

Before Queenstown Lakes District Council

In the matter of The Resource Management Act 1991

And The Queenstown Lakes District Proposed District Plan Topic 12
Upper Clutha Mapping

STATEMENT OF EVIDENCE OF DR SHAYNE GALLOWAY FOR

Allenby Farms Limited (#502 and #1254)

Dated 4 April 2017

Solicitors:

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**anderson
lloyd.**

Qualifications and Experience

- 1 My name is Dr Shayne Patrick Galloway.
- 2 I am a Director and Independent Researcher with Galloway Recreation Research Limited.
- 3 My qualifications and experience are summarised in Appendix 1 to this evidence.
- 4 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.
- 5 In preparing this evidence I have:
 - (a) Reviewed the reports and statements of evidence of other experts giving evidence relevant to my area of expertise, including:
 - (i) The Allenby Farms Limited submission on the Queenstown Lakes Proposed District Plan 2015 – Stage 1.
 - (ii) Evaluation of a Potential Significant Natural Area at Mount Iron, Wanaka. Contract Report No. 3762. Kelvin Lloyd and Richard Gillies, dated March 2017.
 - (iii) Other documents as indicated by footnotes throughout my evidence.
 - (b) Made a six hour visit to the Mount Iron and Little Mount Iron sites on 10 March 2017. The site visit involved a tour of the Allenby Farms property on Mount Iron with Lynden Cleugh and a walking tour of the Mount Iron Loop Track,
 - (c) Reviewed the planning documents relevant to the submission and related land managers
 - (i) New Zealand Handbook: Tracks and Visitor Structures, SNZ HB 8630:2004
 - (ii) Maps: Mount Iron – Proposed Trails (100A) and Significant Natural Area Submission (103A)
 - (iii) QLDC Parks and Open Space Strategy 2016 (Draft)
 - (iv) QLDC Cycle Trail and Track Design Standards and Specifications

Scope of Evidence

- 6 I have been asked by Allenby Farms Limited to prepare evidence in relation to the recreation amenities available on Mount Iron and Little Mount Iron. This includes:
- (a) Recreation amenity values associated with Mount Iron and Little Mount Iron.
 - (b) Benefits to the District and the Wanaka community from the Mount Iron and Little Mount Iron Trails.
 - (c) Recommending matters to be included in a Recreation Management Plan for Mount Iron and Little Mount Iron.

Executive Summary

- 7 Mount Iron and Little Mount Iron form a central geographic feature within that side of Wanaka township with existing recreation amenities that receive high use from local residents, regional visitors and tourists.
- 8 Formalization of the proposed tracks on Mount Iron and Little Mount Iron would significantly enhance the recreation amenity values by providing additional access in the case of Little Mount Iron and concentrating use overall. In addition these trails provide additional linkages with the larger recreational network in Wanaka.
- 9 From a recreation perspective, the development of the additional house sites by Allenby Farms would have no effect on current or future amenities – so long as access was assured.
- 10 A range of benefits are accrued to the District and Wanaka communities from access to Mount Iron and Little Mount Iron. These can be broadly grouped into areas of personal use/quality of life, economics, and environmental.
- 11 As I indicate below, the trails receive a lot of use from residents and there is ample evidence that they are popular with visitors as well. The economic benefits accrue from the attention Mount Iron receives from the tourism industry and visitors, which I address below, as well as the values estate agents in Wanaka place on views of Mount Iron and/or proximity to its trails. It is clear from my research and experience of the resource that Mount Iron and Little Mount Iron make living in and visiting Wanaka more desirable.
- 12 Given the historic recreation use of Mount Iron and Little Mount Iron, and the growth of tourism and residential and commercial development within the eastern part of Wanaka, it is apparent that the use of and desire for access to

Mount Iron and Little Mount Iron will increase in proportion. The existing recreation resource upon which the benefits available on Mount Iron and Little Mount Iron are based will face increasing pressure from traffic and unmanaged access.

- 13 The Mount Iron and Little Mount Iron resource currently exists as a highly-used multiple use recreation area with significant recreation and natural amenity values¹ and is located in the midst of considerable residential development and tourism focus.
- 14 Conflict between recreation activities (i.e. mountain biking/foot traffic), management frameworks and decisions (i.e. whether mountain biking, rock climbing etc. are permitted on the resource), and between recreation and environmental amenities (i.e. impacts to sensitive vegetation from foot traffic) will occur and likely has occurred. In addition there are questions of health and safety and liability which currently are in question.
- 15 As much of the current recreation value on Mount Iron and Little Mount Iron depends upon informal access to and use of private land by the general public, there is no guarantee that this access will continue to be available.
- 16 The most appropriate and advantageous solution to protect the recreation and environmental amenities which currently exist, as well as those that may be developed, would be the development and implementation of a resource management plan covering the public and private areas as whole.

Recreation Amenity values associated with Mount Iron and Little Mount Iron.

- 17 Mount Iron and Little Mount Iron form a central geographic feature within Wanaka township with existing recreation amenities that receive high use from local residents, regional visitors and tourists.
- 18 The roche moutonnée landform of Mount Iron and Little Mount Iron rises from the glacial plains surrounding it approximately 250m to heights of 548m and 507m respectively. It is a significant element in the landscape that invites exploration and provides sweeping views of the surrounding area and the mountain ranges that ring the Wanaka plains. The Kanuka forests through which the trails mainly travel and mountainous views in the distance lend a sense of remoteness to the recreational experience there. The medial distance views which are dominated by the town centre, Allenby/Rob Roy neighbourhood, Albert Town and soon Northlake and Three Parks are frequently interrupted by the topography through

¹ Lloyd, K. & Gillies, R. (2015) Evaluation of a Potential Significant Natural Area at Mt Iron, Wanaka. Contract Report No. 3762. Wildlands.

which the trails travel and the forest and rocky crags which dominate the proximal viewscape. The sense of isolation is particularly noticeable from the Northern approach and on the proposed Little Mount Iron track (Trail C).

