

Examining the Environmental Implications of the Proposed Whistler University

Introduction

A proposal has been made to develop the Alpha Creek Lands for the construction and subsequent operation of a small, private university (WhistlerU). The purpose of this report is to provide some perspective on the environmental implications of such a development (Figure 1). There have been many reports commissioned on the environmental characteristics of the Alpha Creek lands. The main distinctive feature of these lands is an area of restricted drainage, known as the Alpha Creek wetlands.

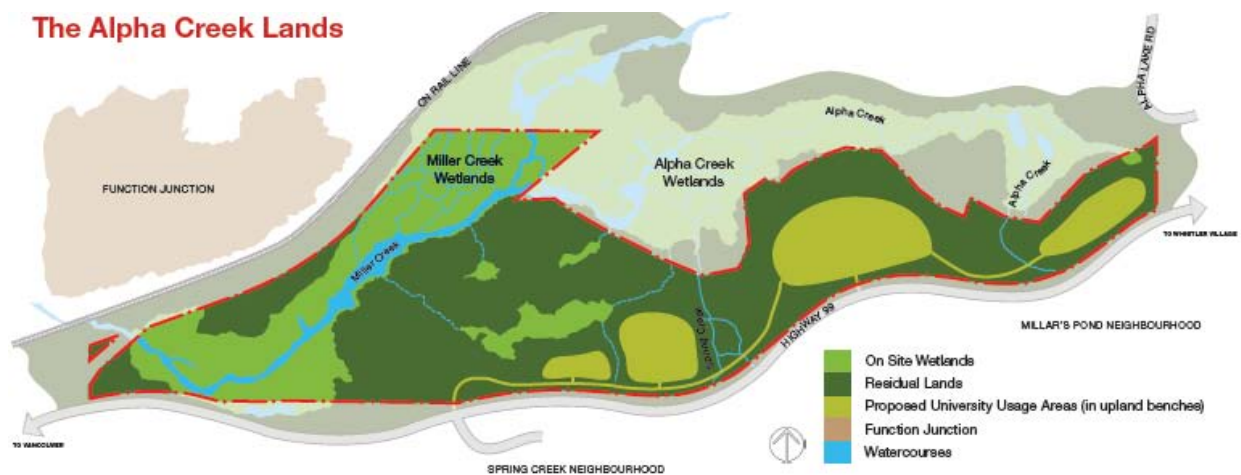


Figure 1: Map summarizing proposed University development at the Alpha Creek lands, Whistler.

Wetlands in general are recognized as valuable conservation areas and the Alpha Creek wetlands are no exception, although they are far from pristine, with a major transmission line complete with pylons straddling them (Photo 1, Appendix 1) and evidence that water levels have been impacted by previous developments, such as the road. The site has experienced extensive

previous modification including logging, logging road/trail construction, Highway 99 construction, stream/wetland relocation, upper watershed development and man-made drainage structures, all resulting in an altered hydrological regime. No distinctive rare and endangered species have been recorded at the site¹. Nonetheless the wetlands constitute a valuable habitat, worthy of conservation and future restoration initiatives.

The proposal to develop WhistlerU is fully considerate of the conservation values of the wetlands and associated riparian zones, and plans no development on these areas. Developments will be restricted to approximately one-third of the upland areas, with these areas being the most distant areas from the wetlands on the site (Figure 1). This is consistent with the Description of Success (DOS) indicators of the Whistler 2020 Plan that “use of critical natural areas is avoided and use of surrounding areas is limited to ensure ecosystem integrity”.²

Potential impacts on the wetlands themselves will largely be confined to control of water run-off onto the wetlands from the developed area. State-of-the-art engineering techniques will be used to ensure that these impacts are negligible. These techniques are well known and should not present any technical problems if well-designed and implemented³. Landscaped areas will consist of native plant species that eliminate the need for watering and chemical use, again a DOS indicator for Whistler 2020.⁴

Recommendation 1

- Do not build any infrastructure on the wetlands or associated riparian zones.

Recommendation 2

- Ensure that site development follows state-of-the-art architectural and engineering practices to minimize potential impacts on wetland hydrology.

¹ Terra Planning Ltd, 2000. *Environmental Review of the Alpha Creek Lands Owned by Oka Holdings*. Whistler, BC; Cascade Environmental Resource Group Ltd 2005 *Initial Environmental review: “Alpha Creek Lands*. Report prepared for Oka Holdings, Whistler, BC.

