

TO: CITY MANAGER 2003 August 06
FROM: DIRECTOR PLANNING AND BUILDING OUR FILE: PL 68000-20
Barnet Escarpment Urban Trail
SUBJECT: BARNET ESCARPMENT TRAIL

PURPOSE: To seek approval to construct the Barnet Escarpment Urban Trail from Bayview Drive to Phillips Avenue and to bring down a Capital Reserves Expenditure Bylaw.

RECOMMENDATIONS:

1. **THAT** Council approve the construction of a 3 metre wide gravel Urban Trail from Bayview Drive to Phillips Avenue.
2. **THAT** a Capital Reserves Expenditure Bylaw in the amount of \$422,650 (inclusive of 7% GST) be brought forward for consulting services and construction of the Barnet Escarpment Urban Trail.
3. **THAT** a copy of this report be sent to the Parks, Recreation and Culture Commission.

REPORT

1.0 BACKGROUND

1.1 Trail Vision

For many years the City has maintained a long term vision of creating a pedestrian and bicycle trail along the forested slopes and foreshore area of the Barnet Escarpment to connect surrounding neighbourhoods to Barnet Marine Park in a way that permits Burnaby residents to experience the grand vistas of the Burrard Inlet fiord land and seascapes (see *attached* Figure 1). This vision was identified in the 1973 Development Concept for Barnet Marine Park and re-affirmed in the 1997 status report on Barnet Marine Park with recommendations to reevaluate the locations for trails based upon environmental considerations. This spawned two studies in 1998:

- Shoreline Stabilization and Design for the West portion of Barnet Marine Park; and
- Site Feasibility Study for Overpass of the CPR right-of-way.

The first report examined shoreline issues, and the latter study, adopted in principle by the Parks, Recreation and Culture Commission in 1999, evaluated several potential CPR crossing sites in the context of a multi-use trail connection between the foreshore area and the existing Barnet Escarpment Urban Trail which currently terminates at Bayview Drive.

1.2 Trail Planning

By 2000, three separate but coordinated processes were influencing planning of the trail:

1. As directed by the Parks, Recreation and Culture Commission, a master plan for the western end of Barnet Marine Park, including a CPR right-of-way overpass, was being developed;
2. A preliminary design for a pedestrian only section of the Barnet Escarpment Urban Trail was under development following Council approval of the 2000 March report on the Barnet Escarpment Trail - Design Consultant Selection; and
3. Lafarge Canada, having just purchased Kask Bros. Ltd., had approached the City about resolving long standing environmental degradation and encroachment issues in Barnet Marine Park including the construction of a trail.

In 2001, Kask Bros. Ltd. made a PPA application to address outstanding environmental and encroachment concerns in Barnet Marine Park as outlined previously to Council in a 1995 September 12 In-Camera Report. As part of the restoration of the park site, Kask Bros. Ltd. proposed to implement parts of the preliminary trail design including:

- construction of the Barnet Escarpment Urban Trail along the Barnet Marine Park frontage of their site;
- granting a statutory right of way for a trail head parking lot and for part of the trail at the eastern end of their property;
- provision of concrete for curbs in the parking lot;
- revegetation of disturbed areas in the park; and
- enough lock blocks (approximately 250) to construct the necessary walls and bridges to connect the trail in front of their site to the existing Urban Trail at Bayview Drive.

That fall, the Environmental Review Committee (ERC) approved the preliminary design for a pedestrian only section of the Barnet Escarpment Urban Trail.

In 2002, the Parks, Recreation and Culture Commission approved in principle a design concept for the pedestrian/bicycle overpass by the Kask site and a shoreline connector to the east end of Barnet Marine Park. In keeping with the Commission's decision, the trail design was revised to allow cyclists to access the proposed overpass from both the parking/trail head area opposite the Harry Jerome Sports Centre at the eastern end of the Kask site and the existing Urban Trail to the west at Bayview Drive. In addition to providing an off road cycling facility safe for all users, the new concept allowed for universal access to the top of the proposed CPR overpass from the new parking/trail head area (see *attached* Figure 2).