Note: This track and other recreation assets on and about Mount Iron and Little Mount Iron, as well as those connected to it, are indicated on Appendix C: Wanaka Recreation Map.

- 19 The sloping northern and western flanks are generally forested and are currently used for walking on the existing DOC trail easement accessed from State Highway 84 that proceeds to the summit of Mount Iron and then down to the Albert Town side and connects to the commuter trail which traverses the base of the prominent buttress on the southern aspect of Mount Iron and leads to the parking area on State Highway 84. The Loop Track is described as easy walking and 4.5km in length.²
- 20 In addition, there are informal trails located on private land indicated respectively as trails A, C, D, E, F and G as indicated on the attached recreation map. There are other trails (i.e. walking and mountain bike trails) which have not been mapped.
- 21 During the site visit these trails were observed to be heavily used by walkers and runners across the age spectrum, singly and in groups. Dog walking was common, both on and off the lead. The condition of the main Mount Iron Track reflected its heavy use. All of the trails accessing the tops of Mount Iron would be classified as Walking Tracks under SNZ HB 8630:2004. Trail C would require some improvement to achieve that standard to the summit and to where it reaches the descending trail to Trail D, although it could exist just as well as a poled route.
- 22 In terms of accessibility, the sloped areas of trail are not wheelchair accessible while the commuter trail (Trail C) could be with surface improvements. Mountain biking is prohibited on the Mount Iron Track and occurs informally on the commuter track.
- 23 I note that there is an access way to a woolshed to the west south west of the SH 84 parking area which receives high use as a connecting trail to the SH 84 parking area as well as the parking area at the end of Allenby Place. This access way is currently not protected by easement. A toilet block is also available at the Allenby Place parking area.

² <http://www.doc.govt.nz/parks-and-recreation/places-to-go/otago/places/wanaka-area/things-to-do/mount-iron-track/>

24 The Mount Iron and Little Mount Iron resource is also accessed from the North via Hidden Hills with linkages to Trails A, B and C. The Hidden Hills track also accesses the summit of Mount Iron on a trail that is of similar grade and width as the Mount Iron Track. This trail received significantly less traffic on the day of the site visit and there was less evidence of heavy trail use. Mountain biking was observed on two occasions during my visit. I would expect use of this trail to increase with the development of the Northlake residential area.

25 I walked the trail to the summit of Little Mount Iron (Trail D) and down Trail C and along the property line to where it crosses onto the DOC estate. The upslope aspects of Trail C exist as the remnant of an old four wheel drive track and diminishes to trace in spots and was generally the steepest of the trails I visited. Views from the summit of Little Mount Iron are panoramic from north to east to south and take in the Hikuwai Conservation Area, Deans Bank, and Albert Town reserves. Trail C down to the property line is forested and affords views of schist outcroppings and is generally of a very good quality.

Note: I indicate in Appendix B several photos where the deer fence has been removed to provide access to Little Mount Iron from the private properties along Ewing Place (Figures 5 and 6).

26 During the site visit I was shown a launch site for flying sports (hang gliding etc) that I am told is used casually in favourable winds (Figure 2). As I understand it, that site is on, and accessed across, private land with no legal access.

27 The craggy schist features along the NWW to SSW aspects of Mount Iron and Little Mount Iron present opportunity for rock climbing. Bolted sport climbing spots were observed and in use on the DOC trail north and south of the Old Racecourse Road Access. Upon visual inspection these climbing sites appeared to be properly bolted and maintained (Figures 1 and 9). I noted the development of additional climbing sites in this area as evidenced by ropes and anchors left hanging on the crags (Figures 7 and 8).

28 I also noted the presence of bolted climbing sites on the privately owned Little Mount Iron property (Figure 4). This was accessed via informal trail which corresponds to the proposed Delta track. These climbing sites had a similar appearance of being properly bolted and maintained.

29 There are sufficient undeveloped crags on Mount Iron and Little Mount Iron to suppose that quite a few additional rock climbing sites could be developed.

30 Generally speaking the recreation amenity values of Mount Iron and Little Mount Iron are varied and of a high standard and accommodate range of experiences in terms of encountering others, nature appreciation, health and fitness, social interaction, etc. The resource has proven resilient to site

hardening and concentrated use (i.e. Mount Iron Track) however it is clear that informal tracks have been formed for unmanaged recreational use and these have a concerning impact on what is in fact a relatively fragile alpine environment.

- 31 Formalization of the proposed tracks on Mount Iron and Little Mount Iron would significantly enhance the recreation amenity values by providing additional access in the case of Little Mount Iron and concentrating use overall. In addition these trails provide additional linkages with the larger recreational network in Wanaka.
- 32 From a recreation perspective, the development of the additional house sites by Allenby Farms would have no effect on current or future amenities – so long as access was assured.