² Resort Municipality of Whistler 2007 *Whistler 2020: Moving Towards a Sustainable Future. Descriptions of Success*. Whistler, BC.
<http://www.whistler2020.ca/whistler/site/ourVision.acds?context=1930515&instanceid=1930516>. Accessed June 28, 2010.

³ These recommendations are summarized following a hydrological assessment by consulting engineers and hydrologists: La Cas Consultants Inc 2005 *Overview Hydrological Assessment*. prepared for Oka Holdings, Whistler, BC.

⁴ *Op cit*, Note 2.

Recommendation 3:

- Focus on high-density development that minimizes building footprints.

The second area of potential negative impacts is on the overall connectivity of conservation lands in the Whistler corridor. Whistler is developing a Protected Area Network (PAN) plan for the community. This is a valuable input to planning and contribution to Whistler 2020, although the final proposed version is not currently available for inspection. It is assumed that the wetlands and associated riparian zones will be part of this plan, and WhistlerU supports this measure. Most of the rest of the area of the Alpha Creek lands is in immature hemlock stands with some western red cedar, Douglas fir and amabilis fir mixed in (Photo 2) with little distinction from surrounding re-growth areas. Mature and wildlife trees will be protected (Photo 3). Night lighting will be muted and focused to facilitate nocturnal wildlife activities. Wildlife connectivity corridors will run the length and breadth of the proposed development. This is consistent with the Whistler 2020 DOS that “Corridor partners adopt Natural Areas Strategies consistent with the intent of this document.”⁵

Recommendation 4:

- Establish north-south and east-west wildlife connectivity corridors.

In contrast to concern over the negative impacts of development on the Alpha Creek lands, there has been little attention given to the potential enhancement of environmental values to the lands and to the Whistler region that could result from the University. The main purpose of this report is to outline these values, paying attention first to the Alpha Lands themselves and secondly to the Whistler region.

⁵ *Op cit*, Note 2.

On-Site Environmental Values at Whistler University.

WhistlerU is to be a small, high-quality, private university with considerable flexibility in its curriculum, including undergraduate programs which will have mandatory courses in environmental studies, biology and geography that have a strong focus on environmental learning. All undergraduate students, regardless of their degree or major will gain essential experience in understanding environment and environmental issues through hands-on, field-based learning. The Alpha Creek Lands provide an ideal outside classroom on which to base these courses, embracing topics such as climate and microclimates, stream and wetland hydrology, snow hydrology, ecology including wetland vegetation, woodland vegetation, fish and amphibian habitat, bird nesting, feeding and migration and mammal activities. Despite the number of environmental reports completed on the Alpha Creek lands there are still gaps in understanding a basic inventory of ecosystem components, let alone functional relationships. For example, there is no baseline seasonal water quality data available for the site⁶. Having a year-round presence of expert (faculty) and novice (student) environmental monitors will result in a much clearer understanding of the area. At the moment there is nobody systematically studying the area. Making the site an outdoor classroom for a wide-range of scientific monitoring programs will facilitate improved conservation planning for the entire area. This will help realize the Whistler 2020 goal that “Continual learning about natural areas and species informs appropriate restoration and protection efforts.”⁷

Recommendation 5.

- Develop field-based monitoring classes focused on the Alpha Creek lands to build up biophysical inventory and understand processes.

At one time the classes noted above would have been just interesting parts of the curriculum. However in an era of global climate change, environmental monitoring is now an integral part of

⁶ *Op cit.* Note 3.

⁷ *Op cit.* Note 2.

planning for the future. Whistler occupies an interesting and important location for on-going monitoring related to aspects such as freeze-up and melt days, observing animal hibernation and returning migrants. These observations can be included in the broader national and international monitoring sites and help direct attention to Whistler as a scientific, educational and sustainability centre.

Recommendation 6.

- Link Whistler-based studies to global monitoring initiatives relating to climate change.

History demonstrates that restricting environmental understanding and assessment to science students can lead to considerable costs to society down the road as general awareness of environmental challenges fails to permeate through the population. As a new university, WhistlerU will be in a position to develop a more forward-looking curriculum that ensures that all students benefit from several environmental courses during their studies. This will help build environmental awareness and reduce environmental impacts amongst the student population overall.