The trail has moved closer to construction on a month to month basis in 2003:

- March, the Environmental Review Committee (ERC) reviewed the revised Barnet Escarpment Urban Trail and re-affirmed its approval for a 3 metre asphalt trail behind an existing retaining wall structure 3 metre from the top of bank of a Class B unnamed stream and a bridge structure over a Class C perched wetted area.
- April, the Burrard Environmental Review Committee (BERC), which includes the Vancouver Port Authority (VPA) and the Department of Fisheries and Oceans (DFO), gave encouraging preliminary comments to the conceptual designs of both the CPR overpass and Barnet Escarpment Urban Trail.
- April, Public Open House hosted by the Parks Department, the trail design was displayed in conjunction with Barnet Marine Park and received a positive response.
- May, the Crime Prevention Through Environmental Design (CPTED) Committee, including a member of the Burnaby RCMP, endorsed the design.
- June, Kask Bros. Ltd., using City's preliminary design and coordination from the Parks Department, constructed a 3 metre gravel trail from the eastern end of their site to the staging area for the proposed CPR overpass (see *attached* Figure 3). They then invited Council and the Parks, Recreation and Culture Commission to an Open House to review their progress in addressing City concerns.
- July, Ministry of Transportation were asked if the title to Parcel "A", Lot 1, Plan 3575 used to support Barnet Road and needed to reduce the steepness of the trail, could be transferred to the City. City reviewed an indemnity agreement that would permit fall construction of the trail in the interim.

- August, approval from Terasen (formerly Trans Mountain Pipelines) to cross their pipeline near Bayview Drive requested by the City.

The necessary planning and construction approvals have either been obtained or applied for. The description of the preliminary trail design, trail budget and Council approval for construction form the subject of this report.

2.0 PRELIMINARY TRAIL DESIGN

As approved by Council, McElhanney Consulting Services Ltd. has prepared a preliminary design and cost estimate for an Urban Trail between Bayview Drive and Kask Bros. access driveway. Golder and Associates have produced a geotechnical report supporting the proposed location of the trail and an environmental assessment report has been prepared by Triton Environmental Consultants Ltd. determining that the trail will have no appreciable environmental impacts upon the park and the ERC concurs.

The proposed trail improvements have three distinct segments:

1. a parking area and trail head at the eastern end of the Kask site (see **Appendix A** Parking/Trail Head Area *attached*);
2. a multi-use universally accessible trail along the southern boundary of Barnet Marine Park from the trail head to an outlook area above the proposed CPR overpass (see **Appendix A** Multi-Use Universally Accessible Trail);
3. a multi-use forest trail that ramps up from the outlook area on the Phillips Avenue right-of-way to a relatively flat bench which runs parallel to Barnet Road and connects to the existing Urban Trail at Bayview where a future Bayview trail head area may be developed (see **Appendix A** Forest Trail).

To facilitate access, the trail will ultimately be paved from the parking/trail head area opposite the Harry Jerome Sports Centre to the lookout area, but this will be delayed to avoid having to reconstruct the trail which may be disturbed by equipment used in the construction of the proposed CPR Overpass. The remainder of the trail will remain as gravel. As noted above, some of the trail is still under construction by Kask. A detailed description of each segment and its status is included in **Appendix A**.



View from CPR Overpass Outlook Area

3.0 DISCUSSION

Construction of the trail is contingent upon:

- construction drawings including a complete geotechnical survey of the soils to confirm that they will support trail structures;
- approvals from Terasen to cross their pipeline and Ministry of Transportation to use Parcel A, Lot 1, Plan 3575 for trail alignment; and
- meeting both the construction dry weather construction window of opportunity and the availability of the Parks construction crew (with construction direction from an engineering consultant for the retaining wall and bridge structures).

3.1 Construction Drawings

Staff from Planning, Parks and Engineering have reviewed the design drawings in terms of cost, environmental issues, usability, trail design guidelines, aesthetics, accessibility and CEPTD principles. In every instance, the design has met Council's requirements. As anticipated in a 2000 March report on the Barnet Escarpment Trail - Design Consultant Selection, construction drawings, supported by a thorough investigation of the soils by a geotechnical engineer, will be required. These drawings will include two complex structures, a ramp with retaining walls to bring the trail up from the outlook area to the beginning of the forest trail and a bridge structure to get the trail across a permanently wetted area in the forest without blocking the movement of the water (see **Appendix A** Forest Trail for ramp and bridge locations).