Benefits to the District and the Wanaka community from the Mount Iron and Little Mount Iron Trails

- 33 A range of benefits are accrued to the District and Wanaka communities from access to Mount Iron and Little Mount Iron. These can be broadly grouped into areas of personal use/quality of life, economics, and environmental.
- 34 As I indicate below the trails receive a lot of use from residents and there is ample evidence that they are popular with visitors as well. The economic benefits accrue from the attention Mount Iron receives from the tourism industry and visitors which I address below as well as the values estate agents in Wanaka place on views of Mount Iron and/or proximity to its trails. It is clear from my research and experience of the resource that Mount Iron and Little Mount Iron make living in and visiting Wanaka more desirable.
- 35 The commuter trail linking Old Racecourse Road and SH 84 contributes to quality of life by allowing foot and wheel traffic to travel to and from the town centre.
- (a) This access would be improved by provision of a track linking the commuter trail to Anderson Road on the North side of SH 84 – removing the need to cross the highway to access the sidewalk on the South side. I note that there is an informal trail in frequent use on the North side.
- 36 Wanaka (see attached Wanaka Recreation Map) benefits from a de facto and incomplete trail network. As can be seen on the Wanaka Recreation Map developed with Patterson Pitts Group, the Mount Iron and Little Mount Iron resource sits in the rough middle of an existing collection of trails. These trails have been developed separately over time and in some cases lack coherent

linkages and in others residential use has created a network used to commute and to access disparate tracks.

- 37 The addition of the Mount Iron and Little Mount Iron trails as proposed formalizes further linkages with existing trails and provides a connecting route to the south if one considers the wider loop available from Albert Town to the Outlet then along to Bremner and Roy's Bays.
- 38 The proposed trails also serve as anchors for future trail development and connectivity with residential and commercial developments in Northlake and Three Parks and existing neighborhoods (i.e. linking Trail C with Aubrey Road and access on the north side of Mount Iron and Little Mount Iron).

Trail Use and Standard

- 39 The Mount Iron and Little Mount Iron resource receives large numbers of recreation visitors each year. A DOC trail counter indicated that in 2014/2015 128,637 people accessed the Mount Iron Track and in 2015/2016 140,701 people accessed the track.³
- (a) The counter is a pad sensor on a step of an A-frame stile on the Wanaka side of Mt Iron about half way up the track.
- (b) Regarding the reliability and validity of this data, I was assured by DOC staff of the following: *It is tested monthly as part of the data download. The accuracy of the counters themselves is good; it is more how we interpret the data. For example we presume that 75% of people go up and back down the same way and 25% do the full loop.* The usage figures cited above include this ratio of use.
- 40 The Mount Iron Track is listed as an easy walking track by DOC and as one of the most popular walks, Photo Point #6 by the Wanaka iSite⁴ and would receive its share of use from tourists visiting the area. The Mount Iron Track has received 516 reviews on Tripadvisor.com, a website popular with travelers, where the track is listed as the 3rd most popular of 74 things to do in Wanaka.⁵ The Mount Iron Track is also listed with positive reviews from international tourists on rankers.co.nz⁶ and straytravel.com.⁷

³ Personal Communication: Annette Grieve Senior Ranger/ Supervisor – Community, Te Papa Atawhai / Department of Conservation, Central Otago District (Wanaka office)

⁴ <https://www.lakewanaka.co.nz/>

⁵ https://www.tripadvisor.co.nz/Attraction_Review-g612500-d2098257-Reviews-Mount_Iron_Track-Wanaka_Otago_Region_South_Island.html

⁶ https://www.rankers.co.nz/experiences/3430-Mount_Mt_Iron_Track

- 41 The Mount Iron Track will also serve as the site for the 2017 Outside Sports Mt. Iron Challenge a 15k solo/relay race and 5k trail run.⁸ Organizers expect upwards of 100 participants on 15 April 2017. This race has been conducted in the past and is returning after a break of some years. Organizers expect to run the race annually.

Population Data: Residents and Visitors

- 42 No data is available on the percentage of resident versus tourist use, however data from the Ministry of Tourism indicates that visitation to the area is high and steadily increasing. For example, the Commercial Accommodation Monitor data for Wanaka for the year ended January 2017 indicates that guest nights, international guest nights and domestic guest nights increased 9.3%, 13.3% and 3.4% respectively over the previous year.⁹ Overall guest nights in this data were 824,735 and it should be noted that this data does not include bed & breakfast accommodation, services such as Airbnb, casual private dwelling stays, marine vessels, non-commercial tramping huts or event specific accommodation.
- 43 Similarly data provided by the regional tourism organization indicates increasing trends in guest nights, guest arrivals and length of stay beginning in 1996/1997 and guest nights are forecasted to exceed 1,000,000 by the 2021/2022.¹⁰
- 44 The number of ratepayer users will increase as well. The resource sits in the centre what will foreseeably be the majority of the resident population in Wanaka: Allenby/Rob Roy, Three Parks, Albert Town and Northlake with access to it from each of these areas. According to the 2013 census the population of Wanaka (6471) rose 28.4% (1431) over the previous census. Significant residential development will have occurred since the last census (Albert Town, Hidden Hills) with significant additional residential and commercial development currently underway (Northlake, Three Parks). Northlake is expected to grow to 1370 new houses and Three Parks to approximately 700 houses in addition to significant commercial development as well as the new Wanaka Sports Facility.
- 45 Given the historic recreation use of Mount Iron and Little Mount Iron, and the growth of tourism and residential and commercial development within the eastern part of Wanaka, it is reasonable to assume that the use and desire for

⁷ <http://www.straytravel.com/new-zealand-travel-guide/destination-guide/wanaka/mount-iron-walk/>

⁸ <https://www.runningcalendar.co.nz/event/mount-iron-challenge/>

⁹ Stats NZ (2017) Commercial Accommodation Monitor: January 2017-Wanaka. Wellington:Stats NZ

¹⁰ Lake Wanaka Tourism (2015-2016) Annual Report.

access to Mount Iron and Little Mount Iron will increase in proportion. The existing recreation resource upon which the benefits available on Mount Iron and Little Mount Iron rest will face increasing pressure from traffic and unmanaged access.

