

Vancouver Island Region

**MANAGEMENT DIRECTION
STATEMENT**

September 2003

**for Artlish Caves
Provincial Park**



**BRITISH
COLUMBIA**

Ministry of Water, Land and
Air Protection

Artlish Caves Provincial Park Approvals Page

Foreword

This Management Direction Statement (MDS) for Artlish Caves provides management direction until such time as a more detailed management plan is prepared, prior to facility development to support recreation use in the park. Implementation of strategies identified in the MDS will be dependent on available funding and agency priorities.

This MDS has been shaped by the recommendations of the Canadian Cave Conservancy and their work in developing a comprehensive Vancouver Island Cave/Karst Strategy. Minor adjustments may need to be undertaken upon the completion of this strategy.

Further consultation with the with Ka:'yu: 'k' t 'h' / Che:k'tles7et'h' First Nation may result in the need to amend this MDS. Aboriginal rights are honoured and respected within provincial parks.

Approvals:



Dick Heath
Regional Manager

Date: Oct. 29/03



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Date: March 31/04

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Introduction

Purpose of the Management Direction Statement

The purpose of this Management Direction Statement (MDS) is to provide strategic management direction for Artlish Caves Provincial Park. The MDS describes the protected area values, management issues and concerns, and presents strategies to address them. While several management objectives and strategies are identified in this MDS, the completion and realisation of these strategies are subject to funding and implementation procedures. All initiatives associated with these strategies are subject to BC Parks' Impact Assessment Policy.

Context

Artlish Caves Provincial Park is a Class A provincial park located on western Vancouver Island, 18 km north of Zeballos in the Comox-Strathcona Regional District (Figure 1). The park contributes primarily to Goal 2 of the Protected Areas Strategy, namely protection of special features. The park comprises 285 hectares of forested old growth along the South Fork of the Upper Artlish River and encompasses most of the significant karst features¹ in the area (Figure 2).

The area was identified by the Vancouver Island Regional Protected Areas Team for its spectacular and unique karst features of provincial and national significance, including large cave² entrances and an underground river within an old growth forest environment. As a result of recommendations made in the Vancouver Island Land Use Plan, the area was designated as a provincial park by order-in-council under the *Park Act* on April 30, 1996. The Vancouver Island Land Use Plan also stipulated that sensitive area management of the lands bordering the protected area be followed. The park boundaries were legislated in 1997 by their inclusion in a schedule to the *Park Act*. The park is presently listed in Schedule D of the *Protected Areas of British Columbia Act*.

The park offers recreational caving and commercial cave tours. For Canada, the large cave entrances and interior chambers provide for unusual cave and karst-related experiences and activities in an old-growth forest setting.

¹ Karst is a distinctive topography in which the landscape is largely shaped by the dissolving action of water on carbonate bedrock (usually limestone, dolomite, or marble). This geological process, occurring over many thousands of years, results in unusual surface and subsurface features ranging from sinkholes, vertical shafts, disappearing streams, and springs, to complex underground drainage systems and caves. A few of the characteristics of this ecological unit include: older, well-developed forests, increased productivity for plant and animal communities, extremely productive aquatic communities, well-developed subsurface drainage, and the underlying unique cave resources. [Description from the Canadian Cave and Karst Information Server, 1997 and 2001, www.cancaver.ca/]

² A cave is a natural subterranean cavity (or series of cavities) large enough to be entered by humans, commonly formed by solution of carbonate rock in karst, but may also be formed by wind, fluvial erosion or collapse. It may be an air-filled or water-filled cavity. [Description from the Canadian Cave and Karst Information Server, 1997, www.cancaver.ca/]

Artlish Caves Provincial Park – Regional Context

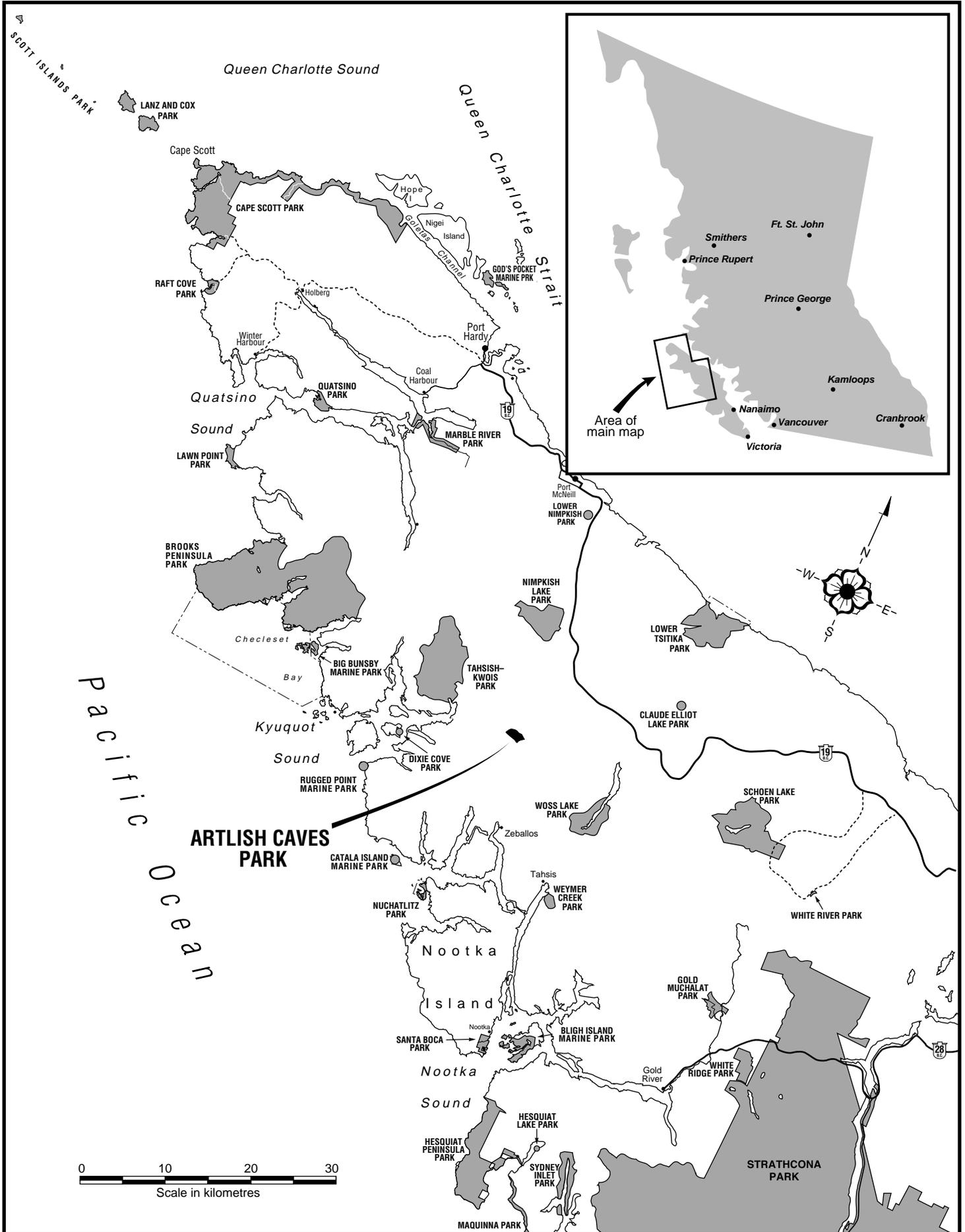
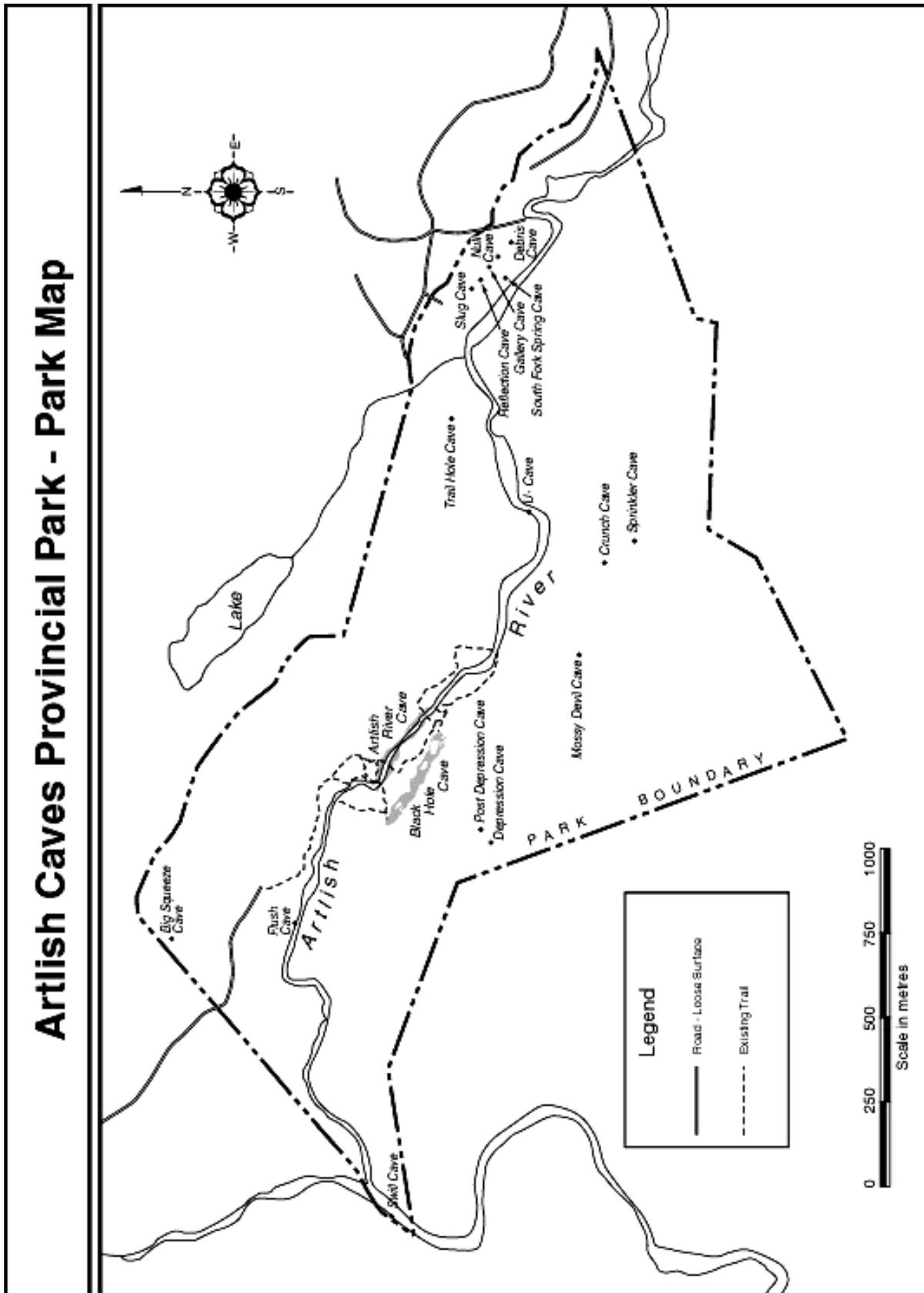


