

Recommendations for the Conservation of Public Lands, Bonshaw – New Haven

Prepared by the Bonshaw Hills Public Lands Committee



Photo credit: ©John Sylvester

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1. Mandate of the Bonshaw Hills Public Lands Committee

In 2012, approval was granted to the Department of Transportation and Infrastructure Renewal (DTIR) by the Department of Environment, Labour and Justice (DELJ) to proceed with the proposed Trans-Canada Highway realignment project between Bonshaw and New Haven, Prince Edward Island. One of the stipulations of the approval was the development of a management plan for environmentally sensitive land in the area. Such a plan was to be developed by the DTIR within one year of the approval date, with the input of government and non-government stakeholders which might have an interest in co-management and protection of the land. DTIR staff identified potential stakeholders in the local councils, land conservation and recreation communities and invited them to participate in this committee. A list of committee members is provided in Appendix I.

Our Task:

The Committee's focus complements Condition 9 of the October 1, 2012 Environmental Approval issued by the Provincial Department of Environment, Labour and Justice. Long-term management plans are to be developed for ecologically important lands in the area of the ongoing TCH Realignment Project, specifically for provincial parcels 860031, 219253, 219154, 218636 and 218669 (Figure 3, parcels in green), as well as other public lands agreed upon by the committee.

2. Purpose of This Report

This report outlines recommendations to DTIR for the management of public lands listed in section 4 (and labelled in figure 3). It should be noted that the report describes management in broad strokes and that parcel-specific management plans must still be further developed. This committee is recommending some long-term ownership and

management directions that impact on how management plans can be implemented. For example, transfer of ownership to land conservation trusts would place the onus of management on the trust and take it out of the direct control of DTIR. Similarly, inclusion of some of the land parcels into expanded versions of the two adjoining provincial parks would transfer the control of management to the Department of Tourism and Culture (DTC). For these reasons, we believe that it is important for DTIR to consider and decide on these broad recommendations before undertaking the necessary work on specific management plans.

Recommendation #1: The task of refining plans for all land parcels should be completed by a smaller committee in the coming 6 – 8 months (Oct 2013 – May 2014) after decision-making on ownership and management by DTIR.

The smaller committee would be assembled by the Province and would develop management plans that outline who will manage each land parcel (representatives of managing bodies should be on the committee) and what would be allowable and non-allowable activities. Some special considerations, such as locations for key pieces of infrastructure like parking lots or wheelchair-friendly access, could be described. Detailed ecological assessments of the public lands would need to be initiated this fall in order to be included with these refined plans. We anticipate that the field work will require a considerable time commitment and that appropriate financial resources should be allocated.

Recommendation #2: Appropriate financial resources should be made available to complete the necessary field work for biological inventories.

3. Incorporation of Public Feedback into This Report

The Committee sought public comment on a draft version of these recommendations over the course of four weeks in May – June 2013. Thirty-three written submissions were received and considered by the committee in drafting this final version of our

recommendations. In addition, we recorded questions and concerns raised at the two public meetings held during this consultation process and used them to weight some written comments on the same topics. Our summary and conclusions drawn from this feedback are provided in Appendix IV.

The public submissions were overwhelmingly positive and supported the committee's three main pillars of management for conservation, recreation and education. In particular, there was considerable support for an expanded network of trails on these lands. While we tried to accommodate all of the constructive comments provided by the public, there were a few instances where competing interests or opinions could not be reconciled. These few instances arose when there was a conflict with the management principles which the committee derived early in our discussions (listed in section 5.2) and which formed the foundation for our work, or when the recommended action would preclude an activity that already exists on these lands. As an example of the former, a few submissions that advocated for recreational use of the lands wanted to ensure that there were no areas considered "off limits" for public access. This contravenes our agreement in principle to place greatest priority on conservation of ecologically sensitive areas (see principles 2, 4, 5 and 10 in section 5.2, as well as our legislated mandate in section 1). As an example of the latter, some submissions advocated for no hunting on these land parcels. While that may be possible for upland game hunting, waterfowl hunting and angling are already allowable activities along the West River that adjoins



several of the land parcels in question. These are pre-existing activities that we would not recommend be removed from the list of possibilities for people using these public areas.

Figure 1. View looking north from parcel F (photo credit: Megan Harris)

4. Land Parcels Considered by the Committee

Condition 9 of the highway realignment approval identified 5 land parcels acquired by the Province. Additional land parcels were acquired and other provincial lands already existed in the area prior to the start of the project. The latter includes Strathgartney Provincial Park, Bonshaw Provincial Park, the equestrian grounds (currently leased to the Island Horse Council) and two small areas along the West River associated with historic sites. Figure 3 shows all public lands adjacent to the highway corridor. The Committee considered all of these parcels as having potential for conservation and recreation within a connected, larger public space.



Figure 2. Open upland mixed-wood forest in parcel G, the former Encounter Creek / Fairyland property (photo credit: Todd Dupuis)

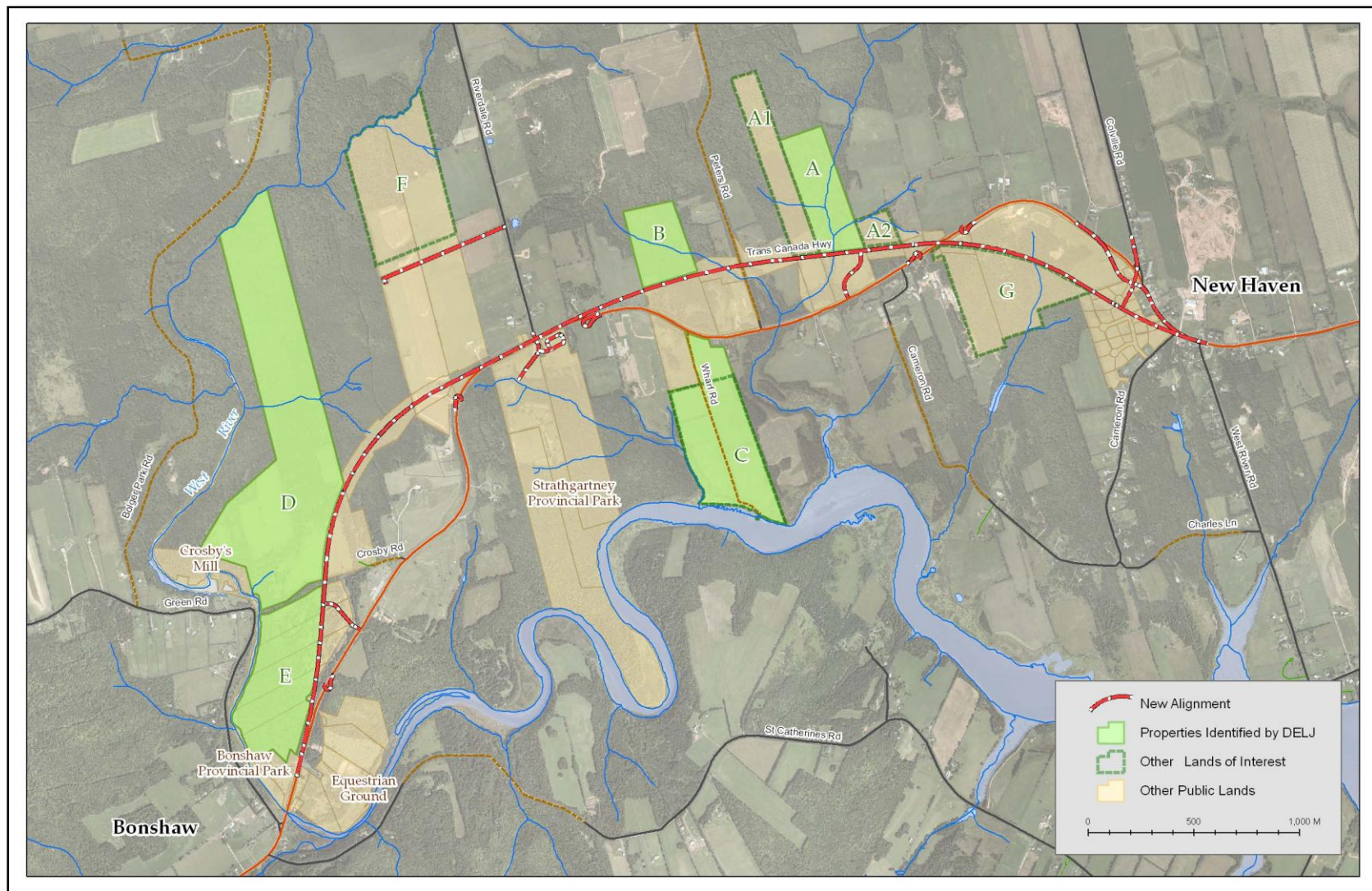


Figure 3. Map of public lands in Bonshaw Hills; the original 5 land parcels listed in condition 9 as well as 4 other public lands of interest are labelled with letters A – G.

4.1 Ecological and Historical Values of the Bonshaw Hills Region

“The center of Prince Edward Island is blessed with many hills, small valleys, tiny streams that broaden swiftly to estuaries as they run the short distance to the sea. The landscape is a patchwork of working and abandoned farms, woodlands in all stages of growth, unspoiled trails and roads. It is ideal country for walking: the hills are only a few hundred feet high. One seldom encounters a ‘No Trespassing’ sign.”

