense of enclosure
- adjacent private landscape is "borrowed"



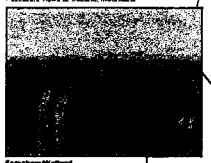
North Dyke & Cannery Site
- less pastoral than west dyke
- view to forest/shore/wetland
- VVR, mountains
- potential for interpretation at Cannery Site



Lane, Property N
- very strong sense of enclosure
- excellent framed view of mountains to north
- lane borders and "borrows" from adjacent private landscape

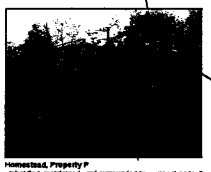
West Dyke
- pastoral, "working landscape" character
- views to ditch vegetation, waterfowl, glimpses of open areas within site
- excellent views to wetland, mountains

Homestead & Orchard, Property G
- one of the more unmaintained areas within the study area
- overgrown with blackberry, other volunteer vegetation
- existing buildings in disrepair

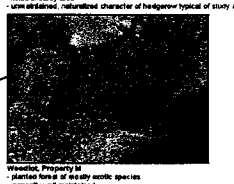


Foreshore/Wetland
- wildlife habitat
- excellent views of wildlife, navigation structures, Gulf & Vancouver Islands

Hedgerow & Field, Property M
- hedgerow provides edge to field
- field is well maintained relative to other fields in study area
- unmaintained, naturalized character of hedgerow typical of study area



Homestead, Property P
- inhabited, maintained yard surrounded by remnant agricultural fields
- terminus of paddock lane with tree rows
- potential for interpretive connection between building and landscape
- remnant paddock fences

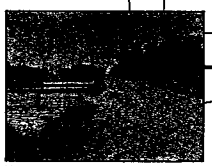


Woodlot, Property N
- planted forest of mostly exotic species
- currently well maintained
- strong sense of enclosure

Old Field, Property P
- moderately overgrown with herbaceous species
- includes old horsetrack
- framed views to a mountains to north
- potential for informal active recreation

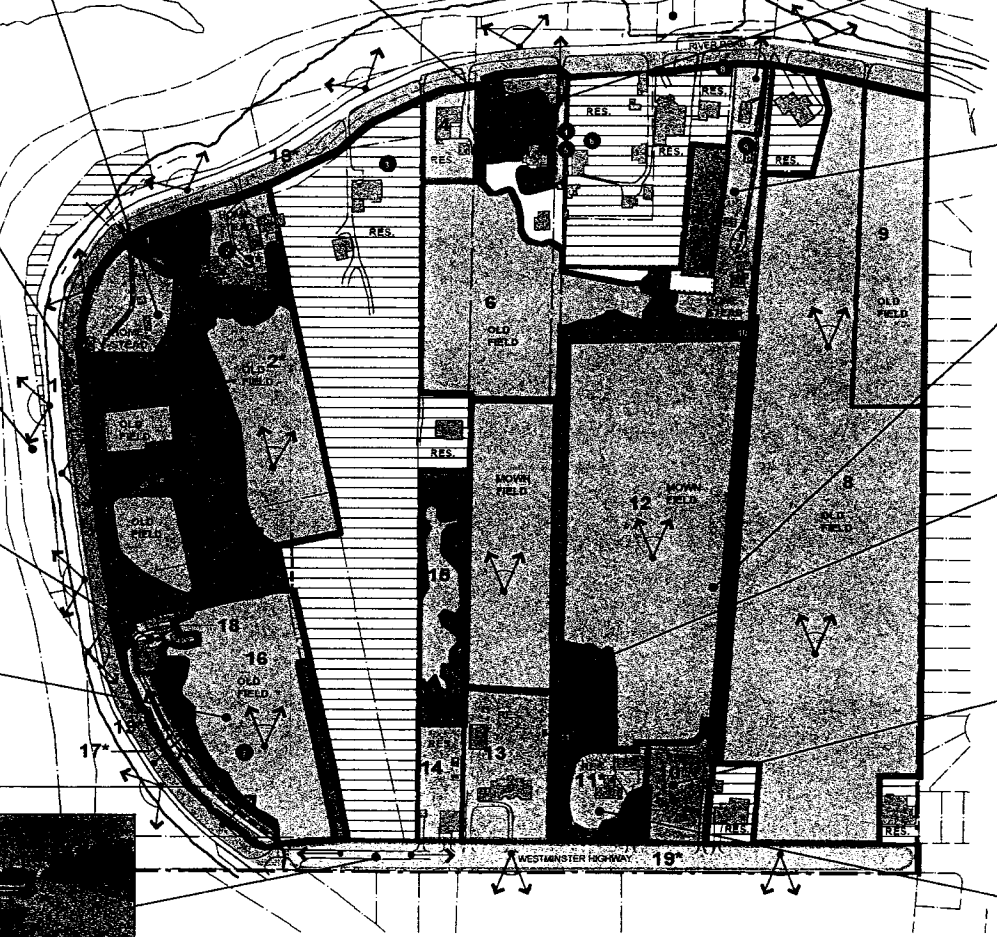
Orchard, Buemann Residence, Property M
- hazelnut trees planted on N-S-E-W grid
- well maintained; no understory vegetation
- very strong sense of enclosure and axis
- potential to interpret connection to building working orchard