Figure 2: Park Map



Protected Area Attributes

Conservation

- Preserves a major underground river cave system. For a portion of its length, the Artlish River flows completely within the Artlish River Cave leaving no flow at the surface.
- In terms of flow volume and passage dimensions, it is the largest active river cave system currently known in Canada.
- Constitutes a concentration of river karst features unique in Western Canada, in that the dry gully above the Artlish River Cave, the Black Hole Cave, and the Artlish River Cave itself indicate three distinct geomorphological phases of the river.
- Includes undisturbed surface karst features such as karren, sinkholes, springs and a total of 20 caves. Under the MOF Cave Classification system, three of these caves (including Black Hole Cave) are of Type II which require moderate to intensive management and one (Artlish River Cave) is of Type II-III which requires most intensive management. The remainder are Type I which require least management.
- Is suitable for scientific research on karst environments because of the variety of features within a relatively small area
- Preserves old-growth valley bottom karst ecosystem with coastal western hemlock and western red cedar (note: Sitka spruce may be present within the park boundary, but is not a dominant tree species)
- Part of a major watershed in Kyuquot Sound
- Provides habitat for sockeye, coho, chinook, and pink salmon, steelhead and rainbow trout
- Provides winter habitat and migration corridor for Roosevelt elk

Cultural Heritage

- Some culturally modified trees
- Within the asserted territory of the Ka:’ yu: ’k’ t ’h’/Che:k’ tles7et’ h’ Band

Recreation and Tourism

- High values for tourism: cave tours, landscape viewing, nature tours, wildlife viewing
- High values for limited use by non-organized recreationists
- Moderate values for organized recreational caving through groups like Vancouver Island Cave Exploration Group and Central Island Caving Club. Most of system has been explored and mapped
- High scenic values

Significance in the Protected Areas System

- Relatively undisturbed karst environment that is underrepresented in the protected areas system
- Low elevation karst environment in natural state which includes major underground river (a portion of the Artlish River) of provincial and national significance
- Forested (old-growth) karst topography
- Five species of salmon, including summer run of steelhead
- Winter habitat and migration corridor for Roosevelt elk, a blue-listed species.

Land Uses, Tenures and Interests

Access

- Via road from Zeballos: Zeballos mainline to south fork of the Artlish mainline. Several landslides have made access via this route by foot only from the Zeballos mainline (approximately three kilometre walk to the park boundary).
- Via road from Port McNeill: Atluck Road (Atluck Lake) to Artlish Road. Off-road logging trucks frequent portions of this access route. At one time, road access extended 250 m within the present park boundary, but cross-ditching has made access from Atluck Lake four wheel drive vehicle only. As of March 2003, with a bridge removed, vehicle access is limited and access is by foot (20 minutes to the park boundary and 45 minutes to the caves).
- Via helicopter: to date, helicopters have been landing on a river sandbar upstream from the caves, within the park boundary.
- Several routes to the caves from the ends of logging road access have been marked by recreational users, and in places, follow Roosevelt elk trails.

Existing Tenures, Alienations and Encumbrances

- Forest Licenses A19231 and A19233 are adjacent to the park. No active cutting permits but cutblocks have been proposed by the Nootka Sound Economic Development Corporation on the north side of the park near a small lake. These blocks will be accessed from the east.
- Road permit R01710 (active) and R06867
- Ministry of Forests Recreation Project 900-1-252 (cave reserve)
- Mineral and Placer Reserve (no staking)
- One active trapline (T_0112T616)
- One licensed guide-outfitter

Existing Land Use Activities and Facilities

- Recreational caving, hiking - most caves have been fully explored by organized recreational users. However, there is still some recreational use; counters in the caves and visitor logbook indicate less than 50 caver days per year. With limited road access, there was fewer than 20 users in 2002.
- Commercial tourism use - as many as four commercial tourism operators have used the caves and surface features for commercial tours since approximately 1976. When the bridge was removed from the western logging road system operated by Canfor, use dropped off as walking time to the caves was extended from 25 minutes to 45 minutes. Since the park's designation, one tour company had been guiding school groups and helicopter tour groups. Monitoring in 2000 revealed problems associated with visitor use and most commercial operators suspended activities until more detailed planning could provide appropriate management direction.
- No developed facilities at present. Several marked by unofficial routes facilitate access to the cave entrances. See Figure 3.