3.2 Construction Approvals

Parcel A, Lot 1, Plan 3575 was purchased by the Province to support Barnet Road. When the Barnet Road was turned over to the City with title to the underlying properties, Parcel A was not able to be included. The parcel is inaccessible and has a 1:1 slope making it undevelopable. Ministry staff are currently investigating whether title to the parcel can be turned over to the City. In the interim, the City is reviewing a draft Indemnity Agreement that would allow the City to have access to the parcel for construction in 2003/2004. City staff have received verbal assurance from Terasen that the City will be granted permission to cross their pipeline. The City has received permission to cross the pipeline with trails under similar circumstances in several other locations, and does not anticipate this crossing to be an issue for Terasen (see **Appendix A** Forest Trail for Parcel A and pipeline locations).

3.3 Construction Timing

Due to the wet soils on the north side of Burnaby Mountain, the trail construction window on steep slopes is restricted to June through October. Parks crews are available in fall 2003 to construct structures in the most sensitive areas and to continue trail construction in the spring for completion in Summer 2004. A civil engineering consultant will be required to provide on-site direction to Parks Crews for construction of the retaining walls and precast bridge structure due to the complexity of the structures and precariousness of the steep and unstable slope which supports Barnet Road.

4.0 FINANCING

Design and Construction of the Urban Trail, associated structures, hazard tree removal, parking lot construction and landscaping, slope rehabilitation, and signage, are estimated to be \$395,000 plus GST. The original concept for a pedestrian only trail was quite limited in scope and had a budget of \$400,000 - \$500,000. After the Parks, Recreation and Culture Commission approved of a bicycle accessible CPR Overpass, the City's consultant investigated a trail design that would incorporate bicycles and wheel chairs that could have access to the top of the overpass to be built in the future. This has not increased the budget however, because Kask Bros. subsequently offered the City construction of the trail from the parking/trail head area to the lookout area (which they have completed), provision of all of the lock blocks necessary to build the bridges and retaining walls on the remaining section and concrete for the trail head parking lot curbs. Therefore, while the scope of the project was expanded due to the provision of a universally accessible trail from the parking/trail head area to the outlook area and an upgrade of the trail design to permit cyclists on the portion west of the outlook area, the budget to complete design and construction is still between \$400,000 - \$500,000.

In this regard, staff requests that a project budget of \$422,650 (inclusive of GST) be established to cover construction costs, rehabilitation costs, design and direction fees.

Sufficient Capital Reserves are available:

- in the 2003 Urban Trails component of the 2003 - 2007 Annual Capital Program, \$398,130 is budgeted under the Burnaby Mountain - Phase 3 Barnet Marine Park; and
- in the 2004 Urban Trails component of the 2003 - 2007 Annual Capital Program, \$100,000 is budgeted under the Burnaby Mountain - Phase 3 Barnet Marine Park.

Appearing elsewhere on this agenda is a Capital Reserves Expenditure Bylaw in the amount of \$422,650.

The Urban Trail Maintenance Budget, a subset of the Public Works Operating Budget for Boulevards will be adjusted in budget year 2004 to provide maintenance for the new urban trail.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Linking the Urban Trail network to Barnet Marine Park with a trail is a desirable goal as it will improve non-vehicular access to the park and allow residents to experience the unique ocean waterfront along Burrard Inlet. The proposed pedestrian trail design is consistent with approved plans including the Urban Trail component of the Burnaby Transportation Plan and the preliminary design of a master plan for the central and western portion of Barnet Marine Park. The necessary planning and construction

approvals have either been obtained or applied for. Advancement of this project does not commit the City to costs outside of the normal capital budgeting process.

Construction of the Barnet Escarpment Urban Trail will provide the City with the first off road link to Barnet Marine Park directly accessible from North Burnaby neighbourhoods. It is recommended that Council authorize staff to prepare all necessary construction drawings, geo-technical surveys and agreements with Terasen and the Province; and that approval be granted for the construction of the Urban Trail between Bayview Drive and the Kask Bros. site by Parks construction crews.



J.S. Belhouse, Director
PLANNING AND BUILDING

IW/jc
Attachments (4)

cc: Director Engineering
Director Parks, Recreation and Cultural Services
Director Finance
City Solicitor

