TRAIL MANAGEMENT PLAN
FOR THE
BRUCE COUNTY RAIL TRAIL – SOUTH:
HURON-BRUCE RD. TO PAISLEY

NORTHWOOD ASSOCIATES LANDSCAPE ARCHITECTS LTD.   May 30, 2003

This report to be read together with the 'Trail Development Map' for the Bruce County Rail Trail – South prepared by Northwood Associates and dated March 2003, revised April 1 and April 24, 2003.

1. INTRODUCTION

1.1. BACKGROUND

The Bruce Grey Trail Network (BGTN) considers development of the Bruce County Rail Trail (BCRT) as a joint undertaking by three partners: The County of Bruce, the Bruce Grey Trail Network, and local trail groups. Interim responsibility for the development of this trail will be the responsibility of the Bruce Grey Trail Network as outlined in the Memorandum of Understanding between the County of Bruce and the BGTN. The BGTN is in the process of forming the Bruce County Rail Trail Management Committee to oversee all future management of the corridor.   It is envisaged that over time, the management committee will evolve to become a separate incorporated body and will assume full responsibilities for management and operation of the Bruce County Rail Trail.

The composition of the Bruce County Rail Trail Management Committee will consist of representatives from Bruce County, BGTN, local trail groups/users and adjacent landowners. No single private or public organization will have sole responsibility for the management of any portion of the trail.

The Bruce County Rail Trail will be a co-operatively managed recreational trail corridor that encourages safe use for a variety of recreational activities while ensuring the protection of natural and cultural heritage value for future generations.

1.2. LOCAL TRAIL GROUPS

The Brockton Trails Committee is comprised of local individuals interested in spearheading the development of a trail along the former CN corridor through the Municipality of Brockton and in the Town of Walkerton. Their Mission Statement is to develop and promote a four-season trail system within the Brockton area that takes into consideration all users and user groups for years to come.

The Mildmay Carrick Trails Committee has indicated their interest in developing trails in the village of Mildmay and possibly along the CN corridor that runs through the village of Mildmay.

Bruce County Rail Trail - South extends from the southern boundary of Bruce County at the Huron Bruce Road, through Mildmay, Walkerton and ends at the bridge in Paisley.

1.3. PROPOSED TRAIL

1.3.1. THE VISION

- This trail falls under the Bruce-Grey Trails Network and was identified as one of the priority trail development areas in the Master Plan.
- It will be part of a larger system of trails. Development of this trail will greatly assist the development of new trail systems in the region.
- Bruce County Rail Trail - South is to be an all-seasons trail.
- It will be a main trail corridor, connecting the communities through which it passes.
- There are opportunities to connect this trail to other existing trails:
  - in the publicly owned (County of Bruce) 781-acre Brant Tract just south of Paisley;
  - the Saugeen River Trails in Walkerton;
  - snowmobile trails;
  - other multi-use trails in the area.

1.3.2. FORMER CN RAIL LINE

- Trail is to be constructed on the County-owned former CN rail line between Huron-Bruce Rd. (the south edge of Bruce County) and the south end of the Paisley bridge.
- Rail line is a historic line that was rebuilt in 1966 to provide rail access to the Bruce Nuclear Power Development (BNPD).
- Project is first phase of a larger scale trail project, which will extend from Huron-Bruce Rd. at the south end (just north of Clifford) to Port Elgin and down the spur line from Port Elgin to the BNPD. This trail will also link to proposed trails to the south through Clifford, Harriston, Palmerston and beyond.
- The rail right of way (ROW) is 20 m (66') wide in all cases, except where portions have been sold off (in Walkerton and Paisley) and where there were sidings (width is up to 45.7 m (150') in these locations).
- Existing rail bed is consistently 3.6 m to 4.3 m (12' – 14') in width with 20 mm ø (3/4") clear stone surfacing in some places. There is an accumulation of topsoil on top of the gravel rail bed in some areas. All railway ties have been removed and a portion of the former rail bed has been graded smooth.
- There are many large steel and concrete culverts under the rail bed and most are in good condition, although some need cleaning out.
- Sections of the rail bed are in areas of poor drainage, compounded as a result of non-functioning culverts.
- Gravel rail bed has been removed in a few locations for use as granular base for driveway construction on adjacent properties and to create drainage ditches across the rail bed.
- There are no bridges on this section of the rail bed.