Adjacent Patterns of Land Use

- Crown land and Kyuquot Provincial Forest are adjacent to park

- Timber harvesting - under forest license by Canadian Forest Products (CanFor), Western Forest Products and Nootka Sound Economic Development Corporation as a community forest license. Zoned as General Management under Vancouver Island Resource Target.
- Recreational fishing downstream

First Nations Interests

- Within the asserted territory of the Ka:’ yu: ’k’ t ’h’/Che:k’ tles7et’h’ Band
- Administrative interest by the Nuu-chah-nulth Tribal Council

Other Agency Interests

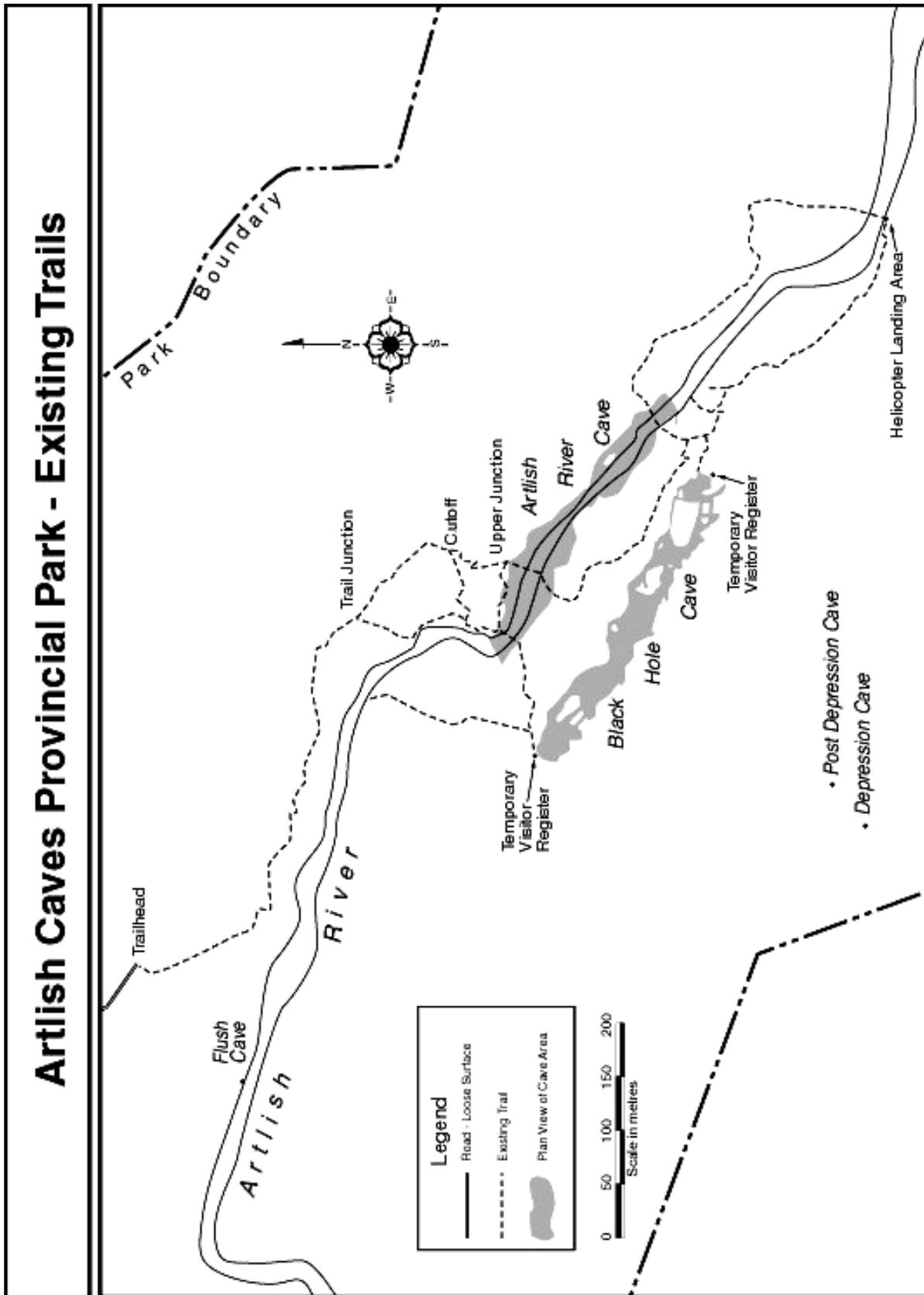
- Ministry of Competition, Science and Enterprise, Land and Water BC Inc. and Ministry of Sustainable Resource Management - access for cave tours
- Fish and Wildlife Science and Allocation Section of the Ministry of Water, Land and Air Protection - fish and wildlife populations and habitat and in trapline and guide outfitter territory administration
- Ministry of Forests - active logging roads and cut blocks adjacent to park

Private and Public Stakeholder Interests

The following parties have indicated they have an interest in the park area:

- Various caving groups and organizations (BC Cave Rescue, BC Speleological Federation, Canadian Cave Conservancy, Vancouver Island Cave Exploration Group, Cave Guiding Association of BC, Central Island Caving Club)
- Various caving guiding and tourism operators (Canadian Underworld Tours, Cave Treks, Mountain Line Tours, Northern Vancouver Island Cave and Karst Explorations, Nimmo Bay Resort)
- Comox-Strathcona Regional District
- Mount Waddington Regional District
- Village of Zeballos
- Friends of Nootka Sound
- Nootka Sound Economic Development Corporation
- Canadian Forest Products
- Western Forest Products
- Vancouver Island Nature Exploration (Coal Harbour)
- Vancouver Island North Tourism Association
- Zeballos Fish and Wildlife Association

Figure 3: Existing Trails



Protected Area Role Statement

Primary Role

The **primary** role of Artlish Caves Park is to protect an undisturbed karst/cave landscape that incorporates a major low elevation river cave system and its associated ecosystems. Artlish Caves Park protects karst features of provincial and national significance, including large cave entrances, an underground river, karren, sinkholes, and springs within a relatively low-elevation old growth forest environment. For a portion of its length, the Artlish River flows completely within the Artlish River Cave leaving no flow at the surface. The park is one of a number of cave/karst systems on Vancouver Island, which has the greatest concentration of cave/karst features in Canada. Six cave systems have been protected ranging from Horne Lake Caves which have been highly explored to Clayoquot Plateau where exploration has been limited to a few caves. The Artlish system itself has been intensively explored.

Artlish Caves Park is part of a major watershed in Kyuquot Sound. The old growth valley bottom karst ecosystem in the park (consisting of mostly western hemlock and western red cedar trees) as well as the river contribute habitat for numerous fish species and ungulates. The park provides winter range and a migration corridor for Roosevelt elk, and provides habitat for five species of salmon and a summer run of steelhead trout.

Secondary Role

The **secondary** role is to present the park's features for the appreciation and enjoyment of the general public. The fragile nature of many karst features is such that not all caves are hardy enough to withstand visitation. However, parts of the Artlish system with large cave entrances and interior channels, in particular the Artlish River Cave, and, with careful management, the lower section of Black Hole Cave, can withstand some visitation and contribute to the park's role as a destination for the purposes of natural feature appreciation. In addition, as part of the system of protected cave/karst areas on Vancouver Island, interpretation of the cave and its features can contribute to the appreciation of the park.