Recommendation 7:

- Build compulsory environmental courses into all undergraduate programs

The range of habitats available both on site and in the immediate vicinity of Whistler University provide an unparalleled opportunity for experiential learning situations with minimal cost (Photo 4). Environmental courses and programs will be strongly field-based to take advantage of this

*Is our educational system preparing you and the students that will follow you to understand and deal with these changes?
....Currently, many schools, colleges, and universities graduate students who have little or no idea about how the ecosphere functions and how human activities impair those functions. They shop, travel, eat, drink, work, and play in blissful ignorance of the impacts they may be having on life support systems.*

Dearden and Mitchell 2009, p581

opportunity. Developing this field-based component also helps fulfill the Whistler 2020 DOS that “Opportunities exist within developed and recreational areas for people to learn about the natural environment.”⁸

Recommendation 8:

- Ensure that environmental courses and programs have a strong field component to facilitate experiential learning.

WhistlerU intends to develop graduate programs for degrees at the master's and doctoral level. The undergraduate courses in environment are unlikely to suit the graduate programs, indeed, some of the students will have already completed them. All graduate students should however become parts of the WhistlerU culture with its focus on environmental learning and responsibility. This can be accomplished in two ways:

Recommendation 9:

- Graduate student orientation must include a required component on environmental awareness which includes field-based observation and understanding

Recommendation 10:

- At least one compulsory course in any Graduate program should deal with the importance of environmental responsibility in the field of study. Examples of this might include a course in *Ecotourism* in an MBA (Tourism), on *Ecobusiness* in an MBA (Business), on *Environmental Law* in a *Juris Doctor* program and *Environmental Education* in an MEd.

On the basis of the site inventories described above an optimal system of trails will be developed by the students. This trail system will be designed to minimize impacts on fragile areas and species while giving access to the area for both students and area residents. Trail mapping, construction and the development of effective nature interpretation signs are valuable practical

⁸ *Op cit*, Note 2

skills that can be built into course curricula. Wetland interpretation will be a strong focus of this trail system.

Recommendation 11:

- Develop an interpreted trail system that will protect sensitive areas from environmental impact and help build awareness of the value of habitats in the area.

Off-Site Environmental Values at Whistler University

The future is increasingly a race between education and catastrophe

H.G. Wells

Whistler is to be commended on the development and implementation of the Whistler 2020 Strategy. It is visionary, tied to practical strategies and should result in a more sustainable future for the community as it evolves and develops. WhistlerU fully supports the Strategy and feels that there is great potential for the University to contribute towards this evolution in a number of significant ways. Development of a university, a knowledge centre, is fundamentally different from other kinds of developments. Universities are recognized as societal leaders in a wide variety of fields. They attract world class thinkers and the leaders of tomorrow. They are catalysts of forward-focused thinking. Many communities compete to attract a university to their area. Establishment of a university in Whistler would be a prime example of one of the economic DOS indicators from Whistler 2020 to: “proactively seize[s] economic opportunities that are compatible with tourism, and effectively adapt[s] to changing external conditions.”⁹

WhistlerU will contribute directly to several of the main priorities outlined in Whistler 2020:

- *Enriching Community Life*

WhistlerU will attract well-educated people with interests and skills that will help enrich the resort municipality of Whistler. Faculty and students alike will add to the culture and social fabric of the community and enjoy Whistler’s wide range of activities and amenities. They will be residents, mix with visitors in the village and on the mountain, sharing in the resort vibrancy and cosmopolitan atmosphere. Local residents will be able to take university courses and obtain degrees. This is directly relevant to the Whistler 2020 DOS indicator that “diverse, affordable and accessible lifelong learning opportunities exist to meet the community’s needs.”¹⁰ This is especially the case as WhistlerU will develop programs which are accessible to working adults and part-timers through ensuring that timetables extend into evening and weekend sections and

⁹ *Op cit*, Note 2

¹⁰ *Op cit*, Note 2

block courses which can be concentrated into short periods of time, especially during the summer.

The University, as a comprehensive knowledge centre will provide an opportunity for the development of other forms of learning and course-work, with special attention being paid to Whistler's unique environmental setting and First Nations traditions (Photo 5). Again this relates directly to several of the 2020 DOS indicators, for example that: "A learning culture is nurtured and promoted locally and regionally through diverse formal and informal opportunities and leverages Whistler's international stature" and that: "Residents and visitors have many opportunities to actively learn about the resort community, the natural environment and First Nations culture."¹¹ There is also a DOS for a "physical and organizational focal point for the diversity of arts, culture and heritage activities that spread throughout the community"¹². WhistlerU will help provide that function.