2. STANDARDS

2.1. TRAILS

2.1.1. INTENDED USE

- It is intended that the trail be barrier-free (i.e. wheelchair accessible).
- County-approved uses include the following:
    1. walking/hiking
    2. cross-country skiing
    3. bicycling
    4. horse-back riding *
    5. dog-sledding *
    6. snowmobiling *
    7. ATV (all-terrain vehicle) riding *

    (* for those who belong to an organized club)

- The Mildmay Carrick Trails Committee is currently opposed to ATV use of the trail through the village of Mildmay. This issue will require further discussion and the trail, for some user groups, may need to be constructed with dual tread-ways or re-routed around some of the urban areas.
- Trail Management is planned to be under the auspices of the Bruce County Rail Trail Management Committee when it takes over management of the entire rail trail.

2.1.2. SURFACING

- Minimum 50 mm (2") hard-packed limestone screenings (stone dust) over up to 125 mm (5") compacted granular base over the existing leveled-off rail bed.
- The amount of granular base will vary depending on the condition of the existing rail bed. Sections of the existing rail bed where there is clear stone should be graded off to spread out the clear stone over a larger area prior to the installation of the finished trail surface.
- This surface (screenings over granular base) will be used for the majority of the trail as it provides a relatively low cost, easy to maintain and accessible (wheelchairs and bicycles) surface with a character complementary to the surrounding rural landscape.
- Trail can be constructed in two phases, with granular base installed first and later topped up with limestone screenings, as funding allows.
- Some urban sections of the trail may be upgraded in the future to a hard, smooth surface such as asphalt or recycled material.

2.1.3. WIDTH

- Average width of the trail will be 4 m (13'): enough width for several people to comfortably pass each other whether on foot, in a wheelchair, riding a bicycle, on horseback or riding a snowmobile or ATV.
- Trail to be 5 to 5.5 m wide where it passes through urban areas. (Signs should be posted in these areas indicating a reduced speed limit for motorized vehicles.)
- Trail shoulder area where grade at side of trail begins to slope down will be approximately 0.6 m (2') wide.

2.1.4. CLEARANCE

- 3.5 m (11.5') is preferred average vertical clearance for full width of trail to allow for emergency vehicle access.

- Note that the width of the trail clearing in areas of dense evergreen tree and underbrush growth should be increased to reduce the need for constant trimming of encroaching branches and to increase visibility and perceived safety for the trail user.
- Dense herbaceous vegetation (tall weeds and grasses) should be cut back approximately 1 m (3') on either side of the trail.

2.1.5. ACCESS BARRIERS

- Designed to allow passage of allowed users and block prohibited use.
- Preferably adaptable, to seasonally prohibit user groups, alternatively, signage could be used to notify users of seasonal prohibitions, as decided by the Trail Management Group.
- Must allow passage of emergency and maintenance vehicles.

Access barrier preferred by Trail Group

- Landscaping rocks and/or posts to be used on either side of barrier to restrict prohibited entry around access barriers.

2.1.6. FENCING

- The County of Bruce has assumed responsibility for fencing of the trail and has clearly outlined its policy in this regard in the County Highways Department Rail Trail Fence Policy dated February 6, 2003.

2.1.7. ROAD CROSSINGS

- Trail should cross all main roads at or close to right angles.
- Appropriately sized culverts should be installed or existing culverts extended to provide for trail re-alignment at road crossings while accommodating roadside drainage.
- There should be signage and road markings to warn vehicles of trail crossing ahead.
- Signage to warn trail users of road crossing ahead should also be situated a short distance from the crossing.

2.2. VIEWING/RESTING AREAS

2.2.1. INCIDENCE

- Provide rest areas adjacent to the trail at frequent intervals, where appropriate, approximately every 1,000 m.
- Create viewpoints in appropriate locations where there are interesting views or at points of interest (historical significance) such as at former railway sidings and south of Mildmay where a train derailed and disappeared into the swamp.