Management of the Mount Iron and Little Mount Iron Resource as a Whole

- 46 The Mount Iron and Little Mount Iron resource currently exists as a highly-used multiple use recreation area with significant recreation and natural amenity values¹¹ and is located in the midst of considerable residential development and tourism focus. Several issues arise from the current arrangement.
- 47 The Mount Iron and Little Mount Iron resource currently exists under dual private and public ownership adding complexity to recreation and environmental management responsibility and decision-making. Ideally, Mount Iron and Little Mount Iron would exist under the management of one land owner. Given the geographic and social context of Mount Iron and Little Mount Iron, the most sensible single landowner would be QLDC to manage as a Natural Reserve as set out in the Draft 2016 QLDC Parks and Open Space Strategy.
- 48 Historic recreation use has impacted the area with unplanned trail development and for activities which are not desired by the land owners. These trails can and have impacted the natural values of the resource. For example, mountain biking is prohibited on the Mount Iron Track by DOC and it is not permitted or encouraged by the Allenby Farms owners either, yet single track bike trails are in evidence descending from the summit of Mount Iron through to the locked gate at Hidden Hills. I observed two separate mountain bike riders ascending the Trail E presumably with the intent of descending back to Hidden Hills.
- 49 Similarly, the development of rock climbing sites on Little Mount Iron creates trails and impacted areas at the base of the sites as well as on the faces of the crags. While the rock climbing sites I observed appear to be properly established it is unclear how and by whom these sites are managed.
- 50 The same concerns apply to the flyer's launch site and any future development of recreation activity on Mount Iron and Little Mount Iron.
- 51 Conflict between recreation activities (i.e. mountain biking/foot traffic), management frameworks and decisions (i.e. whether mountain biking, rock climbing etc. are permitted on the resource), and between recreation and environmental amenities (i.e. impacts to sensitive vegetation from foot traffic)

¹¹ Lloyd, K. & Gillies, R. (2015) Evaluation of a Potential Significant Natural Area at Mt Iron, Wanaka. Contract Report No. 3762. Wildlands.

will occur and likely has occurred. In addition there are questions of health and safety and liability which currently are in question.

- 52 All of the above issues are complicated by the cross-boundary issues resulting from part of the Mount Iron and Little Mount Iron resource being in the public DOC estate and part being in private ownership.
- 53 The most appropriate and advantageous solution to protect the recreation and environmental amenities which currently exist as well as those that may be developed would be the development of a resource management plan. A resource management plan would:
- (a) Developed by the private landowner in consultation with, and probably the agreement of DOC.
 - (b) Catalogue the environmental, recreational and other amenities of Mount Iron and Little Mount Iron.
 - (c) Formalize a flexible decision-making framework for managing existing and future recreation use.
 - (d) Establish methods for establishing permitted use and impacts and review of permitted uses.
 - (i) By way of one example, Mountain biking is not currently permitted or desired by either land owner, yet it occurs. How will this be addressed? Should mountain biking be permitted then sole use trails designed for the activity would be required to minimize environmental impact and recreation user conflict.
 - (e) Establish methods for consideration of new activities and amenities. For example,
 - (i) Toilets, parking, café's, etc.
 - (ii) Commercial use, events, etc.
 - (f) Anticipate negotiated agreements for user-managed development and use of particular assets. For example, a common and accepted framework for managing rock climbing sites is the negotiation of agreements for the local rock climbing club to maintain and manage rock climbing sites on both public and private lands.
 - (g) Address management of environmental impacts of recreation, invasive species, etc.

- (h) Address the maintenance and development of tracks to a particular trail standard (i.e. SNZ HB 8630:2004) or overarching management strategy (i.e. QLDC Parks and Open Space Strategy), for example.

Conclusion

- 54 Mount Iron and Little Mount Iron offer significant potential and existing recreation and natural amenities given their location in the heart of residential Wanaka.
- 55 Mount Iron receives an inordinate amount of recreation use, given the size of the residential community, from tourism and the resultant impacts to the amenities continue to accrue in proportion to that use.
- 56 The proposed trail easements serve to formalize the trails on the northern aspects of Mount Iron, add access to Little Mount Iron and go some way to developing the commuter link to the town centre along the base of Mount Iron and Little Mount Iron. As such they add considerable value to the recreation amenities already in existence, help protect the environmental values of the SNA, and create additional recreation amenities on Mount Iron and Little Mount Iron.
- 57 In my view, the proposed house sites do not affect the recreation amenity on Mount Iron and Little Mount Iron.
- 58 Given the importance of Mount Iron and Little Mount Iron to the district and the Wanaka community, the resource should be protected under a resource management plan developed in agreement by the current land owners with a view to a future status under a single land manager (i.e. QLDC) as a core piece of Wanaka's recreation network.

Dated this 4th day of April 2017



Dr Shayne Galloway
Galloway Recreation Research Limited

Appendix A: Curriculum for Dr Shayne Galloway

Attachment A: Experience and Qualifications

Shayne Galloway, PhD
48 Hope Avenue
Queenstown, 9304

Education

1999 to 2003 Indiana University
PhD (Leisure Behaviour: Adventure Education & Education Psychology)
1997 to 1998 Indiana University
MS (Recreation Resource Management)
1987 to 1991 Indiana University
BS (Journalism and Political Science)

Technical Training

2016 ISO 9001:2015 Quality Management Systems Lead Auditor Training, Melbourne, Australia. February 8-12. Certificate Number ENR-00242091.

Current Roles

2016-2019 **Member, Board of Trustees, Shotover Primary School, Queenstown.**

2015 **Technical Expert – Adventure Activities Scheme, Joint Accreditation System of Australia and New Zealand (JAS-ANZ)** Contracted consultant providing expert advice on registration audits of adventure activity operators in New Zealand.