Lane, Property P
- good sense of enclosure
- glimpses of old agricultural fields within site
- rows of mature exotic specimen trees
- potential for arboricultural interpretation



Westminster Highway
- semi-enclosed character created by vegetation on either side
- good views and potential connection to Terra Nova Nature Park to south
- potential for development as "country lane"

Buemann Residence, Property M
- inhabited, well-maintained residential yard
- surrounded by orchard, planted woodlot and agricultural fields
- strong potential for interpretive connection to building
- potential for eventual adaptive re-use of building



LEGEND

LANDSCAPE CHARACTER TYPES

Field
- flat, open areas
- some with remnant vegetation; some cropped, hayed or mown
- successional vegetation ranging from herbaceous to woody species
- edges well defined in some places by hedgerows, shelterbelt plantings
- paddock fencing in some areas

Yard
- remnant & inhabited yards; some with existing buildings, some with former building sites
- open areas interspersed with blackberry thickets, old hedgerows, large specimen trees; some heritage trees
- enclosed, in some cases intimate character
- edges not strongly defined

Woodlot
- wooded and semi-wooded areas
- part-cultivated, part-naturalized character; some areas originally planted, some consisting mainly of volunteer vegetation
- stronger sense of enclosure than yards
- edges between yards, fields and woodlots not strongly defined

Hedgerow/Thicket
- long hedges or shelterbelt tree plantings
- many are overgrown , semi-naturalized
- both planted, volunteer species present
- often over or adjacent to drainage ditches
- provide seperation, definition of open areas

Orchard
- ordered plantings of fruit trees
- conditions range from maintained to overgrown

Perimeter Areas
- long, narrow areas on north and west boundaries of study area
- edges defined on inner side by vegetation, ditches, and by vistas rather than edges on outer side

Rural Corridor
- strongly linear features, with potential for trail development

STUDY BOUNDARY

PRIVATE PROPERTY

EXISTING INTERNAL TRAIL

SIGNIFICANT VIEW

(8) EXISTING PROPERTY

(9) LANDSCAPE UNITS
-units with interpretive potential are asterisked

(10) SIGNIFICANT TREES:
*1,2,*5*: Horse Chestnuts 3: Common Pear*
*4. English Yew 5: English Oak**
7. Treed Driveway 8. Lombardi Poplar Shelterbelt
9. Weeping Birch 10. White Poplar*
11. Buemann Woodlot
(Heritage trees on C.O.R. inventory are asterisked)

PROJECT TEAM

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DENISE COOK: Cultural Resource Inventory

EVECO CONSULTANTS LTD.: Soils & Drainage Inventory

KEN SUMMERS BIOLOGICAL SERVICES: Wildlife Inventory

ROBERTSON ENVIRONMENTAL SERVICES LTD.: Vegetation Inventory

GIS INNOVATIONS INC.: GIS Services, Graphics

3m 50m 100m
0' 150' 300'

June, 2002

TERRA NOVA NORTHWEST QUADRANT: Inventory & Analysis — LANDSCAPE CHARACTER — Plate 10

Unit 19
-Avoid contamination of water quality in ditch and retain vegetation along the study properties side of ditch (South and East edges of ditch)
-Provide linkage, through River Road and Westminster Highway around private properties between internal trails.
-Preserve and enhance views into the study area and outward to river and Sturgeon Bank
-Interpret cannery history, historical access to interior of site, wildlife in foreshore, airport to North
-Manage pedestrian/vehicular access
-Develop West end of Westminster Highway as "country lane", establish connection between study area and nature park to South