2.2.2. CHARACTER

- Rest areas should reflect the surrounding environment (e.g. rest areas in urban areas are more formal; those adjacent the Brant Tract should be more rustic and natural in character).
- There should be seating opportunities at each rest area. A variety of seating areas should be provided: shady areas for summer use, sheltered from the wind for winter user. 'Seat' may be large log, stump or cut sections of logs, single flat-topped rock or grouping of boulders, rustic bench made of rough-hewn squared timber, or more formal benches – as the surroundings dictate.

- Viewpoints may be a mere widening in the trail. Seating should be provided at viewpoints and Interpretive Signage may be included where appropriate and in areas not likely to be vandalized.

2.3. <u>SIGNAGE</u>

2.3.1. CONSISTENT WITH REGIONAL TRAILS
- All trail signage should comply with Bruce-Grey Trail Network's Signage Recommendations and the BGTN Master Plan.

2.3.2. TRAIL HEAD
- Clearly identify whole trail system by name;
- Simple map of trail showing:
    - adjacent communities and major landmarks/attractions related to trail;
    - distances and approximate walking times for each section of the trail;
    - trail access points;
    - parking locations.
- Small map of Region showing (future and) existing trail linkages to east and west;
- Trail regulations – communicated in a positive manner (i.e. outline allowed use rather than prohibited use), trail etiquette;
- Interpretive information:
    - some highlights or features to watch for on the trail;
    - interesting points of natural or cultural history relevant to trail, historic photographs of railway, stations and/or sidings;
    - origin of place names;
- 911 fire number location for trail head.

2.3.3. ACCESS POINTS
- Clearly identify the trail by name;
- Simple map of trail same as at Trail Head;
- Communicate trail regulations in a positive manner;
- 911 fire number location for access point.

2.3.4. DECISION POINTS
- Directional signage relating to the landmarks, snowmobile trails, hamlets and other places identified on the Trail Head and Access Point maps (e.g. 'To the Brant Tract Trails ➔', 'To the Saugeen River Trail System ➔').
- Durable and vandal-resistant, but low-cost, as most will be in remote locations and subject to potential vandalism.

2.3.5. TRAIL DISTANCE MARKERS
- Distinctive but relatively small markers showing distance (in kilometres) from start of trail for emergency (911) location and identification.
- South edge of Bruce County portion of trail should be designated 'start' of trail.

2.3.6. WARNING SIGNS
- Clearly identifying impending road crossings, laneways, cattle crossings, etc. along the trail.

2.3.7. INTERPRETIVE SIGNAGE
- History of the rail line should be the theme of all interpretive plaques.

- Could be sponsored by local businesses with simple, discreet donor recognition. Trail Management Group should develop a policy related to sponsorship and advertising (size, fee structure, etc.)

3. TRAIL DEVELOPMENT

3.1. SECTION 1 TRAIL: *Huron-Bruce Rd. to Carrick-Brant Line*

3.1.1. OPPORTUNITIES

- Connection to possible future linkage to rail trail to the south
- Connection to Otter Creek Ravine Trail in Mildmay
- Trail passes through scenic areas of hardwood bush, rolling farmland and wetlands north and south of Mildmay
- Possible trail head/staging area on County land next to the Station Tavern in Mildmay and the northern end of Mildmay across from Rotary Park
- Access to food, washrooms, gas and lodging in Mildmay
- Equipment dealer on north edge of Mildmay may be interested in providing gas for ATVs and snowmobiles
- Rotary Club Park is just across the road from the trail at the north end of Mildmay, provides another opportunity to connect to Lion's Club trail along creek
- Highlight historical points of interest

3.1.2. OBSTACLES

- The Mildmay Carrick Trail Committee opposes ATV use of trail within the urban area of the village of Mildmay.
- A few houses very close to trail immediately north of Mildmay and first concession south of Mildmay
- Crossing of County Rd. #3 – angled, at crest of hill
- A trail committee that is inclusive of all trail users needed to develop this section.