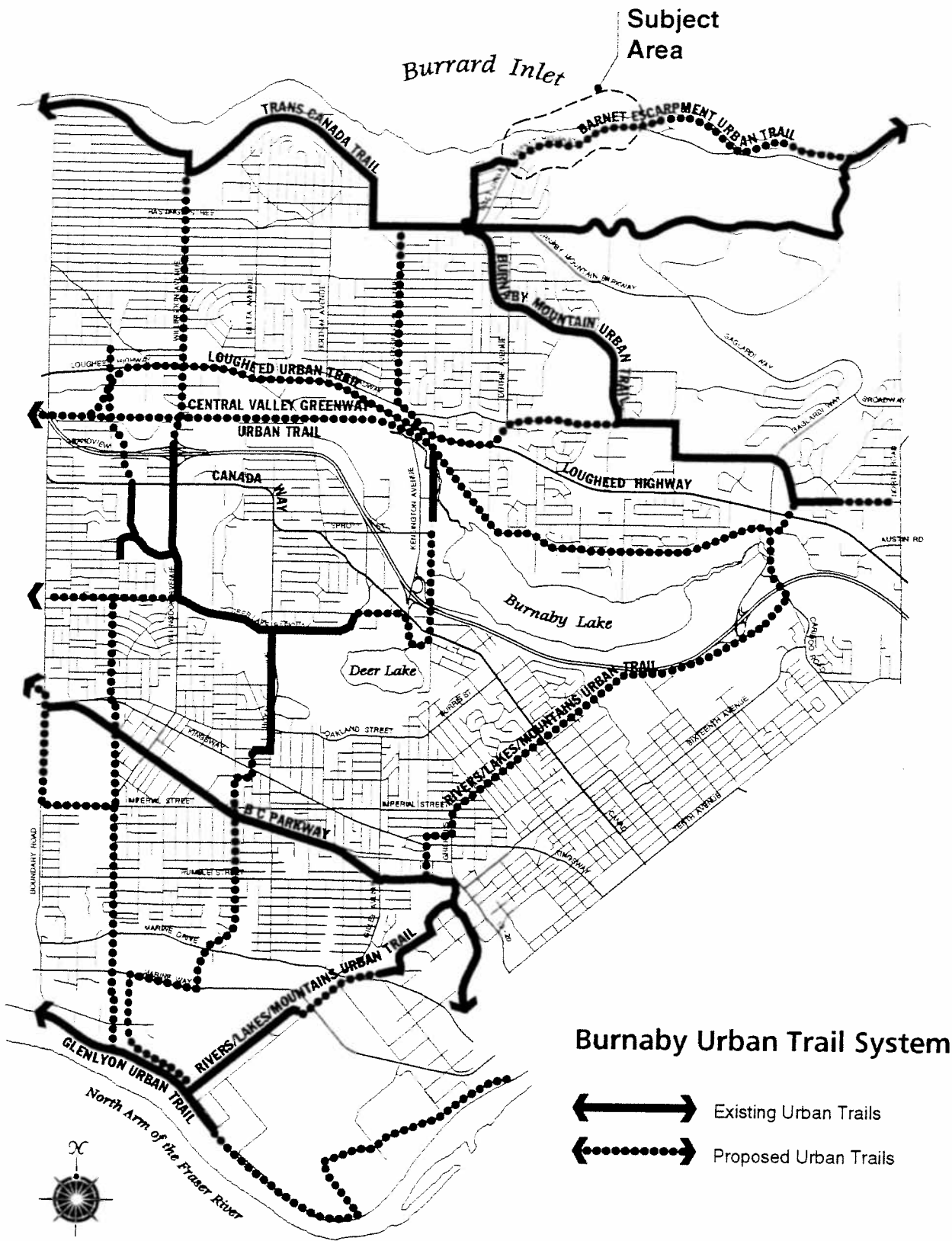
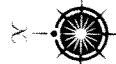