Unit 4
-No major constraints on public access.
-Could serve as site entrance/service area or buffer for high environmental values in Unit 5

Unit 5
-Protect large, mature trees for wildlife values
-Manage trees to retain values (i.e., remove invasive species)
-Avoid new trails/access through treed area; keep access to edge of trees
-Use existing access road for low-impact trail connection between River Road and site interior
-Interpret historical relationship between cannery industry and residences, orchard remnant

Unit 6
-Maintain and enhance hedgerows for wildlife and heritage value
-Develop open space trail connection with Unit 5
-One of the site units that could be developed for agriculture

Unit 7
-Maintain hedgerows for wildlife values
-Enhance and interpret front garden/house/back field typology
-Reuse historical buildings if structurally feasible. Interpret old post office and stagecoach route
-Protect, interpret, and possibly re-establish orchard trees

-Maintain hedgerows (for historical and wildlife values)
-Develop trail, maximizing spatial interest and views

Unit 3
-Protect large mature trees for wildlife values
-Manage trees to retain values (i.e. remove invasive species)
-Avoid access through treed area, keep access to edge of tree area and use fences if necessary
-Develop low impact trail. Maximizing spatial interest and connecting to Unit 1 and River Road
-Interpret former building footprints, heritage trees

Unit 9
-Retain trees and encourage hedgerows for wildlife
-Remove blackberries from field
-Interpret historical development pattern of clusters of residences along dyke with deep, narrow fields behind; use historical driveway alignments for trail access
-Develop some open spaces for informal active recreation
-One of the best site units (along with Unit 8) for potential agricultural development

Unit 2
-Maintain old field biophysical values and minimize impact on wildlife use(voles and raptors) by restricting trail access to East edge of field
-Conserve native soils by avoiding fill
-Maintain trees and hedgerows for wildlife habitat
-Periodic mowing of old-field will be required to maintain habitat value
-Develop low-impact trail along old slough alignment
-Interpret historic slough; seek to acquire portion of slough on private property for future trail, interpretation

Unit 8
-Maintain Hedgerows for wildlife
-Control purple loosestrife and ensure that future uses and access do not contribute to its spread (ie. seeds in the soil transported on the boots of community gardeners)
-Interpret historical development pattern of clusters of residences along dyke with deep, narrow fields behind
-Develop trail, open space for informal active recreation
-One of the best site units (along with Unit 9) for potential agricultural development

Unit 1
-Plant native shrubs and trees to enhance wildlife values
-Remove blackberry growth (to no more than 25% blackberry coverage of unit)
-Develop trail connecting to River Road and Unit 17 to South, following existing (and historical) alignment, and maximizing spatial interest and views
-Interpret former building footprints, connection between buildings and landscape, naturalization

Unit 12
-Maintain as actively mowed/seasonally flooded field for wildlife and historical values (original open field development pattern behind residences)
-Retain hedgerows for wildlife use
-Some open space can be used for informal active recreation; access to be restricted in winter months when fields are flooded/used by waterfowl

Unit 11
-Prevent public access to woodlot portion of unit
-Develop trail in maintained yard only; interpret connection between buildings and landscape
-Reuse building if structurally feasible (semi- or non-public use, to minimize impact on woodlot)

Unit 18
-No biophysical constraints on public access or use
-Reuse building if structurally feasible
-Interpret connection between building site, old access bridge, and landscape
-Consider trail connection to River Road at old access bridge

Unit 10
-Enhance wildlife and aesthetic values by planting groundcover
-Develop low-impact trail, maximizing spatial interest and views
-Interpret connection between residence and orchard
-Develop orchard for demonstration
-Develop buffer between unit and adjacent private land