Tertiary Role

The **tertiary** role is to provide opportunities for research and scientific study of the karst environment. Such research will assist in the conservation of the caves and their features and allow for recreation and tourism opportunities.

Management Commitments and Issues

Management Direction from Previous Planning

BC Parks reviewed the area for potential as a provincial park in 1975. A 14-hectare recreation reserve was established by the Ministry of Forests in 1977 and was expanded to 35 hectares in 1981. The area was part of the Artlish Local Resource Use Plan of 1986 (updated in 1990) and was submitted as a candidate area in the “Parks and Wilderness for the 90’s” process in 1991. The Ministry of Forests developed a draft “Artlish River Karst Area Recreation Management Plan” in 1991. The area was then subject to a four year public planning process involving forestry companies, nearby residents, recreational caving organizations, commercial cave guides, Ministry of Forests and the former BC Environment (Fish and Wildlife). The process was suspended upon the inclusion of the area as a Protected Areas Strategy Goal 2 candidate.

The initial proposed size for Artlish was 534 hectares. The decision to protect the current 285 ha area was conditional upon the “sensitive area management of adjacent areas”. This condition was officially stipulated on the day of announcement and was recorded in *Completing the Vancouver Island Land Use Plan - Special Feature Protected Areas Summary Report* (Ministry of Government Services, February, 1996). The Ministry of Forests and Western Forest Products have treated the area around the park as a test area for implementing the *Karst Inventory Standards and Vulnerability Assessment Procedures* (Resources Inventory Committee, Jan. 2001) and the *Karst Management Handbook for British Columbia* (BC Ministry of Forests, 2001).

Management Issues

Theme	Issue
Protecting Ecological Values: Appropriate Use	<ul style="list-style-type: none"> • Sensitivity of karst topography and caves and the ease with which they are damaged. • Unplanned increase in visitor numbers and/or changing use patterns causing declines in ecological integrity and visitor satisfaction levels. • Impacts of use levels and practices (number of groups per season, number of groups per day, group size, types of activities, details of practices) on cave, karst and forest features. • Cumulative damage from visitors: breakage of speleothems, soiling the rock surfaces, littering.
Protecting Ecological Values: Wildlife and Vegetation	<ul style="list-style-type: none"> • Lack of knowledge of natural values. • Impacts of recreation use on wildlife use of caves (bat hibernation sites, birds, and amphibians) and cave organisms. • Potential for rare and endangered biota specific to limestone features.
Protecting Ecological Values: Sensitive management of adjacent areas	<ul style="list-style-type: none"> • Potential impact of forest development on caves and karst features. • Protection of elk winter habitat. • Implication of watershed and fire management in karst areas.
Public Safety	<ul style="list-style-type: none"> • Provision of safety guidelines for recreational and commercial users to ensure safe recreation experience.

Theme	Issue
Access and Facilities	<ul style="list-style-type: none"> • Lack of safe and good road access to the park. • Development of safe and low impact access to and within caves. • Provision of information regarding access to park and within park. • Lack of parking, trails, viewpoints, picnic area and sanitary facilities.
Community Relations	<ul style="list-style-type: none"> • Park-specific relationships with neighbouring communities, First Nations and user groups, especially regarding potential economic benefits derived from the park.

Management Direction

Priority Management Objectives and Strategies

A four-phased approach is proposed to address management of the park and its values, particularly recreation and tourism use. The park is virtually in its natural state. However, there has been some site specific degradation by visitor use to date and appropriate use levels must initially remain low. Higher use levels can only be accepted if management of the park is intensified by a combination of facility improvements and better visitor supervision. As access is a key issue, any improvement of road access toward the park boundary would either trigger initiation of the fourth phase of development or would require that there be a mechanism for controlling road access to the park. See Figure 4 for a map of Phase 1 and 2 trails and Figures 5 to 7 for a map of Phase 3 road options.

Objective	Strategy
Protect and maintain sensitive and ecologically important cultural park features	<ul style="list-style-type: none"> • Work with Ministry of Forests and forest companies to address management of adjacent areas to protect cave and karst features. Ensure appropriate hydrology, windthrow and recharge area testing has been completed before harvesting proceeds. • Work with volunteers and any commercial operators to undertake careful restoration of impacted areas in the park, particularly in Black Hole Cave (BHC), and to assist with assessment and monitoring. • Until assessments are undertaken, request that all users not enter BHC or travel in the upper portions of the cave.

Objective	Strategy
<p>Continue inventory and monitoring program for management purposes</p>	<ul style="list-style-type: none"> • Continue research and assessment of principal caves to develop baseline information to determine cave health. • Continue backcountry recreation inventory monitoring (BRIM) and mitigate trail impacts. • Continue to use counters and visitor logs. • Continue baseline inventory and photo monitoring work (already undertaken in 1987, 1990 and 2001) of key impact areas in the park, particularly BHC. Establish new stations to track use in the BHC active streamway. • Survey biota to identify rare or endangered species or other areas of management concern (such as bats) particularly in BHC and Artlish River Cave (ARC) with priority on BHC. • Conduct preliminary archaeological study, cultural inventory and traditional use assessment in conjunction with First Nation.
<p>Increase awareness of park and its values and ensure public safety while protecting sensitive cave features.</p>	<p><i>Phase 1 and 2</i></p> <ul style="list-style-type: none"> • Provide basic information on safety consideration and the sensitive nature of park values to visitors through website • Maintain confidentiality of caves' features and location until issues of safety and sensitivity have been addressed. <p><i>Phase 3</i></p> <ul style="list-style-type: none"> • Develop park information focused on increasing the appreciation of natural values of the park and an understanding of the rules for visitors and the reasons behind them, role of the park, and the significance of the cave/karst features. This includes interpretative signing at selected park features. • Develop education plan focussed on the appreciation of features rather than adventure caving. • Coordinate with other cave parks and non park cave/karst tourism and recreation opportunities in the region as part of marketing and promotion. <p><i>Phase 4</i></p> <ul style="list-style-type: none"> • Provide an education program in park in high use season. • Develop remote viewing opportunities served by cameras in locations both on and off tour routes that would transmit images live to park entry point and possibly to other cave/karst visitor centres, where they would serve both to promote the park and to enable comparison of features and processes from one area to another.

Objective	Strategy
<p>Maximize the recreation potential of the Artlish Caves Park while protecting sensitive features and values</p>	<p><i>Phase 1</i> (assumption that there is no significant changes in road access)</p> <ul style="list-style-type: none"> • Assess need for minor improvements to surface trails, for marking of preferred underground routes and for minor improvements to underground trails for safety or conservation purposes. <p><i>Phase 2</i> (assumption that there is no significant changes in road access)</p> <ul style="list-style-type: none"> • Develop routes through cave (minimal markings) for non-guided visitors to minimize potential environmental damage and maximize user safety. • Undertake limited improvements to existing surface trails, such as marking, brushing and removal of windfalls, minor re-routing and minor surface improvements. • Undertake limited improvements to access to ARC downstream entrance, such as clearer delineation of single paths and viewing stops, minor surface improvements to avoid tracking mud, etc. <p><i>Phase 3</i> (assumption that access improvements are in the planning stage)</p> <ul style="list-style-type: none"> • Undertake detailed site planning for facility development in park. Determine the best entry point into park from long-term road, ensuring that it is not placed on karst bedrock. • Establish the best locations for surface trails, considering presentation of other park karst features. • Consider a role for lake northeast of park as campground or other recreational use related to the park. • Determine any underground trail improvements necessary to contain and/or redirect increased use from restored or improved road access. <p><i>Phase 4</i> (assumption that improved road access is in place)</p> <ul style="list-style-type: none"> • Develop facilities to support large numbers of visitors (i.e. bus tours) without unacceptable impacts on park values including wildlife (i.e. elk). This may include a permanent building for reception, fee collection, education and research, gift shop, seasonal accommodation, First Aid and toilets. • Establish entry point facilities including parking for 30 cars and several buses. • Reconstruct surface trails and construct new trails to incorporate surface interpretation features. This may include a boardwalk from lower entrance of ARC to lower entrance of BHC via dry gully leading away from the BHC entrance and viewing platforms at key features. • Modify and/or improve underground access and routes in ARC to accommodate large groups (i.e. 20 people) and possibly small groups (i.e. 10) in BHC.