Ian MacQuarrie, The Bonshaw Hills (1989)

The Bonshaw Hills region is a rolling tapestry of farms and forest, streams and springs. The landscape has both ecological importance and recreational value for tourists and Island residents alike. The hills are dominated by mixed hardwoods with many of the shaded stream ravines home to remnants of Acadian riparian softwood and hardwood forests. Patches of older woods containing sugar maple, yellow birch, eastern hemlock, eastern white pine and some American beech are gems within larger blocks of younger forest. The area provides more than a pretty panorama as it is frequented by locals and city dwellers for its hiking trails and other recreational pursuits. The West (Eliot) River watershed has cold, spring-fed water and some of the best habitat on the Island for native Atlantic salmon. The river is a sports fishing favourite with brook trout in virtually every tributary, large or small.

The area has a rich history of ship building, lumber milling and agriculture. Early settlers in the watershed farmed the fertile lands around the estuary and shore, using mussel mud harvested from the estuary in the winter to improve the soil for crops. Ship building was a big industry, with shipyards at Bonshaw, Fairview and Shaw’s Wharf (St. Catherine’s). Mills were scattered all along the river. The remnants of these mills still affect how the river flows today, even though there are few mill ponds left intact.

Logging occurred in the upper watershed for 'ton timber' (large hardwoods), which was then floated down river to Charlottetown and shipped to England.

Figure 4. Crosby's Mill on the West River in Bonshaw, circa 1930 (photo credit: Mac Irwin)



Today, there are still many reminders of that resource-based history, some of which occur near the area of the highway

realignment. Three pioneer cemeteries, the remains of Crosby's Mill, old bridge

abutments, rock carvings, homestead foundations, an old well and wharf remnants are on or adjacent to the public land parcels described in this document.



Figure 5. Riparian margin along West River in land parcel D (photo credit: Todd Dupuis)

The forest areas encompassed within several of the land parcels are exceptional, particularly the older groves

adjacent to the river and smaller streams. Figure 6 shows forest cover types for the area. Mature eastern hemlock is present on at least three of the parcels, as are large eastern white pine, sugar maple and healthy under-stories of ground hemlock, native ferns and wildflowers. These are typically shown as 'tolerant' on the forest cover map in Figure 6. The steep terrain also allows for many glimpses of greater vistas of surrounding forest, fields and river.

As Ian MacQuarrie so eloquently states in his book, *The Bonshaw Hills*, this is a special place, worth protecting for people and for nature itself.

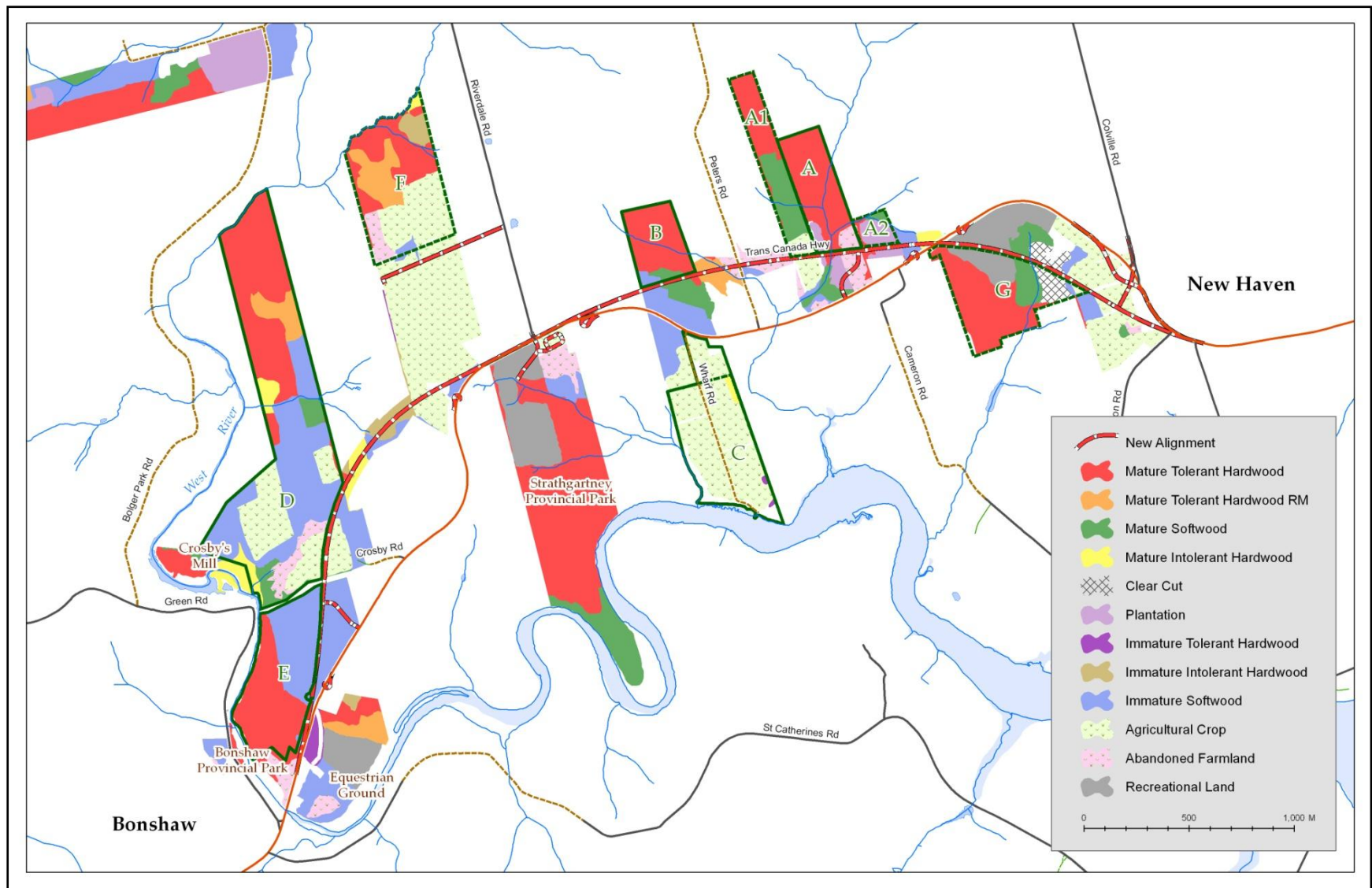


Figure 6. Forest cover types for Provincial land parcels in the Bonshaw – New Haven area

5. Recommendations for Public Lands Management

5.1 Definitions of Key Land Management Terms

In this section, the Committee uses some terms to which people from different resource backgrounds could attach varying meanings. To clarify what these words mean to us, a brief list of key terms and their definitions is included here.

Table 1. Definitions for terms used by the Committee

Term	Committee Definition
Active living	Physical activity outdoors, both consumptive (e.g., hunting, fishing, trapping, berry-picking) and non-consumptive (e.g., hiking, cycling, photography)
Acquisition	The purchase, trade for other land(s) or acceptance of a gift of land(s)
Connectivity	Presence of corridors (such as forest strips) which enhance plant and animal movement to and from other blocks of desirable habitat. Corridors play an essential role in maintaining biological diversity
Conservation	Planned management of a natural resource to prevent over-exploitation, destruction or neglect
Ecological integrity	An area's current state as compared to its natural state. An area with good ecological integrity will have a natural diversity of plants and animals, no invasive species, and be functioning well. Maintenance of ecological integrity means managing the environment in such a way that natural processes are maintained and genetic, species and ecosystem diversity are assured for the future
Ecologically important lands	Places that have special environmental attributes worthy of retention or special care. These areas are critical to the maintenance of productive and diverse plant and wildlife populations
Enhancement	The process of making the present environment more habitable for particular species or groups of species; distinct from restoration in that it introduces elements that were historically absent (e.g. nest boxes)
Hardwood Forest Types	" Tolerant " refers to forests dominated by tree species that grow well in the shade of other trees; they tend to be long-lived. Examples include sugar maple, American beech, red spruce and eastern hemlock. " Intolerant " refers to forests dominated by trees which grow better in direct sunlight than in the shade of other trees (i.e. they are intolerant of shade). Examples include trembling aspen, white birch, red pine and eastern larch
Lease	An agreement by which an owner of real property gives the right of possession to another for a specified period of time and consideration
Licence	A permission to do a particular act or series of acts on land of another without possessing any interest in the land. The permission is

Term	Committee Definition
	exclusive to the two parties and cannot be transferred.
Natural capital	The “stock” of nature that provides a flow of goods and services that sustain us. For example, a stock of forest provides goods such as timber, ground hemlock and mushrooms, as well as services such as wildlife habitat, water filtration and erosion control
Preservation	The process of working to protect something so that it is not damaged or destroyed; involves more limits on public access or use than conservation. A preserve is a piece of land that is managed through this process
Protection	To legally restrict one or more uses of an area of land to ensure its natural features are not disturbed. The <i>Natural Areas Protection Act</i> and the <i>Recreation Development Act</i> are two examples of legislation that can be used to protect land on PEI
Recreation	Non-motorized use of lands consistent with active living
Restoration	The process of restoring site conditions to what they were historically, before disturbance and/or environmental degradation
Riparian zone	The unique area adjacent to and influenced by a river or stream (includes but is not limited to the flood plain)
Species-at-risk (regional)	Species of plants and animals with diminished population numbers that are considered to be of special concern, threatened or endangered in the region by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). These may or may not be listed on the national species-at-risk registry

5.2 Land Management Principles

The first task of the Committee was to establish a basic set of principles for land management that would direct decision-making at the smaller scale of individual land parcels or groups of parcels. The following principles were derived through Committee consensus:

- 1) Land management should consider relevant broader, existing strategies and policies such as the Provincial Climate Change Strategy and the West River Watershed Management Plan.
- 2) Conservation of existing areas with high geological, ecological or heritage values is of primary importance.
- 3) Strategic acquisition (through purchase or trade) or restoration of other areas is important where there is a positive impact on habitat connectivity or other broad management goals such as erosion control, active living or protection of view-scapes.