2014 **Independent Scholar and Director, Galloway Recreation Research Limited**
Providing management planning, recreation impact, market and resource research as well as recreation, leisure and tourism user and feasibility studies, facilitation and focus groups, education and safety management to the adventure and recreation sector.

Currently clients include: residential developers, local and regional tourism operators, local government authorities, adventure activity providers and national government entities.

Consultation Projects

2017 Review of Proposed Changes to Mount Iron and Little Mount Iron Recreation Amenities, Allenby Farms.

Assessment of Recreation Amenities: Franz Joseph Gondola Project, Skyline Enterprises

2016 Performance Study: New Zealand Adventure Activities Certification Scheme Review, WorkSafe New Zealand.

Expert Evidence for Judicial Review, High Court, Amuri Jet Resource Consent Application, Thrillseeker Jet.

Technical Expert, Adventure Activities Registration Scheme – JAS ANZ. Per Diem, Ongoing.

2015 Expert Evidence – Recreation Amenity, Bridesdale Special Housing Area Hearing, Bridesdale Farm Developments Limited.

Initial Impact Assessment on Recreation Amenity for Hanley Downs, RCL Group.

Demand and Gap Analysis for Shotover Recreation Reserves Vesting, Shotover Country Developments.

Submissions Review, Thunderjet Resource Consent Application, Queenstown Lakes District Council.

Literature Review, Minimum Flows for Jet Boats on Canterbury Rivers, Greenaway & Associates.

Expert Advice, Alpine Activities in Non-Technical Terrain (AANTT) Activity Safety Guideline, Tourism Industry Association. Pro Bono.

Previous Employment

2012 to 2014 **Stay-at-home Dad.**

2006 to 2012 **Lecturer in Outdoor Education, School of Physical Education, University of Otago, New Zealand.** Instruction of undergraduate and postgraduate papers in outdoor education theory and practice, research design and methodology. Supervised Honours, Masters, and Doctoral student work. Conducted research in outdoor leadership and decision-making and recreation participation. Confirmed by University 2012. In addition:

Chair, Outdoor Safety Committee – Responsible for governance of the school's safety management systems; participated in the Outdoors Mark process.

Editor, New Zealand Journal of Outdoor Education.

Research Advisory Group, Water Safety New Zealand.

Led groups in the Paradise area of Aspiring National Park for the school's 7-day mandatory camp.

2003 to 2006 **Assistant Professor, Utah Valley State College, Orem Utah**

Responsibilities included: Instruction of theory and skill courses related to recreation and outdoor leadership, development and delivery of the academic and risk management program for 10 adventure activities; and research in the area of outdoor leadership and decision-making. Developed the Bachelor's Degree in Outdoor Leadership and Recreation Resource Management – including course work and field-based skill assessment. Taught skills courses in mountaineering, rock climbing, outdoor leadership, expedition behavior, and search and rescue.

2002 to 2003 **Visiting Lecturer, National Park Service/ Eppley Institute**

Horace M. Albright Training Center, Grand Canyon, Arizona

Responsibilities included: Coordination and delivery of the National Park Service Fundamentals courses, curriculum revision and development, instructor recruitment and training, assessment and evaluation of course outcomes.

Managed safety of during field events around the canyon. Participated in Search and Rescue training with Park staff.

1999 to 2002 **Associate Instructor Indiana University, Bloomington, Indiana**

Department of Recreation and Park Administration

Responsibilities included: Teaching R371, theory and method of outdoor education, interpretation, and environmental education; teaching R317/R515, Great Smoky Mountain Institute at Tremont in the Great Smoky Mountain National Park; teaching R271, outdoor recreation resource management; and R160, introduction to recreation and leisure course, R100 Introduction to Rock Climbing.

Adjunct Instructor – CORE Outdoor Leadership Program

Indiana University, Bloomington, Indiana

Department of Recreation and Park Administration

Responsibilities included: Assisting in field-based instruction and training, safety management, classroom instruction, as well as service on the CORE Advisory Committee

1998-1999 **Research Assistant**
Indiana University, Bloomington, Indiana
Department of Recreation and Park Administration

1997-1999 **Program Coordinator**
Wolf Creek Adventures at Columbus Youth Camp
Columbus, Indiana

Research and Publications

Research Experience and interests include skill development and decision-making in naturalistic contexts, macro-cognition and the development of expertise and leadership. Recreation behavior including user preference, motivation, engagement, and activity specialization are also research interests. I am qualified in both quantitative and qualitative research method and design.

Selected Publications

Galloway, S. P. (2106). New Zealand Adventure Activity Registration Scheme: A Performance Study.

Galloway, S. P. (2012). Recreation Specialization among New Zealand River Recreation Users: A Multi-Activity Study of Motivation and Site Preference. Leisure Science, 34(2).

Galloway S. (2011) Is rational decision-making the most effective way to train outdoor leaders? In B. Martin & M. Wagstaff (Eds). Contemporary issues in adventure programming, Champaign, IL: Human Kinetics

Shooter, W. & Galloway, S. P. (2010). The Use of Factorial Designs in Leisure Research. Journal of Leisure Research, 42(4). 641-642.

Galloway, S. P. (2010). Recreation Specialization among New Zealand Whitewater Kayakers: A Study of Motivation and Site Preference. Annals of Leisure Research, V. 13, N. 3.

Galloway, S. (2008) Unit Two: Teaching Rock Climbing. In Wagstaff, M. & Attarian, A. (Eds.). Technical skills for adventure programming: A curriculum guide. Champaign IL: Human Kinetics.

Galloway, S.P. (2008) New Zealand Recreational River Use Study: Specialization, Motivation and Site Preference. Dunedin, New Zealand. School of Physical Education, University of Otago.