Objective	Strategy
<p>Ensure level of use appropriate for park values and facilities to accommodate use.</p>	<p><u>Phase 1</u></p> <ul style="list-style-type: none"> • Limit commercial subsurface tours to lower entrance of ARC and discourage all use in BHC (particularly in its upper portion and through its upper entrance) until an environmentally sustainable route through the BHC is determined. • Ensure that commercial tours emphasize education and appreciation of natural features, with some optional opportunities for guided introductions to caving techniques. • Consider a limited “adventure caving” opportunity, such as rappelling, in areas of the ARC which are accessible from the lower entrance and which demonstrably will not be inappropriately impacted (e.g. areas subject to annual flooding). • Set the acceptable level of combined commercial and recreational use at 500 visitors per year for the park as a whole, with a maximum daily peak of 20 visitors. • Require commercial guiding operations to maintain a party size of no more than 7 with a client to guide ratio of no more than 6:1. The combining of two commercial parties may be authorized only for locations at which the operator can demonstrate that no additional impacts will result. • Direct non-commercial visitors not to enter the BHC, or at least not to use the upper BHC entrance or to travel in the upper half of the cave. <p><u>Phase 2</u></p> <ul style="list-style-type: none"> • Continue commercial subsurface tours as in Phase 1. • Continue to discourage of all use in BHC (particularly in its upper portion and through its upper entrance) until an environmentally sustainable route through the BHC is determined. <p><u>Phase 3</u> (detailed planning phase for park facilities to support increased use)</p> <ul style="list-style-type: none"> • After assessment of cave values, determination of any underground trail improvements necessary to contain and/or redirect increased use from restored or improved road access. <p><u>Phase 4</u> (addition of facilities to support increased used)</p> <ul style="list-style-type: none"> • Continue guided underground routes in the ARC and possibly the BHC for larger groups. • Allow limited number of guided ‘adventure caving’ tours in the ARC, possibly including a through trip from the upper to the lower entrance. • Establish management presence during high use season. • Subject to an impact assessment, allow underground travel off established trails by special permit and possibly a guide. This will be applied to members of the organized caving community and to researchers.

Objective	Strategy
<p>Provide safe access to Artlish Caves Park</p>	<p><i>Phase 1 and 2</i> (assumption that there is no significant changes in road access)</p> <ul style="list-style-type: none"> • Direct helicopter access to landing site outside the park boundary along the north-western (Canfor) logging road subject to an impact assessment with emphasis on elk habitat and use. Adjust flight schedule, locations of landing pads and trail to mitigate human impacts. Monitor impacts including those of other recreationists. • Work with Ministry of Forests to address road access and logging traffic conflict issues; deactivate former logging roads that are not required for access. <p><i>Phase 3</i></p> <ul style="list-style-type: none"> • Finalize entry point into park in cooperation with forest companies and local communities. <p><i>Phase 4</i></p> <ul style="list-style-type: none"> • Develop access to park boundary by re-opening the Artlish Main road, probably in conjunction with sensitive resumption of timber harvesting. • Establish management presence and education in park during high use season and access controls on road in off-season.
<p>Continue to develop working relationship with all stakeholders</p>	<ul style="list-style-type: none"> • Continue to develop a working relationship with Ka:'yu: 'k' t 'h' / Che:k'tles7et'h' Band and Nuu-chah-nulth Tribal Council to create a mutual understanding and incorporate interests in park management • Develop a working relationship with Economic Development Commissions, Regional District, neighbouring communities, and tourism associations to address economic development issues resulting from the creation of the park. • Work with Ministry of Forests and forestry companies to manage adjacent lands and ensure timber harvesting does not unduly impact the cave systems within the park. • Work with caving organizations (Canadian Cave Conservancy, BC Speleological Federation; Vancouver Island Cave Exploration Group; Central Island Caving Club) to explore opportunities for inventory, research, stewardship and monitoring park use. • Work with BC Cave Rescue to develop safety protocols and procedures. • Continue to participate jointly with the Ministry of Forests on the Vancouver Island Cave/Karst Management Committee meetings.