- 4) Preservation of lands should be considered for the most special / most sensitive areas.
- 5) Allowable resource uses should be based first on minimizing ecological risks and second on promoting active, outdoor, sustainable living.
- 6) Given the topography of the Bonshaw Hills region and the propensity of Island soils for erosion, long-term management plans should reflect a commitment to minimizing our chronic land use problems associated with soil erosion and excessive nutrient enrichment of groundwater.
- 7) Active management (e.g., tree cutting, pruning, planting) may be allowed to enhance natural features or public access. Any funds generated (from tree cutting for example) will be reinvested in the properties.
- 8) Education and nature interpretation values should be built into the initial framework, to promote wise use of natural resources.
- 9) Land management should consider broader strategies for provincial parklands and other public lands in the vicinity, to maximize the public benefit and natural capital values.
- 10) Public access will be allowed unless there is a conservation or safety reason not to.
- 11) Within the context of principle #10:
 - a. Management should accommodate multiple uses such as hiking, cycling, skiing, snowshoeing, low-impact camping, education, training and research. No motorized vehicle access will be allowed (with the exception of wheelchairs), unless it is for management purposes.
 - b. Traditional consumptive uses (hunting, angling, trapping, berry-picking) will be allowed unless there is a legal restriction.

These management principles were largely endorsed by the public during the consultation process. In particular, there was strong support for the three main pillars of management outlined, namely conservation of sensitive lands, recreation through active living and nature education for all ages.

Recommendation #3: Management of all public lands discussed here should be developed with three core principles in mind: conservation of sensitive lands, recreation through active living and nature education for all ages.

5.3 General Recommendations for Long-term Management

In the process of developing recommendations, the Committee discussed a number of components of land management and of what it might look like over the long term.

- 1) Who should eventually hold the title to these public lands – the Province or a non-government land conservation trust (such as the Island Nature Trust or the Nature Conservancy of Canada)?
- 2) Who should be responsible for their management – the Province, a non-government organization (NGO) or the Province in partnership with one or several NGOs?
- 3) What level of legislated environmental protection, if any, should be established for each land parcel? This would include mechanisms such as designation under the *Natural Areas Protection Act* (NAPA) and designation as a park under the *Recreation Development Act*.
- 4) How can connectivity, both in terms of wildlife and human use, be enhanced among the various public lands?
- 5) How can the sometimes competing needs of ecological integrity and public use be balanced in a way that optimizes both?

In the paragraphs which follow, we offer answers to these basic questions, supported by public input.

5.3.1 Ownership Options

On the whole, the Committee felt that the public good would be better served by transferring ownership of the provincial lands to land conservation trusts in perpetuity, where long-term Provincial administrative costs could be minimized and any *NAPA* designation could not as easily be lifted. Seventy-eight percent of public submissions who specifically addressed the ownership issue supported this recommendation. The committee recognizes that there may be accounting challenges which preclude the adoption of this recommendation, but nonetheless feel compelled to stress the underlying message it conveys. The committee and the public feel that public lands are not “safe” from resale and that lands can only be truly protected if placed in the hands of a land conservation trust. The public response to this question indicates that they want these lands protected.

Another option for the lands adjacent to existing parklands would be to incorporate them into Bonshaw and Strathgartney Provincial Parks. The expansion of Bonshaw Provincial Park through the addition of parcels D and E would be relatively straight-forward, as there are no other land parcels in between. However, the joining of Strathgartney Park to other public land parcels (either D and E or C) would involve further agreements for private lands or strategic planning to incorporate the old Trans Canada Highway as a walking / cycling corridor. These possibilities are further explored below.

There were strong and opposing views expressed by the public during the consultation process on the matter of further land acquisition. This committee recommends that further acquisitions be considered where there are strong ecological or recreational reasons for doing so. However, at no time would we recommend expropriation be used as a tool for acquisition. The committee has begun a dialogue with owners of lands of interest with respect to connectivity for people and wildlife, but no firm commitments can be reported at this time. A plan for acquisition that considers connectivity and allows for individual choice would be beneficial.

Long-term leases (e.g., 50+ years) to land conservation trusts is a less-favoured option from the Committee's perspective, but could work well if the first two ownership choices turn out to be unworkable. Only productive agricultural sections of parcels were considered to have potential value for future private ownership, provided they could be traded for other lands of high ecological value in the vicinity.

Should there be any instances where there is an agreement made to connect public lands via access through private lands, then there should be some discussion by government of supporting initiatives to implement a policy of limited liability. Such a policy would ensure that landowners would not be held liable for injuries incurred by people using private lands for recreational pursuits such as cycling. Legislation addressing this issue already exists for ATV use under the *Off-highway Vehicle Act* (section 11.1) and could be expanded to include non-motorized recreation.

Recommendation #4: Regarding ownership of the provincial lands, the Committee recommends:

- a) The lands be transferred to non-profit land conservation trusts where possible; this is our preferred option***
- b) As an alternative to transfer of the lands, those parcels in the vicinity of the two provincial parks (Bonshaw and Strathgartney) could be incorporated into an expanded provincial park***
- c) The lands could also be leased long-term (50+ years) to land conservation trust(s); we see this as a possibility only if the previous two options turn out to be unworkable***
- d) Ownership of productive agricultural land could be turned over to the private sector if there was interest in a trade for other (private) lands of high ecological value in the vicinity***

Recommendation #5: Landowners allowing access across private lands to improve connectivity of public lands should be protected by limited liability legislation.

5.3.2 Management Partnership Options

Several groups were identified as possible partners in land management of public parcels. The University of Prince Edward Island and Holland College have a pre-determined arrangement with the Province, to lease parcel B and license parcels A, C and E for teaching and research purposes (Figure 7); the new lease would be a replacement for the land parcel they had been leasing but lost in part with the highway project approval (Figure 3, parcel B). Other potential partners in management include: Island Nature Trust, the West River Watershed Group, Cycling PEI, Island Trails Inc, Macphail Woods Ecological Forestry Project, municipal councils or additional non-profit groups.

Recommendation #6: The Province should seek partnerships to undertake restoration, nature interpretation and active living recreation components of long-term management

5.3.3 Land Protection Options

Given the ecological value of the forested lands encompassed by the land parcels under consideration (see section 4.1) the Committee strongly recommends long-term protection of all 5 parcels and the additional public lands. The recommended legislative vehicle for such protection would be the *Natural Areas Protection Act (NAPA)*, with additional protection from the *Recreation Development Act (RDA)* for any parcels incorporated into existing parks. The management of some pieces for recreation, reforestation or wildlife conservation is allowed by *NAPA* legislation provided that the management plans drawn up for each parcel reflect those long-term uses or needs.

Within a few of these land parcels, there are existing agricultural lands that some might question have value as natural areas. The farmlands considered for retention as public lands by the committee are mostly encompassed in the steep land inventory and are marginal at best as agricultural land. Farmland of greater value in parcels C and F could be subdivided off and traded for lands in the area with higher ecological value (Figure 7). The committee considers the farmlands in the steep land inventory would have the greatest value if returned to forest or permanent grasslands.

Any corridor development such as required for power projects would disrupt the connectivity of the parcels for wildlife and would not be recommended. Leaving pieces of land parcels outside of the *NAPA* umbrella would leave them susceptible to such resource uses. The committee considers that the parcels should receive blanket protection from development by placement under *NAPA*.