3.2. SECTION 2 TRAIL: *Carrick-Brant Line to Dunkeld Siding*

3.2.1. OPPORTUNITIES

- Brockton Trails Development Committee is interested in developing this section
- Possible trail head/staging area on Saugeen Transport property on north side of Highway #4 - #9 or on road ROW on south side of highway
- Connection through Walkerton to Saugeen River Trail System and cross-country ski trails
- Working with snowmobile club to open up trail from Walkerton to Cargill
- Access to food, washrooms, gas and lodging in Walkerton and south of Walkerton
- Access to camping in Lobie's Park in Walkerton
- Scenic areas of hardwood bush, farmland and wetlands

3.2.2. OBSTACLES

- Crossing of Highway #4 - #9 – slightly angled level crossing with good visibility but heavy traffic
- Connection through or around former Walkerton siding that has been sold as three parcels to private individuals/companies (crossing private property immediately north of Highway #4 - #9)
- Plugged culvert between Sideroad 5 South and Concession 2

- Connection through wrecking yard currently encroaching on railway ROW immediately south of Concession 2 (gate across trail has been built)
- Close to houses at auto recycler and also west of County Road 3
- Section immediately north of Concession 2 is blocked by a brush pile and is fairly low-lying with some garbage piles at side of trail bed, steep sided rail bed in areas
- Two angled road crossings
- Large billboard just south of Highway #4 - #9 partially blocks trail and platform for changing signage overhangs trail in its present location

3.3. <u>SECTION 3 TRAIL</u>: *Dunkeld Siding to Brant-Elderslie Line*

3.3.1. OPPORTUNITIES
- Brockton Trails Development Committee is interested in developing this section
- Small siding at Dunkeld and at Cargill (north of Concession 8) could become staging areas
- Working with snowmobile club to open up trail from Walkerton to Cargill
- Small siding at Eden Grove could be developed as rest area
- Linkages with trails in Brant Tract
- Minimal brushing required north of Bruce Rd. #3. Scenic area with good buffer zones, trail passes through farmland (small fields) and wetland between Conc. 14 W and Brant Elderslie Line

3.3.2. OBSTACLES
- Section between Dunkeld and Eden Grove sidings is overgrown and trail is rough
- House close to trail at Eden Grove (Concession 10 crossing)
- Crossing of Bruce Rd. #3 – angled level crossing with good visibility, fairly heavy holiday weekend traffic traveling at high speeds (80 km zone)
- Plugged and misaligned culvert 150 m north of Bruce Rd. #3 crossing needed
- House very close to trail at Cargill siding

3.4. <u>SECTION 4 TRAIL</u>: *Brant-Elderslie Line to Paisley*

3.4.1. OPPORTUNITIES
- Connection to rail trail to the north
- Connection to Paisley walking trails on dikes, canoe route access points, and Rotary Park (camping).
- Access to food, washrooms, gas and lodging in Paisley
- Possible staging area on County property at the south end of Paisley
- Possible scenic lookout in Paisley at bridge overlooking Teeswater River
- Junction of Teeswater and Saugeen Rivers in paisley renders Paisley rich in historic value
- Bruce County Heritage Farm, south of Paisley

3.4.2. OBSTACLES
- Angled road crossing of County Rd. #3 south of Paisley
- Section of private land in the middle of Paisley – trail must follow side streets for short section
- A trail committee that is inclusive of all trail users needed to develop this section

4.   CAPITAL COSTS

The following are estimated costs for labour and materials required development of the Brockton Trail. The costs include labour, but it would be reasonable to assume that volunteers led by members of the Brockton and Mildmay Trail Groups, could do some of the work, particularly that related to brushing and trail construction. Costs for Items marked with an asterisk (*) could be reduced with the use of volunteer labour.

Items marked with an arrow (⇦) are municipal or county improvements necessary for trail development. The Brockton and Mildmay Trail Groups see these as municipal or county responsibilities and recommends that they be implemented in concert with trail development. These items are summarized on page 9.

Cost estimates are based on 2003 dollars using Northwood Associates records and estimates of actual construction costs on similar projects. Cost estimates do not include taxes or the preparation of detailed design drawings or engineering studies where they may be required.