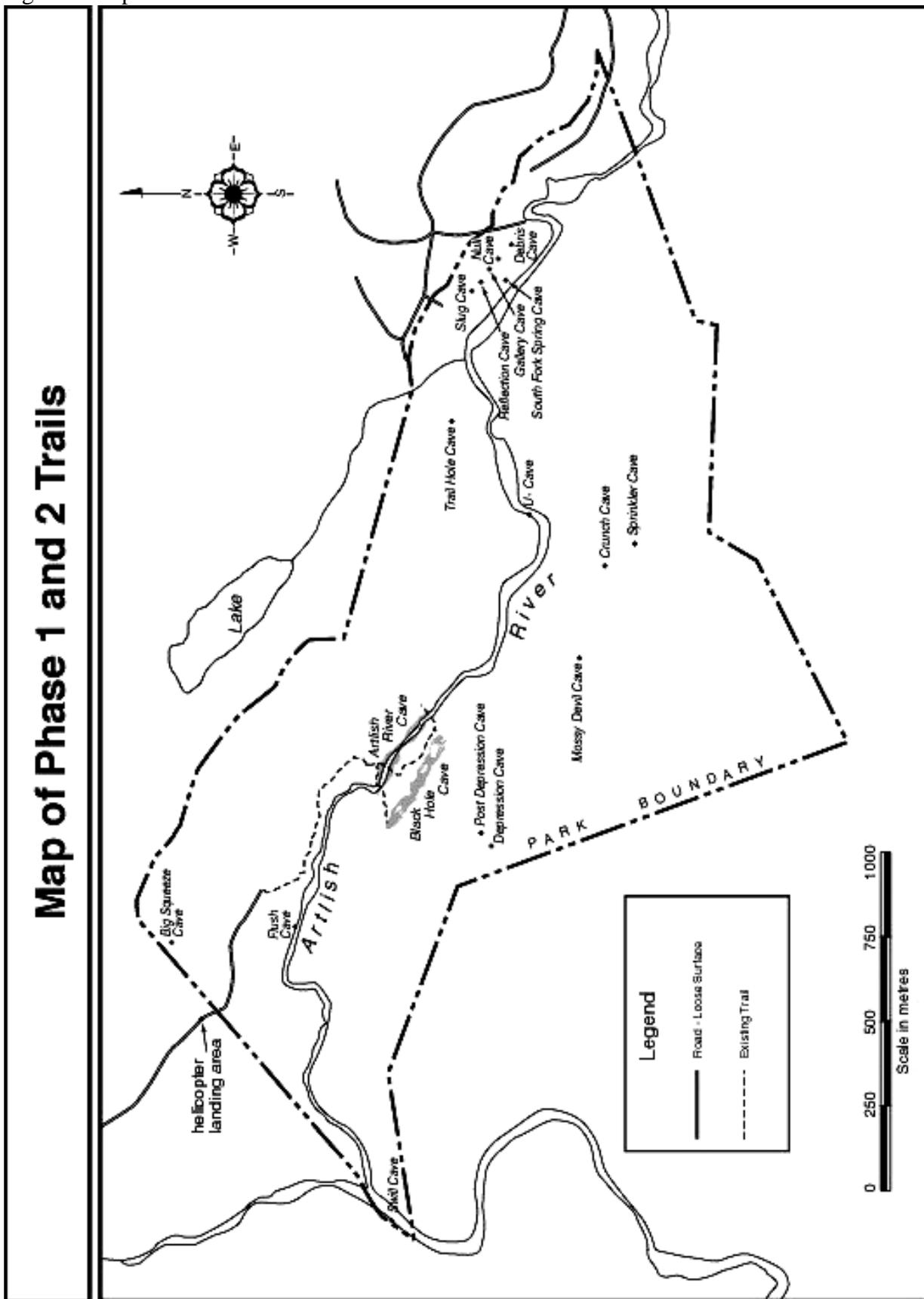
Consultation and Future Planning

- This MDS draws on expert knowledge of the relative values and potential roles of the other cave and karst related parks in Vancouver Island Region. With allowance for minor adjustments upon later completion of a comprehensive Vancouver Island Cave/Karst Strategy, this MDS will provide interim management direction to ensure the conservation and recreation values of the Artlish Caves Provincial Park are protected.
- A Management Plan will need to be developed in Phase 3 to further define acceptable uses, use levels and zoning and ensure the integrity of important habitats and species with public, industry and agency input.

Zoning Plan

- Natural Environment Zoning best fits the overall purpose of the park. Natural Environment Zoning allows for a range of compatible recreational activities, while providing BC Parks with the ability to manage potential impacts on known natural and cultural values. Visitor access may be restricted to preserve the recreation experience or to limit impacts.
- Zoning should be reassessed if visitor use increases significantly, or if the results of inventory and vulnerability assessments indicate otherwise for limiting impacts or using special feature zoning.

Figure 4: Map of Phase 1 and 2 Trails



Appendix 1: Table of acceptable uses, activities and facilities in Artlish Caves Provincial Park

Activity/Use/Facility	Acceptability
Hunting	Y
Fishing	Y
Trapping	Y
Guide Outfitting (hunting)	Y
Guide Outfitting (fishing)	Y
Guide Outfitting (nature tours)	Y
Commercial recreation (non-facility based)	Y
Road Access	M
Fire Management (suppression)	Y
Fire Management (prevention)	M
Forest Insect/Disease Control	M
Noxious Weed Control	M
Exotic Insect/Disease Control	M
Scientific Research (specimen collection)	Y
Scientific Research (manipulative activities)	M

Y= allowed subject to conditions identified in the Management Direction Statement or management plan
M= may be permitted if compatible with protected area objectives

N= not allowed
N1= allowed for expressed management purposes only
N2= present and allowed to continue but not normally allowed

Appendix 2: Considerations for Phase 3 and Phase 4 Planning

As recommended by the Canadian Cave Conservancy, April 2003.

Phase 3 must address in detail the following topics:

- Road access
- Timber harvesting adjacent to the park
- Specific facility developments inside and adjacent to the park
- Funding
- Park operation (supervision, guiding/interpretation, maintenance)
- Marketing and promotion

Road Access

Although road access to both sides of the park could be developed by re-opening currently deactivated logging roads, a single access point to the park is preferable for effective management of visitors. The park's relatively sensitive resources can only accommodate high visitation if use is well-supervised. Funnelling park access through a single point not only provides better control of use, but also offers greater efficiencies in such entry point factors as parking space, signage and staffing. Selection of an entry point must consider both the existing roads in and immediately around the park, and the systems to which these roads connect.

The northwestern (Canfor) access road presently extends some 400 metres into the park and could be re-opened to vehicles with relative ease by replacing the bridge over the North Fork of the Artlish River, some 2.2 kilometres from the park. The trail route from the road end to the ARC lower entrance, a distance of only about 350 metres, is relatively level and offers scenic views of the river and canyon below the cave entrance. However, from the North Fork bridge site to the Island Highway (approximately 24 kilometres) the Canfor logging roads receive heavy industrial use and the section along Atluck Lake in particular is dangerously narrow. The overall road distance from the park to the Island Highway is about 26.5 kilometres.

On the eastern side, the uppermost spurs of the Artlish Main road access cutblocks along the north side of the Artlish South Fork which are now partially within the park. The route from the end of these spurs to the upper entrances of the main caves is relatively level and passes some smaller karst features, but it is less well-defined than the northwestern approach and is slightly over one kilometre in distance. The Artlish Main road is currently blocked by landslips on its lower section. The overall road distance from the park to the Island Highway by this route is about 28.75 kilometres (8.75 kilometres from the park to the Zeballos Main Line and about 20 kilometres from that junction to the Island Highway). However, the access to Zeballos is via public forest roads which already serve a variety of traffic to the community and are likely to be well-maintained or improved over time for this purpose. The costs of reopening and possibly upgrading the Artlish Main road could be offset by resuming at least some of the timber harvesting northeast of the park, with due consideration for its "sensitive area" status.

Accessing the park from the Zeballos Mainline would contribute more to the local economy than access from the western side, which provides access to no existing communities. Assuming long-term development of trail, viewpoint and interpretation facilities and a management presence during visiting hours, the proximity to Zeballos (approximately 25 kilometre- or 30 minute-drive) would provide a good base for staff and roofed accommodation for tourists. Vehicle and ATV access to the park boundary

could be regulated to protect park features and infrastructure by placing a gate on the Artlish Main road at a suitable location (such as a bridge) beyond convenient walking range.

On balance, the convenience of the northwestern access to the main caves is countered by the safer Zeballos road link, the management advantages of relative proximity to the Zeballos community and the economic benefits that would accrue from this proximity. Planning for Phase 3 will need to consider how the east side access can be made more convenient with minimum impact on the park's sensitive karst, wildlife and other features. Several possibilities may be considered:

Option 1 (Map 5): Extending the present Artlish Main access road up the north side of the stream draining the unnamed lake north of the park and along past the lake to connect with the Canfor spur road uphill from the presently used spur and trailhead. This upper spur could then be followed out to its junction with the lower spur and an entry point could be established on the lower spur at the present park boundary, leaving a walk of some 650 m to the ARC lower entrance. This route would avoid any new roadbuilding on the karst bedrock, which occurs south of the lake and stream. Facilities constructed at or just inside the park boundary would be sited within a harvested block and so would not disrupt the park's standing old growth timber.

Option 2 (Map 6): Extending the Artlish Main access to the lake as described above, but locating the park entry facilities at or near the lake outlet (southeast end) and constructing a new trail over the height of land forming the park boundary and down to the ARC lower entrance, a distance of about 650 metres with an elevation gain of 30 metres and a descent of 122 metres. This approach would keep entry facility development out of the park and mostly off the karst bedrock, and would result in a walking approach about the same distance as the first option. However, the approach trail would be considerably more strenuous than the level approach from the northwest and it would present fewer scenic or interpretive possibilities.

Option 3 (Map 7): Developing the entry facilities at the end of the existing Artlish Main road within the harvested cutblock, either inside or outside the park boundary. As this site is north of the stream draining the unnamed lake north of the park, it is not on karst bedrock. A new trail about 1.5 kilometres long would have to be developed to reach the ARC lower entrance, but such a trail would be relatively flat and could offer a number of scenic or interpretive features, including small caves, the Artlish South Fork and the very important feature of the dry gully above the present River Cave which was the original route of the South Fork. A possible variant of this approach might employ an optional vehicle shuttle for the first 800 metres of the trail to a point near the former helicopter landing site. This would shorten the walking distance for those less able or with less time without impacting the park with numerous private vehicles. Use of an innovative vehicle such as electric tram for the shuttle would minimize noise and risks of pollution.