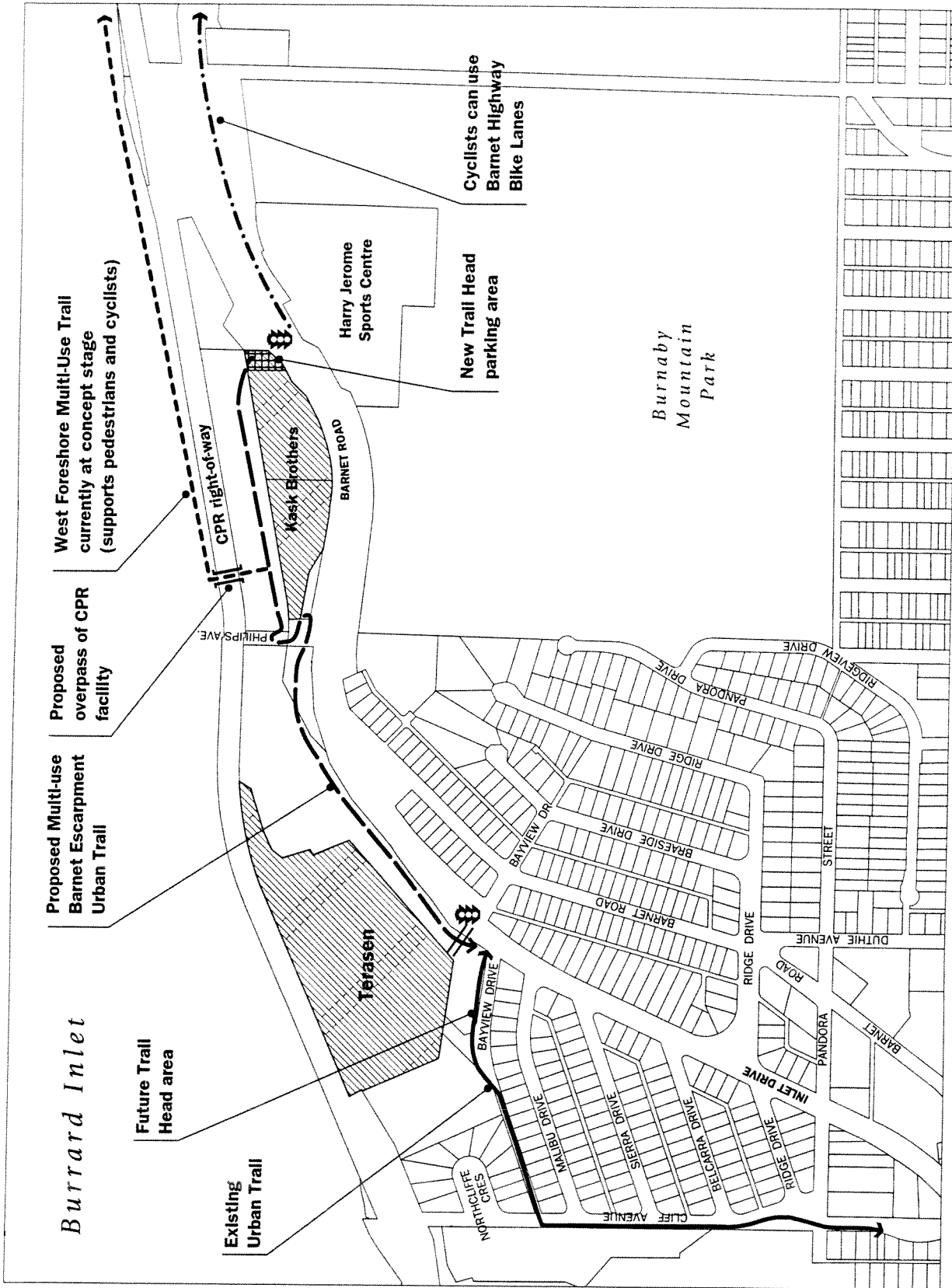