4.1.   <u>SECTION 1 TRAIL</u>: *Huron-Bruce Rd. to Carrick-Brant Line*

	Item	*Description*	*Cost*
1	Trail brushing and grading	17,800 m length @ $1 per m	$17,800 *
2	Construction of trail granular base on rail bed	17,800 m length x 4 m wide 100 mm depth crusher run granular (7,120 m^3 @ $23.50)	$167,320 *
3	Top up trail base with stone dust	17,800 length x 4 m wide 50 mm depth limestone screenings (3,560 m^3 @ $26.00)	$92,560 *
4	Major road crossings	Realign trail bed, extend culvert in one location	$1,500
		2 road markings, signage @ $900 each	$1,800 ⇦
5	Trail access control barrier/gate	28 custom swinging gates with boulders and/or posts at verges @ $1,500	$42,000 *
6	Trail head sign	Durable, Fibrelite (or equal) sign panel and frame	$4,600
7	Other signage	4 access point signs @ $125 each	$500
		1 directional signs @ $100 each	$100
		17 trail distance markers @ $50	$850
8	Rest areas	Log and boulder seating – 8 locations	$3,200 *
9	Parking Lot	Gravel parking area for 20 to 25 vehicles	$3,500
		SECTION 1 TRAIL TOTAL:	$335,730

4.2.   <u>SECTION 2 TRAIL</u>: *Carrick-Brant Line to Dunkeld Siding*

	Item	*Description*	*Cost*
1	Trail brushing and grading	9,250 m length @ $1 per m	$9,250 *
2	Culvert cleaning	1 culvert cleaned @ $500	$500 *
3	Construction of trail granular base on rail bed	9,250 m length x 4 m wide 100 mm depth crusher run granular (3,700 m^3 @ $23.50)	$86,950 *
4	Top up trail base with stone dust	9,250 length x 4 m wide 50 mm depth limestone screenings (1,850 m^3 @ $26.00)	$48,100 *

5	Major road crossings	Realign trail bed, extend culvert in three locations	$4,500
		3 road markings, signage @ $900 each	$2,700 ⇐
6	Trail access control barrier/gate	14 custom swinging gates with boulders and/or posts at verges @ $1,500	$21,000 *
7	Trail head sign	Durable, Fibrelite (or equal) sign panel and frame	$4,600
8	Other signage	2 access point signs @ $125 each	$250
		4 directional signs @ $100 each	$400
		9 trail distance markers @ $50	$450
9	Rest areas	Log and boulder seating – 2 locations	$800 *
10	Parking Lot	Gravel parking area for 20 to 25 vehicles	$3,500
		SECTION 2 TRAIL TOTAL:	$183,000

4.3. <u>SECTION 3 TRAIL</u>: *Dunkeld Siding to Brant-Elderslie Line*

	Item	*Description*	*Cost*
1	Trail brushing and grading	11,400 m length @ $1 per m	$11,400 *
2	Removals	Remove private fence and gate from across trail	$500 *
3	Culvert repair/cleaning	1 culvert cleaned and repaired @ $1,000	$1,000 *
4	Construction of trail granular base on rail bed	11,400 m length x 4 m wide 100 mm depth crusher run granular (4,560 m^3 @ $23.50)	$107,160 *
5	Top up trail base with stone dust	11,400 length x 4 m wide 50 mm depth limestone screenings (2,280m^3 @ $26.00)	$59,280 *
6	Major road crossings	Realign trail bed, extend culvert in one location	$1,500
		3 road markings, signage @ $900 each	$2,700 ⇐
7	Trail access control barrier/gate	14 custom swinging gates with boulders and/or posts at verges @ $1,500	$21,000 *
8	Other signage	3 access point signs @ $125 each	$375
		1 directional signs @ $100 each	$100
		12 trail distance markers @ $50	$600
9	Rest areas	Log and boulder seating – 3 locations	$1,200 *
10	Parking Lot	Gravel parking area for 8 to 10 vehicles	$1,800
		SECTION 3 TRAIL TOTAL:	$208,615

4.4. <u>SECTION 4 TRAIL</u>: *Brant-Elderslie Line to Paisley*

	Item	*Description*	*Cost*
1	Trail brushing and grading	5,450 m length @ $1 per m	$5,450 *
2	Culvert cleaning	1 culvert cleaned @ $500	$500 *
3	Construction of trail granular base on rail bed	5,450 m length x 4 m wide 100 mm depth crusher run granular (2,180 m^3 @ $23.50)	$51,230 *
4	Top up trail base with stone dust	5,450 length x 4 m wide 50 mm depth limestone screenings (1,090 m^3 @ $26.00)	$28,340 *