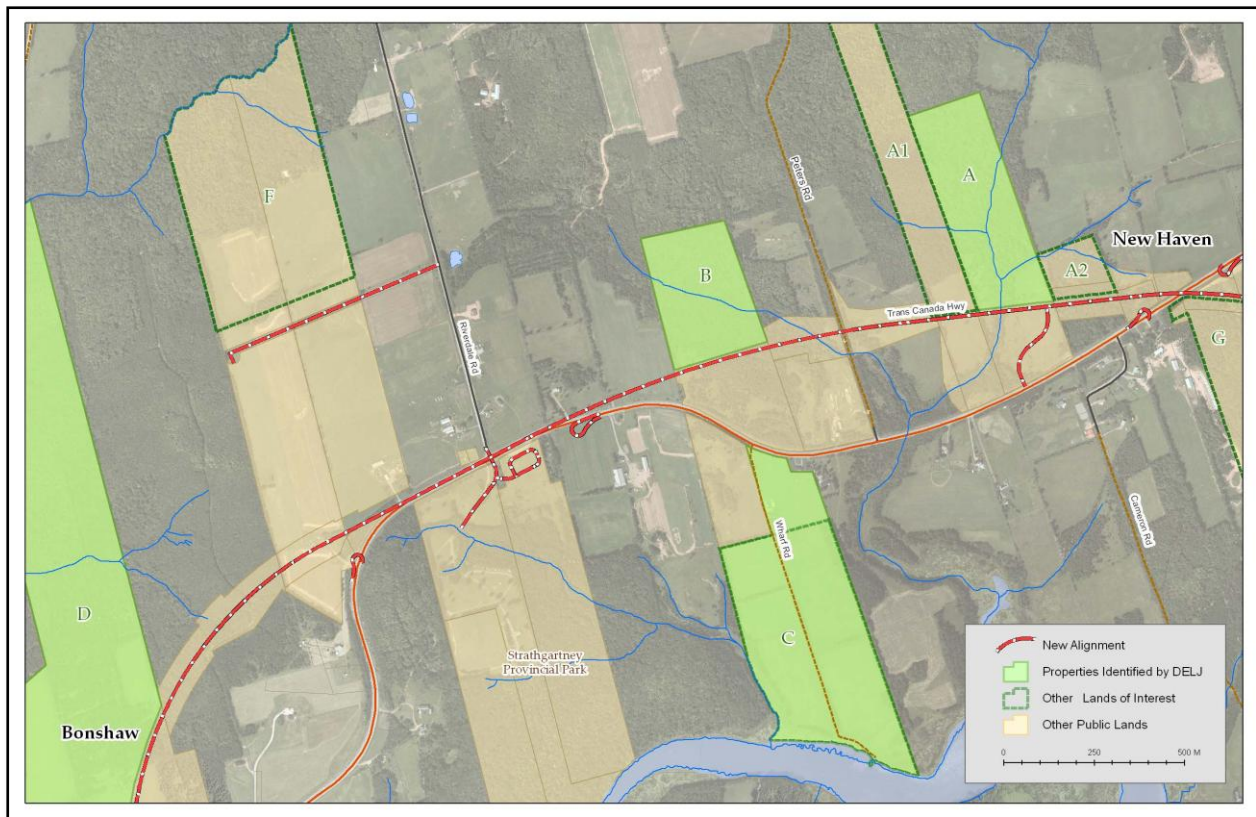


Figure 7. Portions of parcels C and F considered for retention and management as public lands (shown by dashed green outline)

Recommendation #7: All provincial lands retained in the area should be designated under NAPA for their exceptional ecological value, both individually and when considered as a whole, connected environment. Corridor development should not be considered for these parcels.

5.3.4 Land Use for Recreation

Given the location of the land parcels near existing provincial parks, there is great potential to expand park boundaries, recreational use and nature interpretation. Figure 8 shows possible hiking and cycling trails within expanded parklands. With the existence of old farm and woods roads in parcels D and E, the addition of loop trails varying in length from roughly 2 – 6 km would require relatively modest up-front resources to create and have minimal environmental impact. Continuous woodlands trails of these

distances are not common on the Island and particularly not within easy travelling distance from both Island cities.

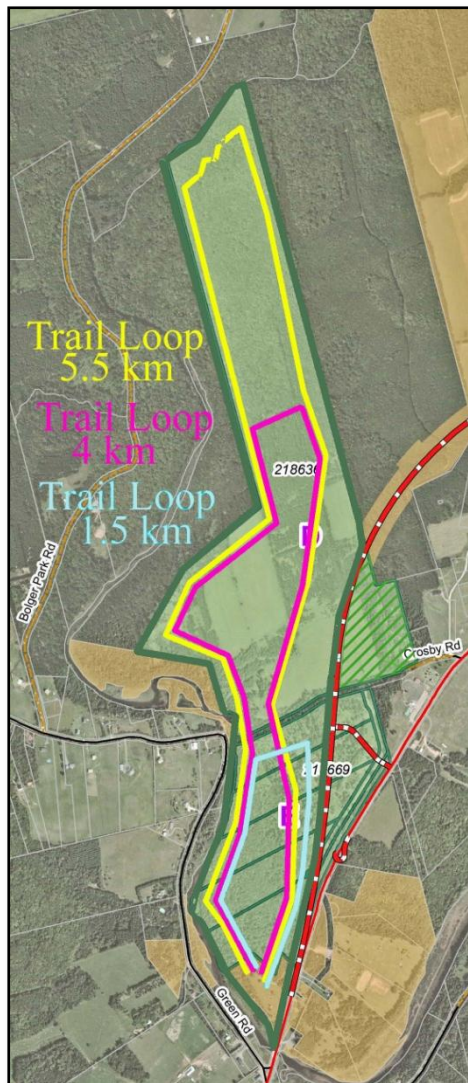
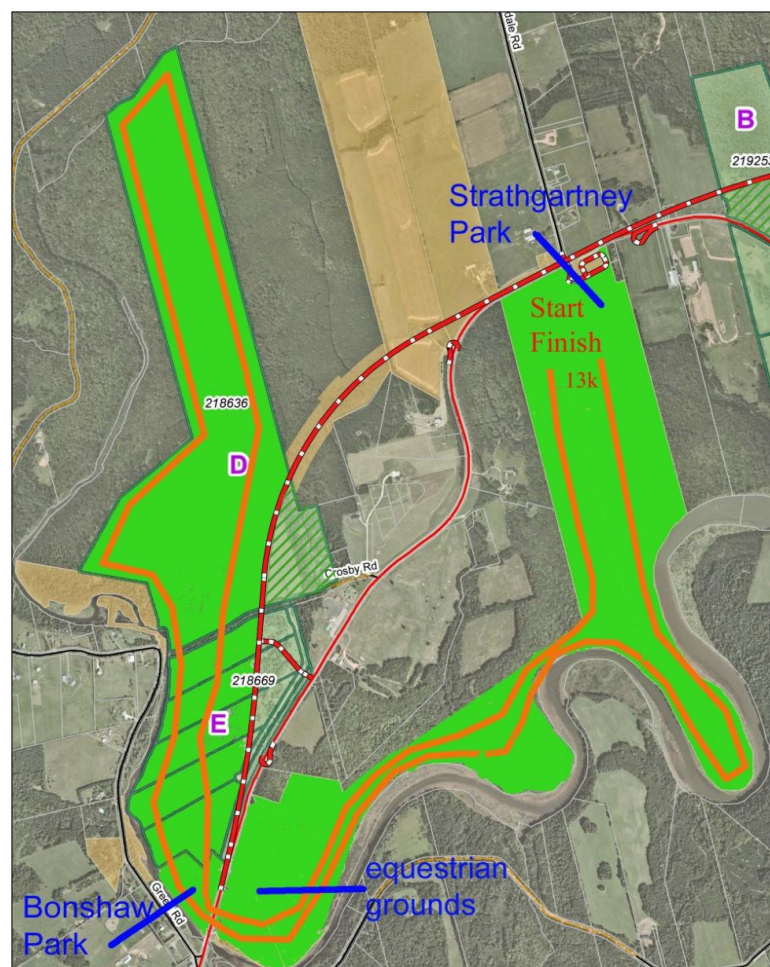


Figure 8. Schematic of possible trails starting out from the Bonshaw Provincial Park

Figure 9. The expanded park concept would link two existing parks (Bonshaw and Strathgartney) and additional public lands. This concept would require purchase or access agreements with private landowners

A larger expansion of parkland that would conceivably link Strathgartney and Bonshaw Parks would require an agreement for access or purchase be developed with one or more owners of private lands sandwiched between the existing two provincial parks. Figure 9 shows a conceptual layout that might enable such a link, along with possibilities for active living trails within that park layout.



There was a high level of interest in the expanded park concept from the public. Thirty-five percent of public submissions identified it as the recommendation they liked best in the committee's draft report. Fifty-one percent of respondents indicated that they would use these lands because of their trails, including cycling trails.

One issue that arose at public meetings and was incorporated in written submissions was that of access to lands for those with limited mobility. While much of the land in these parcels is steep and not suitable for full accessibility, it could be accommodated into trail development on parcel E adjacent to Bonshaw Provincial Park and in the river access to either side of the Trans Canada Highway bridge.

Recommendation #8: Loop trails of several kilometres in length should be developed for active living and would be of great value in an expanded parklands concept. Portions of the trails should be designed to be fully accessible and all trails should be designed with a wide diversity of users in mind.

5.3.5 Connectivity of Public Lands for People and Wildlife

The potential for connection of these land parcels, both for wildlife use and for human use, is great. Riparian margins – the lands adjacent to rivers and streams – are of particular importance for wildlife. Ninety percent of forest wildlife will use the riparian zone at some point during their life cycle. There is a legislated 15 m buffer zone along waterways on the Island; however, many North American studies suggest that wildlife need buffers at least 100 m wide to have healthy populations. The acquisition by the Province of lands adjacent to the West River presents them with an opportunity to lead by example, giving protection to a band of habitat along the river that is considerably wider than the legislated width. The Committee encourages the expansion of protected riparian zone in this area of the West River, recognizing its importance for wildlife on land and in-stream.

The river itself is also a natural connecting corridor between several of these parcels. This point was made by the public during the submission process, with requests to extend protection and assist recreational access to the river environment. The committee considers there is great potential to expand on accessibility of the West River for canoe and kayak use as well as angling use.

Recommendation #9: Better structural access for boating could be incorporated into the area currently used at the TCH bridge. A more rudimentary access might also be possible from Parcel C if planned to minimize riparian damage.