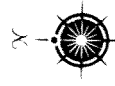
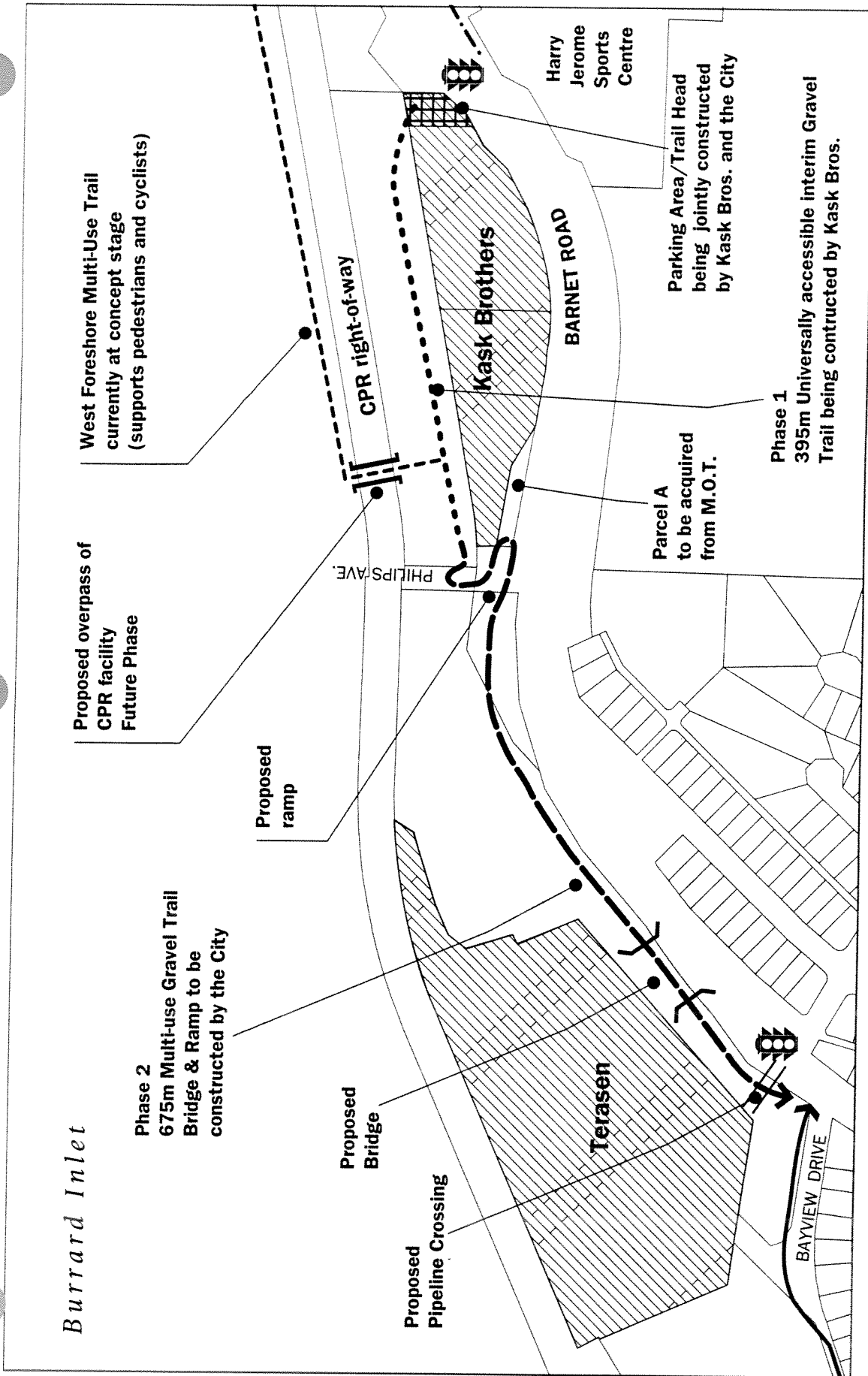