Galloway, S. P. (2007). Experience and medical decision-making in outdoor leaders. Journal of Experiential Education, V. 30, N. 2.

Galloway, S. P. (2005). Avalanche! – Teachable Moments in Outdoor Education. Journal of the Wilderness Education Association, V. 17, N. 2.

Galloway, S. P. (2005). Hierarchical Linear Modeling of the Effect of Experience on Decision-making in Outdoor Leaders (Abstract). Journal of Experiential Education, V. 27, N. 3.

Galloway, S.P. (2002). Theoretical Cognitive Differences in Expert and Novice Outdoor Leader Decision Making: Implications for Training and Development. Journal of Adventure Education and Outdoor Learning, V. 1, N. 3.

Other Recreation Research

Utah Lake Comprehensive Management Plan Resource Document. Daniel Horns (Eds.), 2005. Department of Earth Science, Utah Valley State College.

Indiana Trails Study: A Study of the River Greenway Trail in Ft. Wayne, Indiana. Project Associate. Eppley Institute for Parks and Public Lands. 2001
Indiana Trails Study: A Study of the Maple City Greenway Trail in Goshen, Indiana. Project Associate. Eppley Institute for Parks and Public Lands. 2001
Indiana Trails Study: A Study of the Pennsey Rail Trail in Greenfield, Indiana. Project Associate. Eppley Institute for Parks and Public Lands. 2001
Indiana Trails Study: A Study of the River Monon Trail in Indianapolis, Indiana. Project Associate. Eppley Institute for Parks and Public Lands. 2001
Indiana Trails Study: A Study of the Cardinal Greenway Trail in Muncie, Indiana. Project Associate. Eppley Institute for Parks and Public Lands. 2001
Indiana Trails Study: A Study of the Prairie Dunelane Trail in Portage, Indiana. Project Associate. Eppley Institute for Parks and Public Lands. 2001
Recreation Use Survey for Hoosier National Forest, Phase One and Two with Dr. Doug Knapp (study funded by the U.S. Forest Service as a pilot study for later survey on U.S.F.S. properties) 1999.

Non-refereed Publication

Galloway, S. & Burnett, K. (2004). Report on the State of Recreation and Tourism on Utah Lake. (Horns, D. Eds.). Utah State Parks.

Galloway, S. P., Ewert, A. W. (2004). Instructor Decision-Making: A Current Assessment and Overview of Training and Theoretical Applications. Proceedings of the The 17th Annual International Conference on Outdoor Recreation and Education. Association of Outdoor Recreation and Education.

Galloway S. P., Ewert, A. W. & Shellman, A. (2004). Instructor Decision-making: An overview and application of simulation in training. In T. L. Stegner & R. A. Poff, (Eds.) *Edited Papers of the 17th Annual International Conference on Outdoor Recreation and Education*. (pp. 44-50). Bloomington, IL: Association of Outdoor Education and Recreation. <http://www.aore.org/ICOREpapers2003.pdf>

Ewert, A.W. and Galloway, S.P. (2000). Risk Recreation Research – Research Update Parks and Recreation, February 2001. pp. 26-35.

Galloway, S.P. (2000). Recruitment of undergraduate students by parks and recreation departments. In B. A. Beggs (Ed.) Issues in higher education, recreation and leisure: A monograph from a doctoral seminar. Bloomington, Indiana: School of Health, Physical Education, and Recreation.

Roberts, N.S. and Galloway, S.P. (2000). Components of the Outdoor Trip: What Really Happens?: Research Recommendations. In Stringer, L.A., McAvoy, L.H. and Young, A. (Eds.) Coalition for Education in the Outdoors Fifth Biennial Research Symposium Proceedings.

Galloway, S.P. (1999). The use of assessment in wilderness orientation programs: Efforts to improve college student retention. Proceedings of the 13th Annual International Conference on Outdoor Recreation and Education. Clemson University, Department of Parks, Recreation & Tourism Management.

Galloway, S.P. (1998). The HIP Experience: One Public School's Program. The CORE. Association for Experiential Education, Schools & Colleges Newsletter. 1(1), 11-12.

Presentations at Professional Meetings

Galloway, S.P. (2006). Naturalistic Decision-making in Outdoor Education. Invited Speaker, University of Otago, School of Physical Education Faculty. Dunedin, New Zealand.

Roberts, J., Fox, K., Seamans, J., & Galloway, S.P. Reconstructing Experience (2005). International Conference of the Association for Experiential Education-First Symposium for Experiential Education Research. Tucson, Arizona.

Galloway, S.P. (2005). Judgment and Decision-making In Outdoor Leadership: Critical factors, Common Missteps, and Keys to Success. National Conference on Outdoor Leadership, Wilderness Education Association. Estes Park, Colorado.

Burnett, K. & Galloway S.P. (2005). The Use of Eustress and Distress in Wilderness Therapeutic Programs. National Conference on Outdoor Leadership, Wilderness Education Association. Estes Park, Colorado.

Rhodes, L. & Galloway, S.P. (2005). Developing a World Class Outdoor Leader Training Program: A Delphi Process. National Conference on Outdoor Leadership, Wilderness Education Association. Estes Park, Colorado.

Instructor Decision-Making: A Current Assessment and Overview of Training and Theoretical Applications. (2003). The 17th Annual International Conference on Outdoor Recreation and Education. Association of Outdoor Recreation and Education. Orem, Utah

Training Outdoor Leaders as Decision Makers for Risk Management. 2003 Grand Canyon Field Institute Annual Conference. Grand Canyon National Park, Arizona.

Outdoor Leader Training Simulator, (2002). Wilderness Risk Management Conference. Reno, Nevada. Presented with Alan Ewert.