A number of submissions from the public addressed connectivity of the public lands for foot traffic across the West River. There is currently a footbridge that connects parcels D and E with Green Rd, the Bonshaw community and other walking and cycling trails that exist on neighbouring private lands (Figure 10). It is in disrepair and unsafe.

Figure 10. Existing Green Rd footbridge during high water in March 2013 (photo credit: Todd Dupuis)



Recommendation #10: The committee supports the public's request for replacement of the Green Rd footbridge with a new footbridge at the same location. It would allow for a greater variety of options in foot and bike access to the Bonshaw Provincial Park and adjoining public lands.

Use of the lands to either side of the TCH at Bonshaw would benefit from the



construction of a pedestrian and cycling walkway underneath the highway bridge at the West River. There is currently an area of rock-filled gabion basket under the bridge that anglers use to move up- and downstream (Figure 11). However, it is not suitable for bikes or wheelchairs.

Figure 11. Existing walkway under the Trans-Canada Highway bridge over the West River at Bonshaw (photo credit: Todd Dupuis)

Recommendation #11: The committee recommends that connectivity of lands north and south of the TCH be improved with construction of a more multi-use walkway under the bridge.

Connectivity for recreational use of the public lands in parcels C, D, E and F depend largely on further agreements for private lands, as discussed briefly in section 5.3.1. While the committee has endeavoured to begin the conversation with the owners of these parcels of interest, there are no firm agreements with any of them at the time of this writing. If further land acquisition is not possible at least in the short term, the two existing provincial parks could be connected via a walking / cycling corridor along the old TCH between Strathgartney Park and the equestrian grounds (Figure 12). Similarly, Strathgartney Park could also be partially connected for recreational purposes to Parcels C and G along the old TCH which will become a secondary road with three lanes.

Recommendation #12: Greater connectivity of public lands should be planned for, either through private land agreements or where that is not possible through use of sections of the old TCH. Cul-de-sac planning on the old TCH should incorporate this desire for connectivity of public lands.

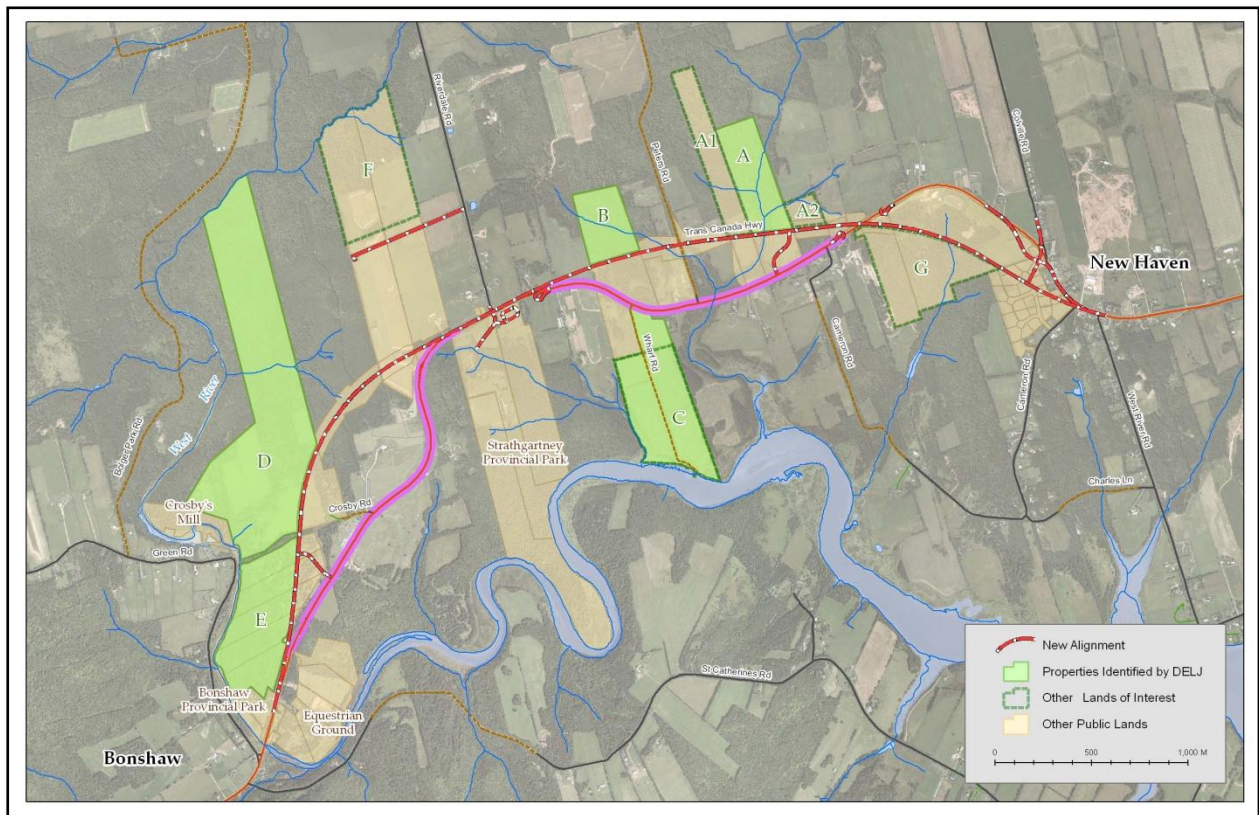


Figure 12. Potential for connectivity of public lands through use of the old Trans-Canada Highway

5.3.6 Conservation Value of Lands

There are stands of mixed, mature hardwood and softwood forest represented within these land parcels that are uncommon on the Island as a whole. These are valuable habitat for a number of forest birds, amphibians, mammals and plants. In recognition of their wildlife value, the Committee recommends careful planning of recreational use within these forest stands, to minimize any negative impact on the natural forest

community. Unintended impacts might include introduction of invasive, non-native plants and damage to moist forest soils through too much foot or bike traffic.

While a few public submissions wanted to see no areas of land being set aside for wildlife only, the overwhelming opinion expressed by the public was one of accepting the need to protect ecologically sensitive areas from over-use. Eight submissions (24 %) discussed the importance of leaving some special wild places to be wild and relatively untouched. The committee recognizes that all of the land parcels A through G contain areas that would be considered sensitive, mostly associated with riparian margins and mature upland hardwood stands. A first step in refining the management plans for each land parcel would be to conduct biological inventories and map the more ecologically sensitive areas. Decisions around ownership and broad management partnerships should ideally be made prior to undertaking inventories. Other parts of all parcels could still be open for recreational use without jeopardizing any of the broad use concepts discussed above.

Recommendation #13: Trails must be carefully planned to balance the ecological sensitivity of some of the riparian and older upland forest stands with public use.

Recommendation #14: Land parcels should be prioritized and inventoried for ecologically sensitive spaces and associated biological components.

The heritage values inherent in some land parcels were also recognized by members of the public during consultations. In particular, there was encouragement to seek heritage status and protection for several adjoining clay roads, including Crosby's, Wharf (Figure 13), Bolger Park and Peter's Roads. The committee encourages the protection of scenic heritage values for these roads. However, we urge caution in defining the details of any protection. Legislating protection as a designated scenic heritage road under the *Roads Act* should not work against protection for conservation values; specifically, soil erosion on old clay road-beds can become an issue.

Recommendation #15: The current scenic and heritage values of Crosby's, Wharf, Bolger Park and Peter's Roads should be retained, provided that it does not interfere with the ability of DTIR to manage them for soil erosion.

Figure 13. A section of Wharf Road adjacent to the West River, with stone fencing (photo credits: Megan Harris)



Although not specifically asked for by the committee, several members of the public also outlined the activities that they did not want to see on these land parcels. Six submissions came out strongly against the use of motorized vehicles either on the lands or in the

adjacent river upstream from the TCH bridge. Other unwanted activities included hunting, ecotourism, interpretive centres, signed trails, and crown forest management. These comments further suggest that the public is seeking low-impact, low-development uses that complement nature conservation rather than work against it.

Recommendation #16: In keeping with the principle of recreation through active living, we recommend that motorized vehicles (except wheelchairs) have no access to these public lands, enforced by adequate signage and trail design principles.

5.3.7 Potential for Nature Education and Interpretation

The natural elements that make these places special and uncommon also contribute to their value for education and nature interpretation. The two main post-secondary institutions on the Island – University of PEI and Holland College – recognize these values for teaching in the field. They have expressed particular interest in the land parcel encompassing the hemlock grove (parcel A) and what remains of the land that was previously the site of UPEI research studies (parcel B). These two pieces contain relatively old trees as well as stream and riparian habitat. The committee proposes that parcels A1 and A2 could ease access issues for researchers and the public alike. Parcel C along the West River also provides easy access from Wharf Rd to the river estuary and adjacent wetland and grassland habitats. The proximity to Charlottetown further promotes their ease of use by conservation and biology students. The Committee supports their lease of parcel B and licence of parcels A, C and E over the long term, provided it does not preclude appropriate access for the general public. The latter caveat is particularly important for parcel E should plans for the expanded park concept be moved forward with the incorporation of parcel E into Bonshaw Provincial Park.

Recommendation #17: The use of parcels A and B (including adjacent lands A1 and A2 as shown in Figure 3) by University of PEI and Holland College is endorsed by the Committee; research and conservation needs should be the determinants of timing and extent of public access.