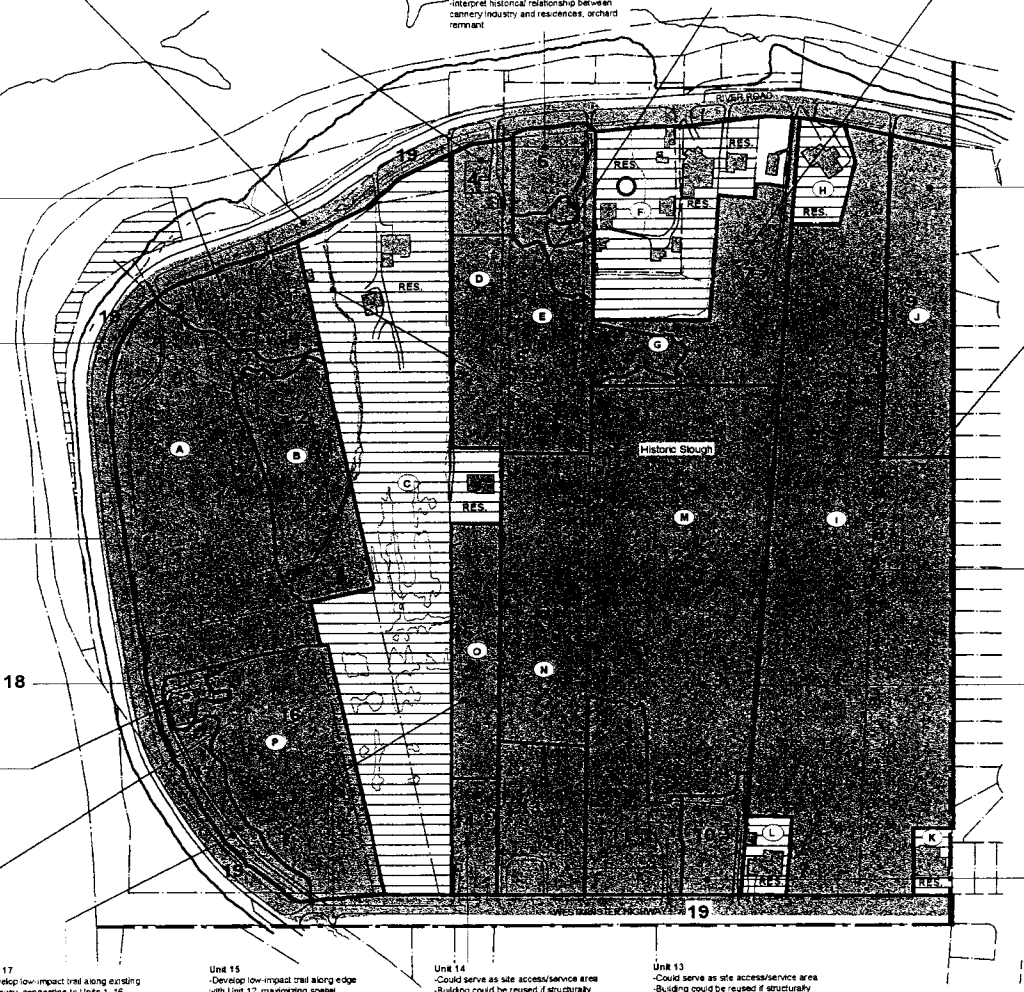
Unit 16
-Conserve native soils by avoiding fill and other major disturbances
-Some open space can be used for informal passive or active recreation
-Develop open space trail connecting to Unit 17/River Road/Westminster Highway, maximizing views

Unit 17
-Develop low-impact trail along existing driveway, connecting to Units 1, 16 Westminster Highway, maximizing spatial interest and views
-Prevent access off of trail, to avoid trampling of tree root structures
-Retain, protect and interpret collection of mature unique trees
-Tree management required (i.e. removal of invasive species)

Unit 15
-Develop low-impact trail along edge with Unit 12, maximizing spatial interest and views
-Access should be restricted in winter months when fields are used by waterfowl
-Retain woodlot trees and hedgerows for wildlife value
-Control spirea and blackberry encroachment

Unit 14
-Could serve as site access/service area
-Building could be reused if structurally feasible

Unit 13
-Could serve as site access/service area
-Building could be reused if structurally feasible



LEGEND

- LANDSCAPE UNIT
- GREAT BLUE HERON NEST AREA
- WATER FEATURES: DITCH, SLOUGH, MARSH, POND, LOW AREA
- STUDY BOUNDARY
- PRIVATE PROPERTY

PROJECT TEAM

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0m 50m 100m
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June 2002

TERRA NOVA NORTHWEST QUADRANT: Inventory & Analysis

GUIDELINES FOR PUBLIC ACCESS & USE

Plate 11