Estimating Outdoor Leader Experience. (2002). International Conference of the Association for Experiential Education-First Symposium for Experiential Education Research. Saint Paul, Minnesota.

Estimating Outdoor Leader Experience. (2002). Presented at the Wilderness Education Association National Conference on Outdoor Leadership. Bradford Woods Outdoor Center, Indiana University.

Decision-Making Leadership in the Outdoors. (2002). Presented with Alan Ewert at the Wilderness Education Association National Conference on Outdoor Leadership. Bradford Woods Outdoor Center, Indiana University.

Development and Validation of an Outdoor Leader Experience Use History Instrument (2002). Presented at the 2002 Coalition for Education in the Outdoors Fifth Biennial Research Symposium. Bradford Woods, Martinsville, Indiana.

Making the Tough Calls: Measuring Instructor Effectiveness in Field-Based Decision-Making Settings. (2001). Presented with Alan Ewert at the 2001 International Conference of the Association for Experiential Education. Charleston, West Virginia.

Disaster Simulation Training for Outdoor Instructors. (2001). Presented with Alan Ewert at the 2001 Congress of the National Recreation and Park Association. Denver, Colorado.

Expertise in Outdoor Leader Decision Making: Theory and Implications for Practice. (2000). The 14th Annual International Conference on Outdoor Recreation and Education. Association of Outdoor Recreation and Education. Oxford, Ohio.

Outdoor Leadership Decision-Making Simulator. (2000). 28th Annual Association for Experiential Education International Conference. Tucson, Arizona.

The Use of Assessment in Wilderness Orientation Programs: Efforts to Improve College Student Retention. (1999). The 13th Annual International Conference on Outdoor Recreation and Education. Association of Outdoor Recreation and Education. Jackson Hole, Wyoming.

Lost and Found in the Wilderness: An Overview of Adventure Therapy. (1999). The Third Annual Court Appointed Special Advocate Conference. Indianapolis, Indiana.

Workshops and Institutes

Judgment and Decision-making Clinic. (2004). Utah Valley State College Outdoor Education Program, Orem, Utah

Judgment and Decision-making in Outdoor Leaders. 2003 Wilderness Education Association Advanced Professional Short Course, Baja, California.

Invited Panelist: Risk Taking and its Perception, Leadership Bartholomew County. Columbus, Indiana January 21, 1999.

Academic Courses Taught

Otago University, Dunedin

PHSE 328 Outdoor Education

PHSE 415 Research and Issues in Outdoor Education

Utah Valley State College (Semester Courses)

REC 4500 – Visitor Behavior

PES 4300 – Research Methods in Physical Education and Recreation

REC 4200 – Outdoor Leadership/Management Practicum

REC 410R – Experiential Learning Expedition

REC 4000 – Outdoor Leadership

PES 3850 – Ethical Concerns in Physical Education and Recreation

REC 3600 – Foundations of Recreation and Leisure

REC 3100 – Recreation Program Planning

REC 3300 – Wilderness Skills

REC 1200 – Mountaineering

REC 1120 – Rock Climbing II

REC 1110 – Rock Climbing I

Courses Developed and Approved

REC 4950 – Senior Seminar

REC 490R – Special Topics in Recreation

REC 2400 – Principles and Practices of Experiential Education

REC 2450 – Rock Climbing Site Management and Facilitation

REC 2600 – Principles of Outdoor and Adventure Education

REC 2650 – Principles and Practices of Challenge Education

REC 2800 – Principles of Water-based Adventure Education

National Park Service – Albright Training Center

Universal Competencies – Fundamentals Program

Core Values

Outside Looking In

Fundamental values

Common Ground – Field Experience

Personal Responsibility and Leadership

Risk Management

Indiana University (Semester courses)

R515 - Outdoor Recreation Consortium. Spring, 2001, 2002 2cr graduate course

R317 - Outdoor Recreation Consortium. Spring, 2001, 2002 2cr undergraduate course

R372 - Outdoor Education, Interpretation, and Environmental Education. Fall, 2000, 2001 3cr undergraduate course

R271 - Dynamics of Outdoor Recreation. Spring, 2000, 3cr undergraduate course

R100 - Introduction to Rock Climbing. 1999-2000, 1cr undergraduate course

Indiana University (Guest Lectures)

Introduction to Recreation and Leisure – Discussion Section

Research and Evaluation

Adventure Education

History and Philosophy of Wilderness (CORE)

Research Experience

Decision-making in Wilderness Medicine: Retention of Training and Ability. In progress research conducted in conjunction with the Wilderness Medical Institute.

The Effect of Learning Environment on Risk Perception In Adventure Recreation. In progress research funded by a Presidential Scholarship Grant, UVSC.

The Effect of Learning Environment on Perception of Environmental Impact In Adventure Recreation. In progress research funded by a Presidential Scholarship Grant, UVSC.

An Investigation of the Effect of Experience on Outdoor Instructor Decision-Making From the Perspective of Social Judgment Theory. Completed as a doctoral dissertation, Indiana University.

Development and Validation of an Outdoor Leader Experience Use History. Completed as a pilot study for the doctoral dissertation on the topic of the effects of experience and instructor decision-making.

A Grounded Theory of Outdoor Instructor Decision Making. Completed as a pilot study for the doctoral dissertation on the topic of the effects of experience and instructor decision-making.

A Behavior Setting Survey of Voyageur Outward Bound: An Ecological Psychology Perspective on Components Affecting Leader Decision Making. (Data collection: Summer 2001)

Language and the Learner: A Multi-Method Case Study Examination of Instruction in Adventure Recreation and Education. Completed as part of Y611 Qualitative Analysis. Dr. Tom Schwen. Indiana University.