As grade school teachers look for ways to bring environmental education into the curriculum for younger students, a well-placed and ecologically diverse area has value for teaching youth about good stewardship practices. The lands and waters

encompassed by these parcels could be a day trip destination for schools during all seasons. Field-based teaching is shown to have a strong and lasting positive impact on children's lifelong connection to the natural world.

5.4 Land Parcel – Specific Management Recommendations

The Committee has put considerable thought into how best to balance competing uses and enhance linkages between parcels. We recommend that the Province and its partner NGOs promote increased connectivity by exploring options to protect adjacent private lands, particularly those with high ecological integrity.

Recommendation #18: The Province and partner NGOs should explore options to protect adjacent private lands with high ecological integrity.

Although the potential for connectivity of these pieces is important, it will likely not be possible to link them all. Hence, the following table and subsections describe the attributes and possible management of each land parcel individually. Refer to Figure 3 for locations of land parcels.

Submissions from the public suggest that they were seeking greater detail on parcel-specific management and in particular recommendations for infrastructure and services in addition to the forest ecosystem inventories mentioned above. For the reasons already mentioned, we feel that it is premature to discuss management at that level of detail until some preliminary decision-making on ownership and protection has been completed by DTIR. Nonetheless, the committee was encouraged to see that the public want to have input into a second, more detailed development of management plans, which would discuss issues such as lighting, wheelchair access, interpretive signage, parking access and toilet facilities.

Recommendation #19: The public should be given an opportunity to comment on the specific management plans over the coming year as they are developed.

Table 2. Recommended ownership and management of public lands

Parcel (see Figure 3)	Size (acres)	Suggested Ownership	Suggested Protection	Suggested Management Strategies
A, A1 & public access to east & west	30+	Government, licensed to UPEI / Holland College	<i>NAPA</i>	Education and research by these institutions. Public access allowed, provided it does not interfere with education and research. Parking / foot access off the Peter's Road re-alignment. Presence of a snowmobile trail in the vicinity may be a management issue.
B	23	Government, leased to UPEI / Holland College	<i>NAPA</i>	Education and research by these institutions. Public access allowed, provided it does not interfere with education and research. Parking off the Peter's Road re-alignment; foot access across private property.
C	71	Transferred or leased to Island Nature Trust OR added to Strathgartney Park; license for access to UPEI / Holland College	<i>NAPA</i> <i>RDA</i>	Conservation of riparian zone (100m). Agricultural land furthest from river may be traded for high-priority conservation lands in the area. If kept, some of the agricultural land may be managed for grassland birds and some may be reforested in native trees.
D	156	Transferred or leased to Island Nature Trust OR added to Bonshaw Park	<i>NAPA</i> <i>RDA</i>	Conservation of riparian zone (>100m due to slope). Restoration forestry and walking / cycling trails in the forest (using existing paths / roads where possible) outside the riparian zone. Reforestation of the agricultural fields a priority due to slope / erosion.
E	55	Transferred or leased to Island Nature Trust OR added to Bonshaw Park; license for access to UPEI / Holland College	<i>NAPA</i> <i>RDA</i>	Reforestation of old fields, restoration forestry in woodland. Walking / cycling trails (using existing paths / roads where possible). The footbridge at Green Rd needs to be replaced.

Parcel (see Figure 3)	Size (acres)	Suggested Ownership	Suggested Protection	Suggested Management Strategies
F	137	Transferred or leased to Island Nature Trust	<i>NAPA</i>	Conservation of riparian zone (>100m due to slope). Restoration forestry in the woodland; agricultural land north of MacKinnon Lane may be managed for grassland birds and to maintain the view. Possibility to trade agricultural land south of MacKinnon Lane for more ecologically sensitive land. Woods roads are source of erosion and need restoration work.
G	28	Transferred or leased to Island Nature Trust	<i>NAPA</i>	Conservation of riparian zone and other ecologically sensitive areas on the property. Maintain some of or all existing trails for walking / cycling, but no establishment of new trails. A new access and parking area will be needed, possibly in the northeast corner of this property. Management issues include current ATV usage, trash on site, and remnants of an old dam that should be removed.
Equestrian grounds	5	Government, leased to Island Horse Council	<i>NAPA</i> (riparian)	Maintain current usage and horse trails. Designate the existing 25 m riparian margin under NAPA.
Crosby's Pond	13	Government	<i>NAPA</i> (riparian)	Designate all of property under NAPA.

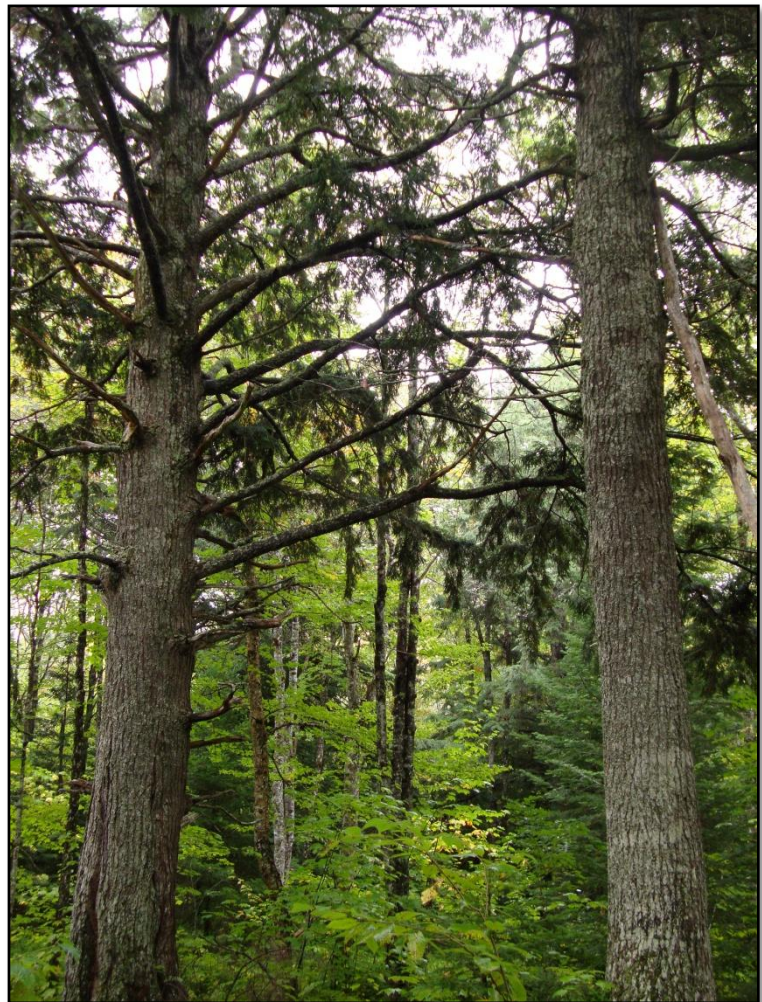
Additional photographic and written descriptions of the land parcels and their main attributes are provided on the following pages.

Parcel A:

This land parcel encompasses an old-growth hemlock and eastern white pine stand, Crawford Stream and an associated mature, healthy riparian ecosystem. The riparian habitat in particular is potentially sensitive to overuse and establishment of any trails in that zone would not be advisable. However, the adjoining public parcel #227298 (A1) which was also purchased for the highway realignment could be included in the management area; it has some existing older horse trails and might also be currently used by snowmobiles in winter. Some woods roads on the northern portion of parcel A are also being used by ATVs.

UPEI and Holland College will hold a licence for use of this property for research and education but the licence should not preclude public access except where it is not compatible with research needs.

Figure 14. Mature forest on parcel A (photo credit: Megan Harris)



Parcel B:

This land parcel encompasses what remains of the original UPEI lease and includes mature mixed hardwood forest. Crawford Brook passes through this section and the terrain is very steep. The

ecological sensitivity of this parcel and the topography do not lend themselves to trail construction. UPEI and Holland College will be leasing this property for research and

education; public access is not precluded by the lease agreement except where it is not compatible with research needs.



Figure 15. Mixed hardwoods, including yellow birch and sugar maple on steep slopes of parcel B (photo credit: Megan Harris)

Parcel C:

This parcel contains several small fields with white spruce hedgerows and is bisected by Wharf Rd, a partially abandoned road originally built to access a government wharf that no longer exists. The road would need some clearing of raspberries and wild roses to be completely passable again, but has wonderful heritage components like old stone walls alongside. The views of the West River are excellent from this property. A riparian wetland occurs along the western boundary, adjacent to the river. Island Nature Trust sees some potential in the fields as habitat for the bobolink, a threatened grassland bird (see section 5.1, species-at-risk). If the upper (northern) half of parcel C were to be traded for more ecologically sensitive lands, then a parking area would likely be necessary immediately south of the existing farmhouse.

Figure 16. Views of wetland and the West River from parcel C fields (photo credit: Megan Harris)



Parcel D:

This parcel is large and varied in its landscape. Originally mostly farmland, the southern portions (which will be closest to the realigned highway) now contain a mix of old-field white spruce and balsam fir stands that are about 40 years old, former fields in an earlier stage of transition back to forest and three plowed fields which were in row crops as recently as 2012. There is a network of old roads through this southern half of the property, where farming and homesteads once occurred. The existing foot-bridge connecting Green Rd to the old Crosby's Rd at the southwest corner of this property could be used to link these properties with the Bonshaw community; however, it is currently unsafe.