Timber Harvesting Adjacent to the Park

The Vancouver Island Land Use Plan recognized the need for sensitive timber harvesting in areas adjacent to the park which had been part of the original larger Goal 2 proposal. The concept of developing park entry point facilities outside park boundaries will add visual quality complexity to harvesting plans which must already consider wildlife values and hydrological impacts on the karst catchment area. On the positive side, these challenges are reduced by the potential to locate park entry point facilities on earlier cutblocks, by the fact that most unharvested timber northeast of the park is not on karst bedrock and by the way the north boundary height of land screens adjacent ground on the north from locations inside the park itself.

Level of Development

The concept for Phase 4 would be to develop high quality facilities capable of presenting the park features to large numbers of visitors (e.g. bus tours) without unacceptable impacts on park resources, including wildlife (notably elk). The type of experience offered would be comparable in many respects to that offered by Helmcken Falls, a nationally significant waterfall 45 kilometres off the Yellowhead Highway in Wells Gray Park. (Artlish River Caves Park is approximately 29 kilometres off the Island Highway.) The recommended facilities would include:

- A single entrance point with parking for approximately 30 cars and several buses and a permanent building for reception, fee collection, interpretation, gift shop, seasonal accommodation, First Aid and toilets. This facility would probably best be located immediately outside park boundaries and off the karst bedrock to minimize any risk of contaminating the park's karst ecosystem. Preferred locations would be to the north side of the stream draining the unnamed lake north of the park, as this area is apparently off the limestone bedrock and thus out of the karst catchment area of the park. Power should be provided by Pelton wheel generation on one of the small streams outside the park.
 - Optionally in Phase 4, and assuming that a suitable site could be found (preferably off the karst bedrock), a campground could be established, oriented toward the small unnamed lake. This facility (approximately 25 sites) would provide summer season overnight accommodation primarily for those interested in spending a day or more in and around the park.
 - Provision should be made in Phase 4 for research facility space at or near the entry point to support cave/karst research, which in turn could support the park interpretive program.
- Park standard Type 1 and 2 trails providing general public access to viewing points at the main cave entrances and connecting a series of surface karst features of interpretive interest. Boardwalks would be appropriate in areas of vegetation or soil sensitivity, such as up the dry canyon approaching the lower entrance of BHC. Consideration should be given to using planks of recycled plastic to provide greater longevity than treated wood.
- Viewing platforms at key features, with capacity to accommodate tour bus sized parties.
- Toilets near main focal points such as the main cave entrances. To avoid any contamination of groundwater, all toilets situated on karst should be of the self-contained composting type.
- Interpretive signage at selected park features.
- Appropriate underground trail development to accommodate relatively large (approximately 20) guided parties in the ARC lower section and (if indicated acceptable through detailed Phase 3 investigations) relatively small parties (less than 10) in the BHC lower section. Subject to Phase 3 assessment, any underground travel off established trails would require a special permit and might require a guide.

Funding

The apparent tenure holder in this area, the Nootka Sound Economic Development Corporation presumably has an interest in removing further timber from the area northeast of the park. If this were done in a sensitive manner and were accompanied by investments in the road and in park facilities (trails, viewpoints, interpretive signs, etc.), the Corporation could complement its forestry emphasis by also laying the foundation for a significant tourist attraction which would stimulate community economic development. Although relatively modest, park development would provide local employment opportunities in

construction, maintenance and park facility operation, including guiding. Consistent with current government philosophy, admission (parking) and guiding fees would be charged to offset operating costs.

Phase 3 should include cost estimates for

- Construction and maintenance of each component of park development as discussed above;
- Road improvements for each park entry point scenario;
- Park operation, including staffing for supervision, guiding and maintenance (for various lengths of operating season);
- Marketing and promotion.

Park Operation

In Phases 1 and 2, the park operator's main focus will be on guiding helicopter-accessed parties, with relatively less involvement in facility maintenance, monitoring and supervision of any unguided visitors who reach the park overland. In Phase 4, the park operator will have broader responsibility for supervision of all visitors, interpretation and guiding and facility maintenance. Horne Lake Caves Park provides a fairly close parallel, in that the facility operator there provides a guiding service, maintenance and some general public supervision but also offers accommodation and other services at a site adjacent to the park. If helicopter access continues, the landing site should be relocated to a location near the park entry point which would minimize disturbance to other park visitors.

As the character of park operations will change significantly from Phase 2 to Phase 4, the Phase 1 and 2 permit should provide for re-advertising of the opportunity to operate the park once Phase 3 planning has firmed up the details. The precise scale of the operation in terms of staffing will hinge on the use levels, which in turn will be influenced by the marketing and promotion of the park.

Park information would focus on developing appreciation for the natural features of the park and an understanding of the rules for visitors and the reasons behind them. All information would stress the role of the park and the significance of its cave/karst features in Island, provincial, national and international contexts. A base level of information and interpretation would be delivered to general public visitors through displays, signs and trail pamphlets. Guided tours would cover the underground routes in ARC and in the BHC (if appropriate). As in Phases 1 and 2, a limited number of guided "adventure caving" tours could continue to be offered in ARC, possibly including a through trip from the upper to the lower entrance. A remote viewing and interpretation program could also be developed by which cameras in locations both on and off tour routes would transmit images live to the park entry point and even to other cave/karst visitor centres, where they would serve both to promote the park and to enable comparison of features and processes from one area to another.

To ensure clear accountability for protection of cave resources, any individuals or groups wishing to go off established tour routes would be required to obtain specific authorization, to meet British Columbia Speleological Federation *Code of Conduct* standards and to cover the cost of being accompanied by a guide representing the park operator. This restriction would apply both to members of the organized caving community and to researchers.

As noted above in the discussion of park development, consideration should be given to developing space for cave/karst research at or near the park point of entry. By providing such a facility and entering into cooperative arrangements with academic institutions, the park operator would obtain useful information which could improve both monitoring and interpretive programs.

Marketing and Promotion

As stated repeatedly in this document, the park's resources are highly significant and can be appreciated by large numbers of visitors, as long as such users are properly channelled and respect the necessity of protecting sensitive areas.

During Phases 1 and 2, government agencies and the caving community should actively seek support for the concepts in this Management Direction Statement from the other parties identified as having an interest in the park and its resources. Strengthened by this support and any agreed-upon refinements, the detailed Phase 3 park planning can proceed in coordination with the complementary planning and actions of other key players such as First Nations, local governments, community businesses, government agencies and user groups. As a result, all could have roles in defining the final shape of park development and in helping to achieve it. Phase 4 development of the park should be part of a complementary set of interlocking initiatives. For example, as already noted, road access and facility development can be coordinated with timber harvesting. Completion of harvesting and formal opening of the park can be coordinated with addition of the park to a bus tour itinerary and completion of facilities for bus tour dining and/or accommodation in Zeballos. Park use can be promoted in the context of advertising other cave related interpretive and adventure opportunities on Vancouver Island to match public demand with a supply of cave/karst sites which are appropriate to particular levels of guided or unguided use. (The Vancouver Island Cave/Karst Strategy currently being undertaken by the Canadian Cave Conservancy will identify such sites.) The marketing of these opportunities will achieve three key objectives –

- Increased public understanding of and appreciation for cave/karst resources
- Focussed use into caves and karst areas which have been assessed as appropriate for such use, based upon the character of the particular features and the level of management in place
- Generation of user volumes sufficient to generate enough revenue through user fees to cover the costs of effective management actions.