Recreation Use Survey for Hoosier National Forest, Phase One and Two with Dr. Doug Knapp (study funded by the U.S. Forest Service as a pilot study for later survey on U.S.F.S. properties) 1999.

The Use of Assessment in Wilderness Orientation Programs: Efforts to Improve College Student Retention (Master's Thesis).

Appendix B: Site Visit Photos with Annotation



Figure 1 Old Racecourse Road Access to commuter trail with rock climbing site in the background.



Figure 2 Wind Gauge at Flyer Launch Site



Figure 3 Hidden Hills Access. A mountain bike trail exits the kanuka at centre right.



Figure 4 Example access to trail network in Allenby



Figure 5 Little Mount Iron trace on decent from summit.



Figure 6 Little Mount Iron trace on descent.



Figure 7 Bolted rock climbing site at the base of Little Mount Iron on proposed Delta track



Figure 8 Little Mount Iron trail on descent



Figure 9 Section of deer fence removed along proposed Delta track



Figure 10 Access created along proposed Delta track



Figure 11 Rock climbing route being developed on Mount Iron within DOC estate



Figure 12 Close view of the rock climbing route being developed on Mount Iron



Figure 13 Access created along proposed Delta track



Figure 14 Developed rock climbing site on DOC estate at Old Racecourse Road access



Figure 15 Impacted trail on Mount Iron Loop



Figure 16 Informal trail developed off the Mount Iron Loop



Figure 17 A mountain biker on the proposed Echo trail, Allenby Farm



Figure 18 A mountain bike trail that intersects the proposed Echo trail on Mount Iron

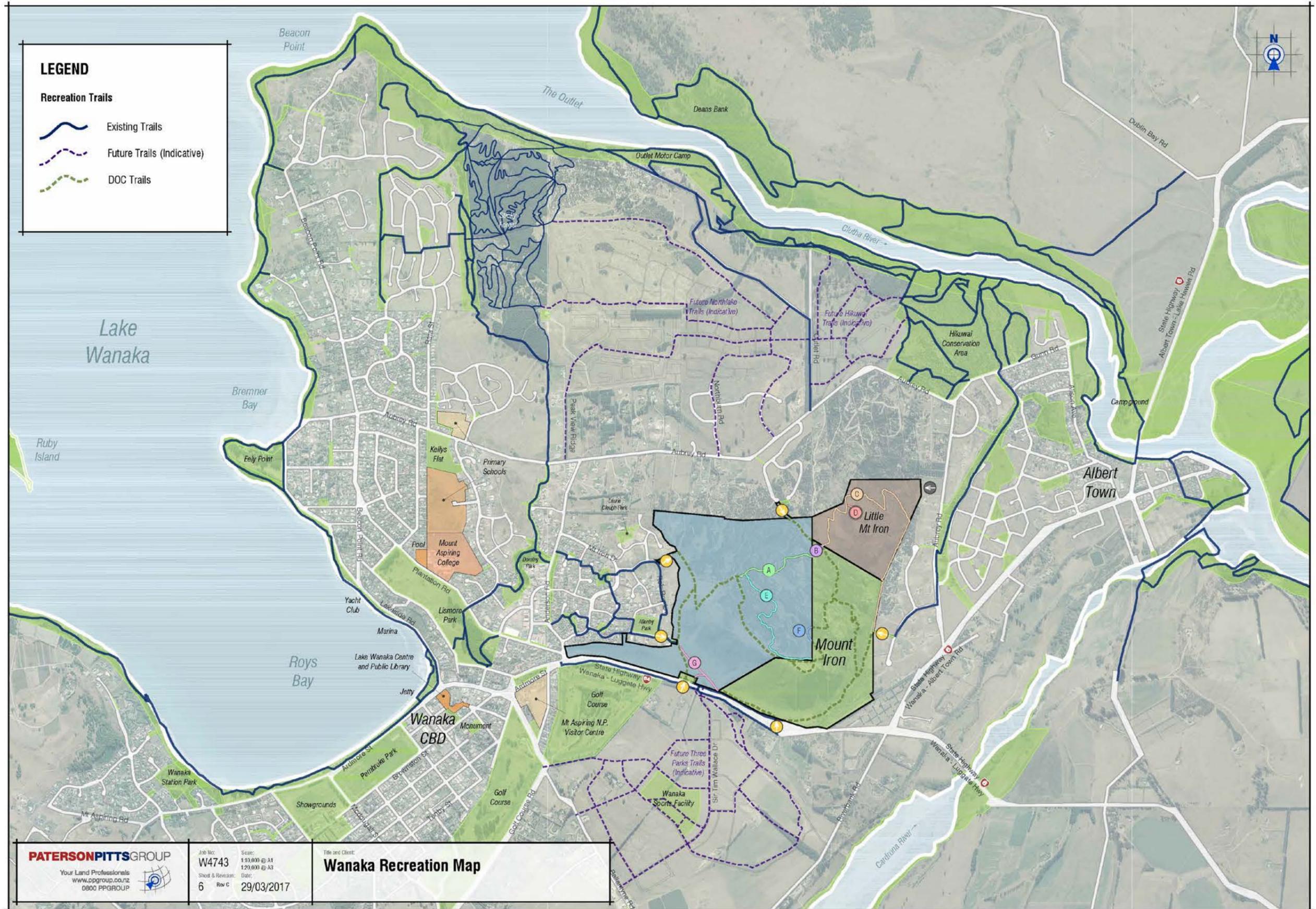


Figure 19 Parking and toilet facilities at the end of Allenby Place.



Figure 20 Roadside parking and traffic on SH 84

Appendix C: Wanaka Recreation Map



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