The northern section furthest from the highway and ending at the West River contains mature sugar maple-dominated upland hardwood forest and mixed riparian forest. There are no trails or roads in these older forest areas and their ecological value is much greater. A small un-named stream flows across this property down into the flood plain of the larger West River. The Committee has considered the potential for linkages to Bolger Park Rd and another trail network that exists on private lands (an old Red

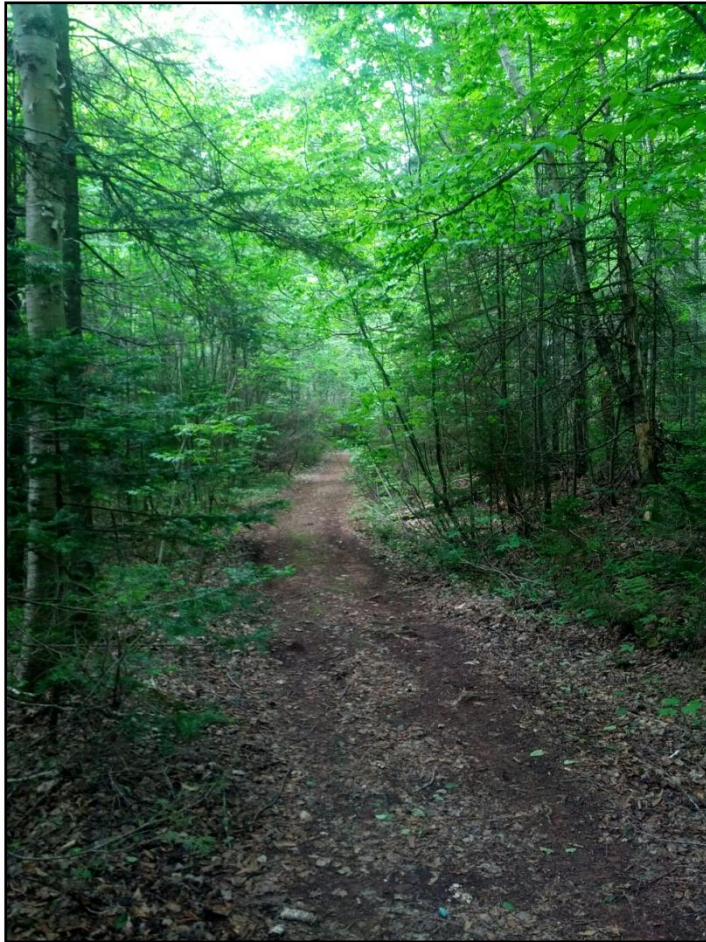
Cross trail). This would involve a second footbridge across the West River at a point where the flood plain is relatively wide. The ecological impact of such a structure and trail network in the riparian margin is of concern.



Figure 17. Older stand of hardwoods in the uplands of parcel D (photo credit: Todd Dupuis)

Parcel E:

This parcel is adjacent to Bonshaw Provincial Park. The upper (eastern) slope areas were clear-cut several years ago and are growing up in scrubby native cherry and birch, but the western third of the property closest to the West River remains in mature mixed forest. There are currently old roads along the western and northern edges of this piece



that could fairly easily be extended to create a loop trail of 2 or 3 km.

Figure 18. Woods road winding along the western edge of parcel E (photo credit: Todd Dupuis)

The western edge of this parcel is defined by the West River and is a popular reach for anglers, particularly those fly-fishing. The river here also has sufficient depth for canoes and kayaks and is frequently used in the summer, with a rudimentary launch point currently available at the TCH bridge.

Parcel F:

This land encompasses two parcels bought for the highway realignment, originally the old Livingstone and Crosby farms. The steep, forested northern edges of these parcels end at Howell's Brook, a large tributary of the West River. The forest is mixed with some old trees, particularly sugar maple, yellow birch and some American beech. The remainder of the properties are in farmland, which is now bisected by the new

Mackinnon Lane (built as an access road to properties affected by the highway realignment). The northern sections (closer to the brook) are registered in the steep land inventory and have not been tilled for some time. The sections that now lie south of Mackinnon Lane were in tilled crop production as recently as 2012. The views to the north of surrounding forest lands are excellent. There are some woods roads in the



northern portion and ATV use with associated erosion is of concern.

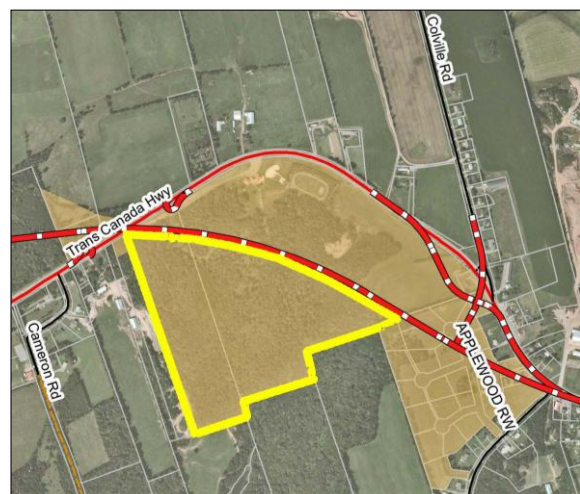
Figure 19. Howell's Brook on the northern edge of parcel F (photo credit: Daryl Guignon)

Parcel G:

This parcel encompasses the area of the old Encounter Creek or Fairyland property that now lies south of the highway realignment (Figure 20). It does not contain the bulk of the commercial infrastructure.

Figure 20. Portion of parcel south of the new realignment considered for management (area outlined in yellow)

There are several old trails in a network that used to service the old campground, as well as a few small cabins in disrepair. A steep ravine along the east side has a small



stream and mature mixed hardwood forest. In particular, there is a grove of old eastern hemlock scattered along the slope of the ravine. The hemlock is regenerating well and many young trees can be found under the forest canopy. This is not a common situation on the Island and is important to conserve. To the west, in the vicinity of the trails, the forest is more mixed in age but also with some wonderful old individual trees. The multiple commercial uses of this property over the years have resulted in some accumulation of debris.



Figure 21. Existing trail network on the old Encounter Creek property (photo credit: Todd Dupuis)

There is great potential on this property for walking and cycling trail circuits of shorter lengths than possible in parcels D and E. However, parking will be an issue and should be planned for sooner rather than later. The grade down to the new highway realignment is steep and would likely preclude any parking access at the western edge of the property. Therefore, the best option for a small parking lot would be on the adjacent land parcel #227223 which was also acquired for the realignment.

6. Estimation of Resources Required from the Province and Partner Groups

The concepts for long-term management of these lands require a degree of resource commitment from the Province. While partner groups may be willing to assist with the logistics, most are non-profits with little or no capacity to shoulder much of the financial burden of long-term management. This section of the report describes some of the resource needs that must be considered when deciding the best option for management.

The lands are currently owned by the Province. If lands were incorporated into larger parks, then the financial resources required to manage the parklands would be administered through the provincial department responsible for park maintenance, currently the DTC. The DTC could partner with non-profits to undertake the maintenance, but the administration of management would still lie with the department. The Committee recommends that the seasonal use of any expanded parklands be extended, including access to year-round parking facilities (Figure 22) and low-maintenance composting toilets. These facilities are particularly important to accommodate greater use for nature interpretation by schools and recreational groups.

Recommendation #20: The all-season use of any expanded parklands should be facilitated through access to appropriate year-round infrastructure.

Should the expanded park concept not eventuate, long-term leases could be granted to non-profit land trusts. Although the maintenance costs would then be shouldered by that land trust, there would still be administrative costs to the Province. Depending on the conditions of the lease, there can be substantial staff time involved in drawing up and delivering the paperwork for leases. Lease administrators are housed within DTIR.