- *Protecting the Environment*

WhistlerU will have an overall positive environmental impact upon Whistler Resort Municipality. This will be manifest in many different ways but includes:

- Providing economic development and diversification that is non-polluting and is minimal in negative environmental impact compared to other forms of economic development;
- Developing environmental capacity in the community through augmenting the core of local residents who have technical backgrounds in environmental analysis;
- Developing programs and courses that raise environmental awareness as well as result in valued inputs into the local planning process.
- Contributing to local, regional, national and potentially international environmental monitoring programs.

¹¹ *Op cit*, Note 2

¹² *Op cit*, Note 2

- Providing and maintaining trails on the Alpha Creek lands that will facilitate access for residents but limit impacts to the area;
- Providing interpretive programming on these trails that helps raise community awareness of habitat values;
- Helping expand the sense of environmental community stewardship that is one of the goals of the Whistler 2020 plan.¹³

- *Ensuring Economic Viability*

Establishing a university will bring economic benefits and diversification to the Whistler community¹⁴. A university is part of the knowledge industry, a clean, non-polluting form of economic development that partners well with sustainable tourism and results in significant economic returns. Taxes paid by the University will help the local tax base and provide services for the local community. This is consistent with the Whistler 2020 goal that “Learning opportunities contribute to the local economy and attract visitors to the resort community for learning vacations.”¹⁵

- Partnering for Success.

WhistlerU is a prime example of the future need for “partnering for success” outlined as a main component of Whistler 2020. In the past, universities were seen as a product purely of government concern. However countries all over the world have discovered that partnering with the private sector can result in provision of unique learning opportunities that the public sector cannot provide. Whistler University represents a partnership between the educational and private sectors to establish a partnership with the local community to provide this learning opportunity. Establishment of Whistler University will help realize the Whistler 2020 DOS to provide “Learning opportunities foster collaboration, trust and community engagement and build the

¹³ *Op cit*, Note 2

¹⁴ Projections suggest an estimate of up to \$30 million per year. Source: WhistlerU 2008 *Newsletter no. .2*.

¹⁵ *Op cit*, Note 2

community's capacity for achieving Whistler's vision of success and sustainability for future generations. ¹⁶

Conclusion

Our greatest challenge lies in rethinking what kind of education is appropriate for a species whose standards of success threaten its ecological foundation.

David Orr 1992

Any form of human-built infrastructure will have some environmental impact. This is inevitable. Intelligent planning must focus on assessment of those impacts, assessment of potential benefits to the community and make a rationale choice as to the best long-term course of action. Fortunately Whistler has had the foresight to develop a long-term vision for the community that outlines not only broad visionary goals but also specific indicators of success. Whistler University represents an opportunity to make a significant contribution to meeting those visions and many specific indicators of success. There will be no development on the most environmentally sensitive areas of the site, and state-of-the-art architectural and engineering solutions will be used to mitigate any hydrological impacts. Whistler University will showcase site design and construction practices that will be at the forefront of modern sustainability techniques and will provide an outstanding opportunity for Whistler to demonstrate the economy of tomorrow. Whistler University will through its on-going research and monitoring will enhance the environmental sustainability of the Alpha Lands and the whole region.

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¹⁶ *Op cit*, Note 2

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¹ Report prepared by SEACON principal partner, Professor Philip Dearden on the basis of field inspections of the site, interviews with local residents and examination of environmental reports and maps as well as Whistler Municipality planning documents. Professor Dearden is the Chair of one of the largest Geography Departments in Canada at the University of Victoria. The Department is known for its strong environmental focus. Dr Dearden is known as one of Canada's foremost authorities on protected areas and the author of a text book on the topic, published by Oxford University Press that is widely used in universities in Canada. He is also the co-author of another best-selling Oxford text book on environmental planning and management in Canada.,

APPENDIX 1

PHOTOS



Photo1: The wetlands, showing transmission lines. The dead conifers are probably the result of past disturbances influencing water tables.



Photo 2: Characteristic second growth forest on the site upland areas.



Photo 3: Mature and wildlife trees, like this Douglas fir, will be identified and protected.



Photo 4. The range of habitats stretches from the wetlands of the river bottom up to the alpine terrain and provides an outstanding natural classroom.



Photo 5: Culturally modified tree (CMT) with stripped bark will provide an ideal site for students to learn about traditional First Nations' practices.