Figure 5: Map of Phase 3 - Road Option 1

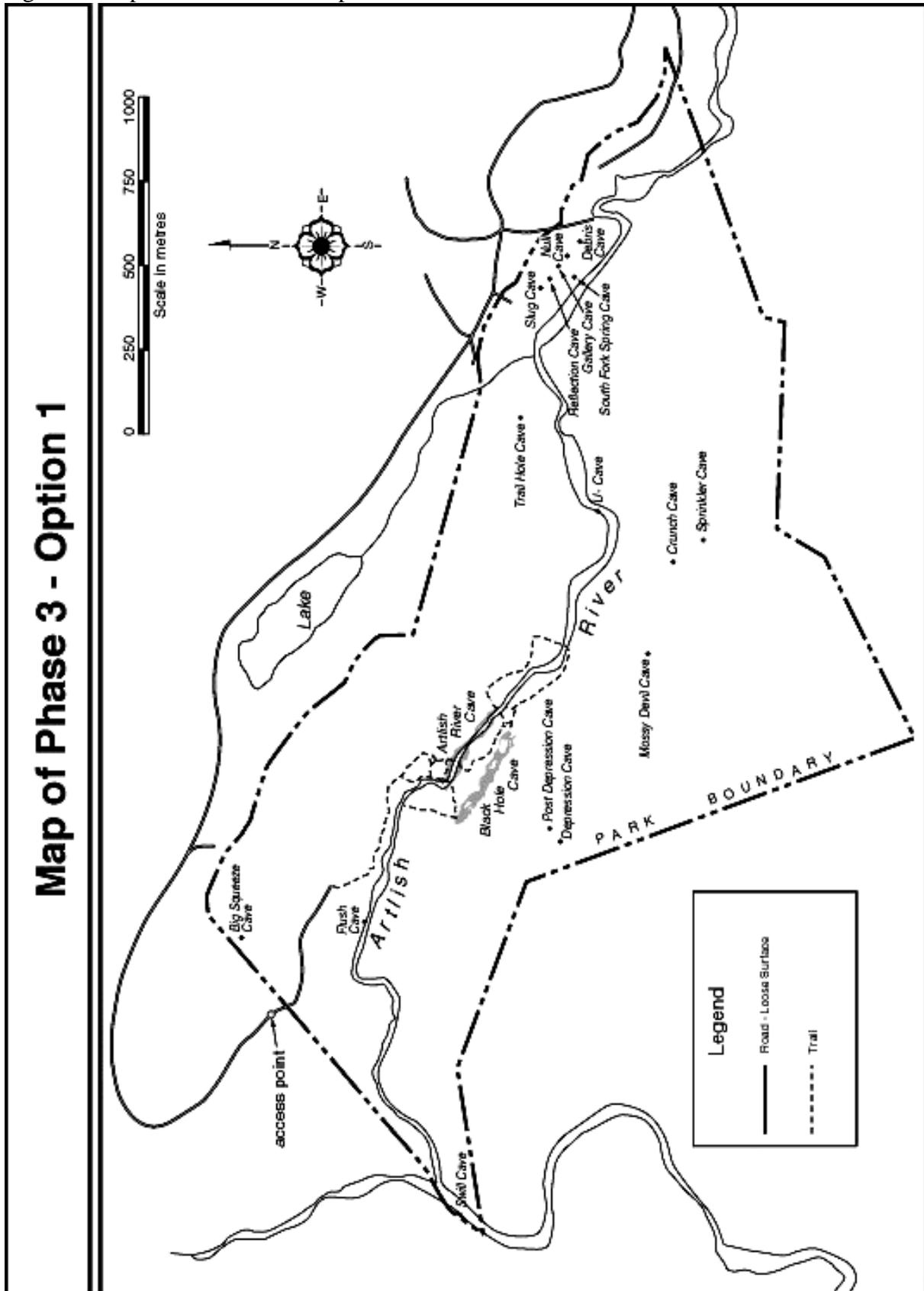


Figure 6: Map of Phase 3 – Road Option 2

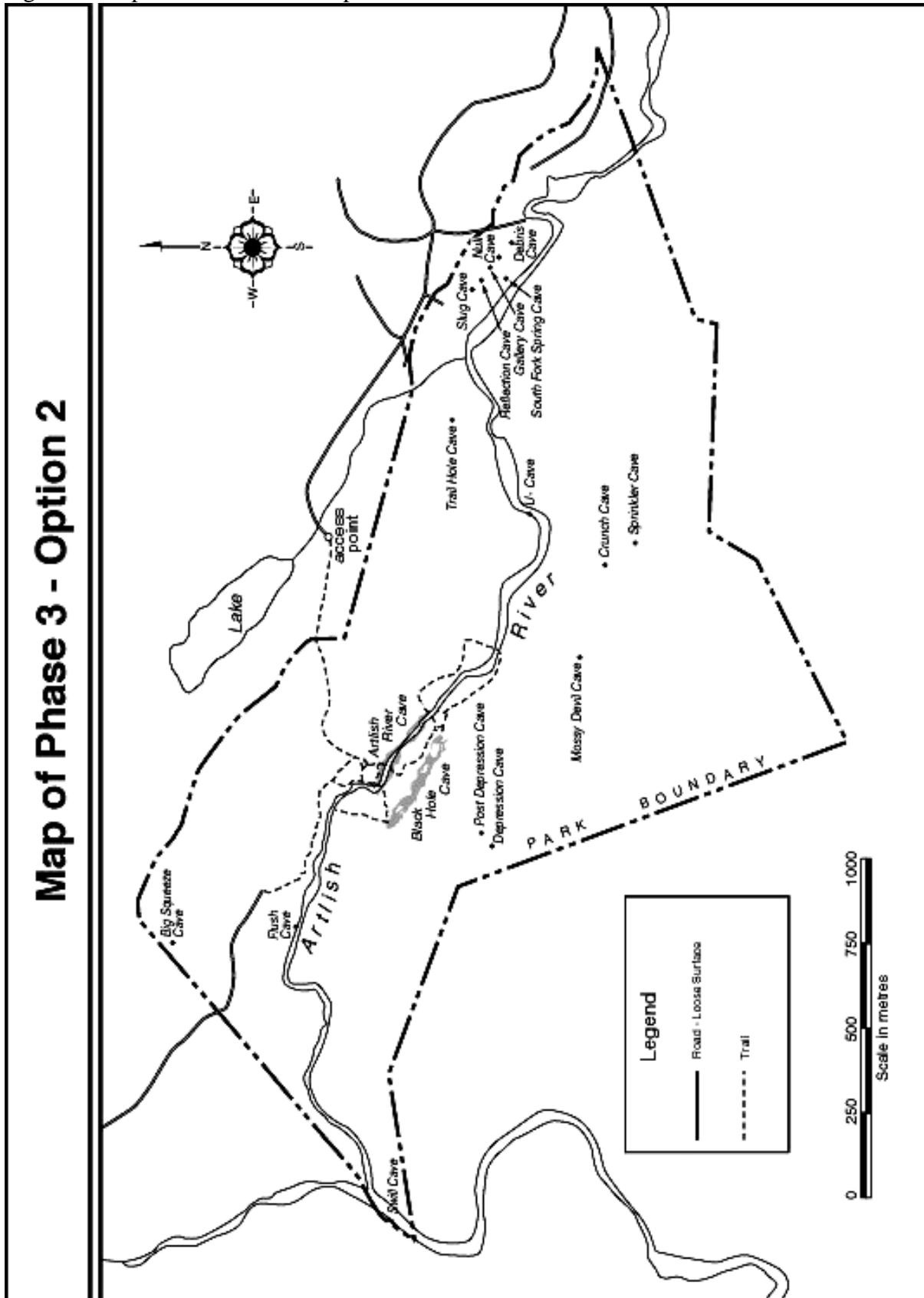


Figure 7: Map of Phase 3 – Road Option 3