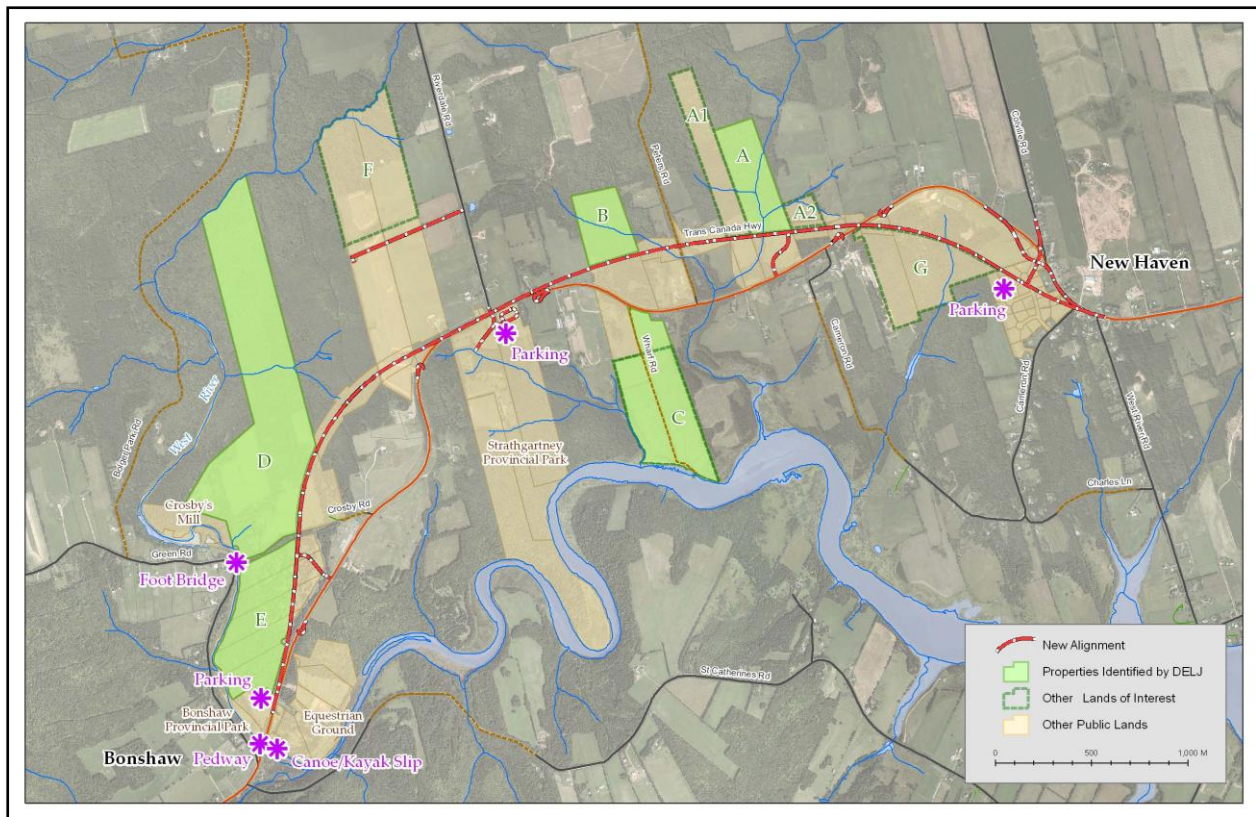


Figure 22. Potential locations for recreation and access infrastructure

If ownership was transferred to an NGO, such as Island Nature Trust, the costs of management would be transferred with the ownership. Funds for land management would then not come from taxpayers, except indirectly through any Provincial grants that might be awarded to the NGO. Most funding to Island Nature Trust, as an example, is raised independently of government.

The Committee has recommended *NAPA* designation and, in some cases, parks designation. These designations would have short-term administrative costs associated with them. The Province would need to allocate funds for those costs within the first year of a long-term management plan. Some of the *NAPA* costs could be deferred to land trusts if there was a transfer in ownership.

Depending on the land parcel in question, management costs in the short term vary considerably. For example, the former Encounter Creek property requires resources for

clean-up of old campground infrastructure. Parcel D north of Bonshaw Provincial Park requires stabilization of former steep tilled fields through planting of perennial grasses and trees. However, other parcels such as parcel A have healthy, intact ecosystems and the Committee recommends little to no management of those lands. In the long term, the objective would be to have minimal management costs, limited to trail management and interpretation costs.



Photo credit: Hannah van den Heuvel

7. Summary of Committee's Recommendations

1. *The task of refining plans for all land parcels should be completed by a smaller committee in the coming 6 – 8 months (Oct 2013 – May 2014) after decision-making on ownership and management by DTIR*
2. *Appropriate financial resources should be made available to complete the necessary field work for biological inventories*
3. *Management of all public lands discussed here should be developed with three core principles in mind: conservation of sensitive lands, recreation through active living and nature education for all ages*
4. *Regarding ownership of the provincial lands, the Committee recommends:*
 - a) *The lands be transferred to non-profit land conservation trusts where possible; this is our preferred option*
 - b) *As an alternative to transfer of the lands, those parcels in the vicinity of the two provincial parks (Bonshaw and Strathgartney) could be incorporated into an expanded provincial park*
 - c) *The lands could also be leased long-term (50+ years) to land conservation trust(s); we see this as a possibility only if the previous two options turn out to be unworkable*
 - d) *Ownership of productive agricultural land could be turned over to the private sector if there was interest in a trade for other (private) lands of high ecological value in the vicinity*
5. *Landowners allowing access across private lands to improve connectivity of public lands should be protected by limited liability legislation*
6. *The Province should seek partnerships to undertake restoration, nature interpretation and active living recreation components of long-term management*
7. *All provincial lands retained in the area should be designated under NAPA for their exceptional ecological value, both individually and when considered as a whole, connected environment. Corridor development should not be considered for these parcels*

8. *Loop trails of several kilometres in length should be developed for active living and would be of great value in an expanded parklands concept. Portions of the trails should be designed to be fully accessible and all trails should be designed with a wide diversity of users in mind*
9. *Better structural access for fishing and boating could be incorporated into the area currently used at the TCH bridge. A more rudimentary access might also be possible from Parcel C if planned to minimize riparian damage*
10. *The committee supports the public's request for replacement of the Green Rd footbridge with a new footbridge at the same location. It would allow for a greater variety of options in foot and bike access to the Bonshaw Provincial Park and adjoining public lands*
11. *The committee recommends that connectivity of lands north and south of the TCH be improved with construction of a more multi-use walkway under the bridge*
12. *Greater connectivity of public lands should be planned for, either through private land agreements or where that is not possible through use of sections of the old TCH. Cul-de-sac planning on the old TCH should incorporate this desire for connectivity of public lands*
13. *Trails must be carefully planned to balance the ecological sensitivity of some of the riparian and older upland forest stands with public use*
14. *Land parcels should be prioritized and inventoried for ecologically sensitive spaces and associated biological components*
15. *The current scenic and heritage values of Crosby's, Wharf, Bolger Park and Peter's Roads should be retained, provided that it does not interfere with the ability of DTIR to manage them for soil erosion*
16. *In keeping with the principle of recreation through active living, we recommend that motorized vehicles have no access to these public lands, enforced by adequate signage and trail design principles*
17. *The use of parcels A and B (including adjacent lands A1 and A2) by University of PEI and Holland College is endorsed by the Committee;*

research and conservation needs should be the determinants of timing and extent of public access

18. The Province and partner NGOs should explore options to protect adjacent private lands with high ecological integrity

19. The public should be given an opportunity to comment on the specific management plans over the coming year as they are developed

20. The all-season use of any expanded parklands should be facilitated through access to appropriate year-round infrastructure

Note that parcel-specific management recommendations are listed in Table 2



Figure 23. Crossing the West River on Parcel D (photo credit: Todd Dupuis)

Appendix I Committee Membership

Name	Representation
Co-chairs	
Todd Dupuis	Atlantic Salmon Federation
Brian Thompson	Department of Transportation and Infrastructure Renewal (DTIR), Land & Environment Division
Committee	
Art Ortenburger	Bonshaw Community Council
Mike Connolly	Cycling PEI
Kate MacQuarrie	Department of Agriculture and Forestry, Forests, Fish & Wildlife Division
Shelley Cole-Arbing	DTIR, Environmental Management Section
Fiep de Bie	Island Nature Trust
Jackie Waddell	Island Nature Trust
Bryson Guptill	Island Trails Inc.
Randy Angus	Mi'kmaq Confederacy of PEI
Tim Banks	Nature Conservancy of Canada
Diane Griffin / Julie Vasseur	Nature Conservancy of Canada
Mark MacKenzie	New Haven – Riverdale Community Council
Daryl Guignon	University of Prince Edward Island
Megan Harris	West River Watershed Group, Central Queens Wildlife Federation

Appendix II Glossary of Acronyms

Acronym	Description
DELT	Department of Environment, Labour and Justice
DTC	Department of Tourism and Culture
DTIR	Department of Transportation and Infrastructure Renewal
INT	Island Nature Trust
NGO	Non-government organization
NAPA	Natural Areas Protection Act
RDA	Recreation Development Act

Appendix III Descriptions of PEI Natural Areas Protection Act and Recreation Development Act

The **PEI Natural Areas Protection Act** (*NAPA*) outlines the criteria for a natural area, what types of lands the Minister of Environment, Labour and Justice may designate as a natural area and how that designation must take place. The designation and de-designation of Crown land is to be a public process complete with public consultation. Private land can be designated without public input and in that case lands to be designated are approved by the *NAPA* Technical Advisory Committee.

Each parcel of land must have an approved management plan as part of the designation agreement and private parcels have additional restrictive covenants that outline activities and uses that can and cannot be carried out on the land. Each set of designation documents also includes an agreement to designate between the landowner and the province and an Order to Designate signed by the Minister. Designation and the associated management plan and restrictive covenant (for private land) run with the land, and therefore provide permanent protection. In the case of public lands, the designation can be removed by the Minister following public processes if a better use of the land is determined.

The **Recreation Development Act** and Provincial Park Regulations are administered by the Department of Tourism and Culture (DTC). The Minister of Tourism and Culture shall promote orderly development of recreation facilities and recreation services. Land may be designated as a provincial park for the benefit and enjoyment of the public. The Minister has the authority to accept a gift of any area of land, or can authorize an exchange of public lands for other lands for the purpose of creating additional provincial parks, or adding to any existing park.

No person shall use any provincial park in any manner contrary to any restrictions upon the use prescribed by regulations. Except with permission of the Minister, the

regulations prohibit such activities as removal of plants, rocks, fossils or other objects of natural curiosity, as well as polluting water or discarding rubbish.

Areas can also be protected under the Recreation Development Act to preserve objects of beauty, fossil remains, and other objects of aesthetic, educational, historical or scientific interest.

Appendix IV Analysis of Public Feedback

See accompanying document:

*(A Summary and Report of Bonshaw Hills Public Lands Public Feedback Final v2
October 8 2013. docx)*