FIGURE 1





-  Privately owned properties
-  Existing Traffic Signal

Barnet Escarpment Trail
FIGURE 2

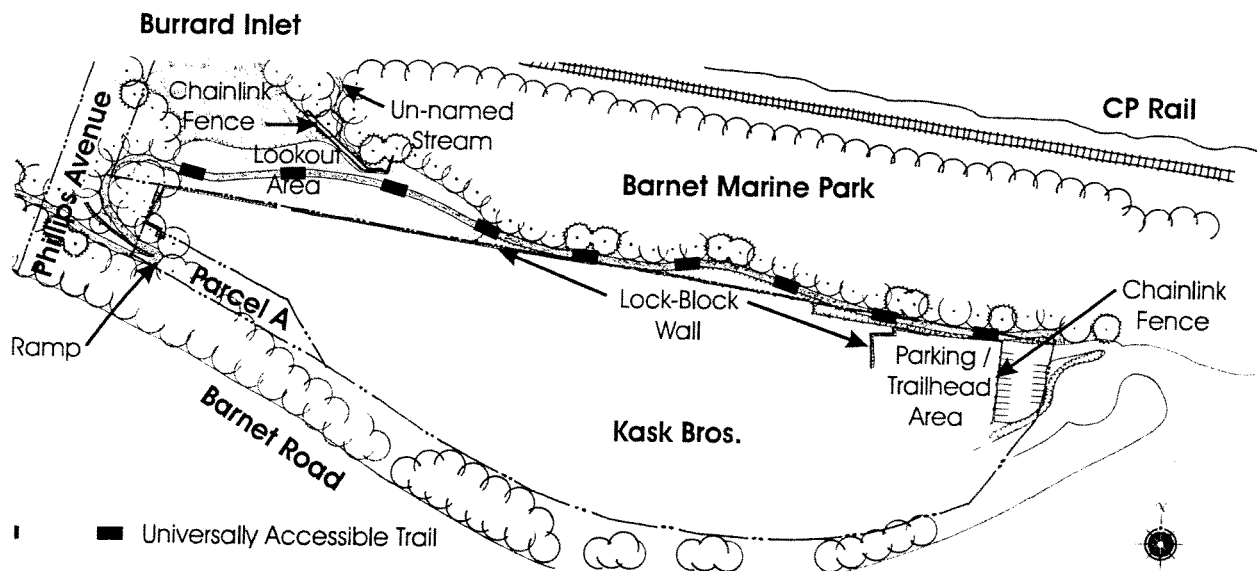


Barnet Escarpment Trail Phasing
FIGURE 3

-  Privately owned properties
-  Existing Traffic Signal

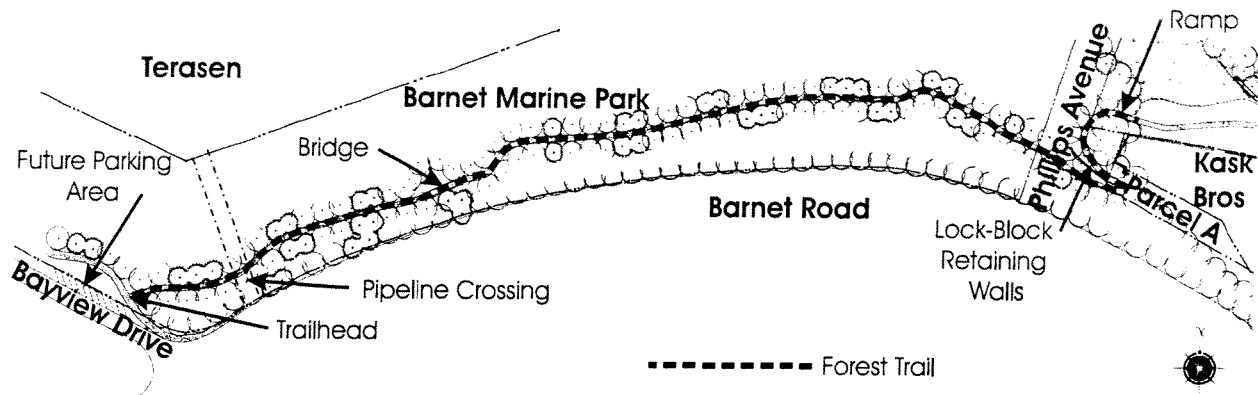
- Parking Lot and landscape screening design completed by Parks staff (See above),
- Fence dismantled and reinstalled by Kask,
- Rough grading of parking lot and trail head completed by Kask,
- City Survey Crew to survey area for SROW over parking area on Kask site, City Solicitor to prepare and execute legal documents,
- City to form concrete curbs, Kask to supply concrete,
- City to supply and install landscape screen; and
- City to supply and install bollards, trail head orientation sign and trail signage.

Multi-Use Universally Accessible Trail



- Trail design completed by McElhanney,
- Regrading and installation of lock block retaining walls and fence completed by Kask,
- Interim gravel trail completed by Kask,
- Revegetation to be completed by Kask,
- Design of outlook area restoration landscaping to be completed by Kask,
- City Survey Crew to survey area for SROW over trail area on Kask site, City Solicitor to prepare and execute legal documents,
- Survey and registration of easement for overflow pipe to be completed by Kask,
- City Survey Crew to survey temporary construction access from the Kask site for future trail and overpass construction, City Solicitor to prepare and execute legal documents,
- City to supply and install interpretive and trail signage; and
- Parks staff to design future trail connection to CPR Overpass.

Forest Trail



- Trail design completed by McElhanney, construction drawings required,
- Province to transfer title to Parcel A, lot 1 Plan 3575, to City (this parcel is used to stabilize the Barnet Highway, but was not transferred to the City at the time that the highway was turned over to the City and so staff is enquiring if the title can now be transferred to the City), City to sign Indemnity Agreement to allow construction access in the interim,
- City staff to get approval to cross Terasen pipeline,
- City Survey Crew staff to lay out the trail,
- Parks staff to complete hazard tree survey and removal,
- Parks staff to construct the trail,
- McElhanney required to provide geotechnical and direction services,
- Kask to provide Lock Block retaining blocks for retaining walls and bridge structure,
- City to supply and install bollards, interpretive and trail signage,
- Conceptual trail head and parking layout completed by McElhanney; and
- Requirement for future parking area to be monitored after trail completion.