5	Major road crossings	Realign trail bed, extend culvert in one location	$1,500
			$900 ⇐
		1 road markings, signage @ $900 each	
6	Trail access control barrier/gate	10 custom swinging gates with boulders and/or posts at verges @ $1,500	$15,000 *
7	Trail head sign	Durable, Fibrelite (or equal) sign panel and frame	$4,600
8	Other signage	1 access point signs @ $125 each	$125
		1 directional signs @ $100 each	$100
		5 trail distance markers @ $50	$250
9	Rest areas	Log and boulder seating – 2 location	$800 *
		SECTION 4 TRAIL TOTAL:	$108,795

4.5. SUMMARY OF CAPITAL COSTS

	Trail Section	*Trail Length*	*Cost*
1	Section 1 Trail: *Huron Bruce Rd. to Carrick-Brant Line*	17,977 m	$335,730
2	Section 2 Trail: *Carrick-Brant Line to Dunkeld Siding*	9,368 m	$183,000
3	Section 3 Trail: *Dunkeld Siding to Brant-Elderslie Line*	11,584 m	$208,615
4	Section 4 Trail: *Brant-Elderslie Line to Paisley bridge*	5,547 m	$108,795
	TOTAL:		$836,140

Total length of the trail being developed under this strategy is 44,476 m (44.5 km). Estimated cost per metre of trail development is approximately $18.80 assuming no volunteer labour.

4.6. SUMMARY OF MUNICIPAL IMPROVEMENTS

The following is a summary of the costs of municipal improvements necessary for trail development. These costs are included in the figures of the above Capital Cost table 4.5.

	Description	*Cost*
4.1.4	Major road crossings	$1,800
4.2.5	Major road crossings	$2,700
4.3.5	Major road crossings	$2,700
4.4.5	Major road crossings	$900
	TOTAL:	$8,100

5. OPERATIONAL MAINTENANCE

The Bruce County Rail Trail -South is designed to be a relatively low-maintenance addition to the County trail system. The Brockton Trails Development Committee under the guidance of the Management Committee and with the support of the municipality, the County and the Bruce Grey Trails Network, intends to undertake the maintenance of the trail developed under this strategy for 'Section 2 Trail' & 'Section 3 Trail'. New trail groups will be formed to assist with the development and maintenance of 'Section 1 Trail' & 'Section 4 Trail'

5.1. <u>MAINTENANCE TASKS</u>

We estimate that it will require 20 person work days per year to maintain this section of the trail. Maintenance tasks will include:

5.1.1. EVERY SECOND YEAR

- Top up surfacing of limestone screenings *where needed*.

5.1.2. ANNUAL

- Spring clean-up and removal of flood debris from culverts and ditches;
- Removal of winter accumulation of garbage;
- Pruning back heavy growth at trail edges.

5.1.3. SEMI-ANNUAL

- Trail grooming: grading/leveling of stone dust and gravel surfaces;
- Noxious weed control.

5.1.4. MONTHLY

- Trail inspection as per risk management strategy;
- Inspection of signage, benches and other trail amenities;
- Trail-side maintenance (e.g. mowing of tall herbaceous growth);
- Repair damage to trails and trail verges from heavy use and/or cycling.

5.1.5. WEEKLY

- Clean up and remove any garbage along trails.

5.1.6. AS-REQUIRED

- Repair or replace damaged signs, barriers, structures and other trail amenities;
- Remove any fallen trees from across trails and removal of any potentially dangerous trees.

5.2. <u>MAINTENANCE MATERIALS</u>

Trail surfacing will be the main component of the trail system requiring materials during maintenance. We estimate that one (1) tandem truck load (10 m^3) of materials will be required per 5 km of trail the second year after installation of final stone dust surfacing to 'top up' the trail surfaces. The following are current costs of the various materials required.

Material	*Delivered cost per 10 m^3 load (tandem truck)*
7/8" crusher run gravel (similar to Granular 'A' gravel)	$145
Limestone screenings	$162

It is assumed that volunteers will install the maintenance materials with the use of small machinery (e.g. a small skid-steer loader/'Bobcat' or stone dust spreader). A skid-steer loader can currently be rented for $165 per day plus trucking costs of approximately $50 for delivery and pick-up and cost of diesel fuel. Alternatively, an excavator or small loader/tractor could be used, if available.