RECONCILING RECREATION AND HERITAGE IN THE CULTURAL LANDSCAPES OF ANNADEL STATE PARK

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ABSTRACT

Visitation to California's State Parks is rapidly increasing as the state's population grows. However, recreational use of the parks can potentially damage their archaeological and natural values. The pressure of visitor numbers in Annadel State Park has contributed to the degeneration of both its trail system, and a number of archaeological sites. This paper describes a recent project to rehabilitate degraded trails within the park, and the strategies used to reduce the project's effects on archaeological values. The behavior of some visitors to Annadel has significantly contributed to the damage to archaeological sites. This paper will also consider how the public interpretation of cultural landscapes may assist in changing the attitudes and behavior of recreational users in areas such as Annadel State Park.

Annadel State Park is one of the largest areas of open space in Sonoma County, California. Only six miles from downtown Santa Rosa, the park attracts over 180,000 walkers, bikers and horseriders each year to its meadows and hillsides. But the increasing popularity of the park as a recreational destination is placing severe pressures on its trail system. In the summer of 1998, California State Parks conducted a project to rehabilitate Annadel's more degraded recreational trails. The interest in this project for archaeology and cultural resource management is that many of these trails are themselves important elements of the park's historic ranching and quarrying cultural landscapes. In addition, the poor condition of these trails was damaging other Native American and European archaeological sites. This paper will detail the type of damage being caused to archaeological sites by trail degradation, and how the 1998 trails project balanced the desires of park users with the need to conserve archaeological values. It could be argued that the damage being suffered by the park is due not only to the sheer numbers of visitors, but also to their behavior and attitudes towards the land. As such, this paper will briefly discuss how visitors to Annadel State Park appear to perceive its cultural landscapes, and will suggest an interpretive theme for the park which places its archaeological sites and human history within the context of evolving landscapes.

The landscapes of Annadel State Park can appear to be largely unmodified by human use. Today the park encompasses a mosaic of grasslands, vernal pools, oak woodlands, Douglas fir, chaparral and redwood forests. However, archaeological evidence indicates that Annadel has been a focus of human activity for thousands of years, and that during this history its landscapes have undergone major changes. Annadel's geological makeup has been critical in determining its use by Native Americans and later, Europeans. The park overlies Mio-Pliocene rocks known as the Sonoma Volcanics, and has large deposits of obsidian, andesitic basalts, ryholite and perlite. It is these resources that have consistently brought people to the area. Annadel contains a substantial obsidian quarry which was used by Native Americans for at least 3000 years. Many of the archaeological sites within the Park, including lithic workshops, isolated flakes and access trails, appear to relate to the production of obsidian preforms for transport further afield. Native

American influence on the landscape also extended beyond the quarrying of obsidian. It has been suggested that regular burning by Native Americans was largely responsible for extending and maintaining the areas of open oaklands in the park (Ammes 1987:39).

Annadel was first utilized by Europeans for its pastoral potential when the area was granted to Juan (John) Wilson in 1837 as part of the Los Guilicos grant. The land was subsequently subdivided and sold, and the new farms raised stock and grew hops, wheat, grapes and orchards. Remnant fruit trees, and stretches of stone and post-and-wire fences are amongst the archaeological features related to this early period of European use. From the 1930s the majority of what is now Annadel State Park was gradually acquired by Joseph Coney. Something of an entrepreneur, Coney used the land not only to grow crops and develop a horse and cattle stud, but also encouraged its use as a private hunting ground, before attempting in the late 1960s to develop it into a housing estate and golf course. One of the more substantial examples of historic landscape modification within the park occurred when Coney constructed an extensive dam to provide water both for his crop irrigation and proposed housing subdivision. Coney also appears to have extended the network of existing roads within the ranch. These jeep roads formed the basis for Annadel State Park's contemporary network of trails.

From the 1880s until the 1920s, areas of the park were heavily modified by Europeans through the quarrying of basaltic andesite outcrops. This industry, which supplied road paving stones to the San Francisco Bay area, had a major effect on the park's vegetation patterns and landforms. Historic photographs of the quarries show hillsides completely denuded of vegetation and pockmarked with pits, tailing piles and tramways. Today, the sites have largely revegetated. A number of the current trails within the park had their origin as quarrying roads and tramways, and pass close by major quarry pits and tailing piles. This period was also associated with the use of the area for charcoal burning, which saw the harvesting of significant amounts of timber and the development of flat terraces for the construction of kilns.

Annadel State Park is seemingly both blessed and cursed by its location so close to a rapidly growing regional center such as Santa Rosa. In the last 30 years, streets and houses have gradually crept up to the park's boundaries. This has resulted in an explosion in the numbers of people who frequent Annadel. A characteristic of many of these visitors is that they might visit the park weekly, if not daily. It is primarily a destination for locals, rather than people living outside the Santa Rosa area. These walkers, mountain bikers and horseriders enjoy the opportunity to exercise in such a large, apparently natural area so close to home. Often these people have developed a strong affection for, and even a sense of territoriality about the park. However, the sheer numbers of visitors have damaged the unhardened surface of the park's trails, particularly during the wet months of winter.

By 1997 Annadel's trails, almost without exception, were in a parlous condition. They were extremely rough, deeply rutted and in some cases, scoured by running water until the trail surface was down to bedrock. Not surprisingly, trail erosion was the major source of the excessive amounts of sediment found in the park's creeks. The damage suffered by the trails is related, in large part, to their history. Many of these trails were originally constructed as short-term extraction routes for quarries, or as ranch roads which were expected to receive relatively low use. Consequently, they were constructed with a minimum of contouring or water shedding devices. Indeed a number of the trails were routed to fall straight down the slope of hillsides. Trails of this type have been very susceptible to heavy erosion and gullying by water and visitor traffic. An especially vivid example of this within the park is the bed of the Wymore Quarry tramway. This tramway, constructed c.1914, used a pulley system to run small cars loaded with finished basalt paving blocks down rail tracks from the quarry to the Melita railway junction. A significant portion of the tramway's bed was subsequently incorporated into the popular Cobblestone Trail. This has resulted in severe damage to the earth and stone construction of the tramway's bed. In sections it is still possible to see the tramway's original

construction which used earth infill of perhaps 50cm in depth, packed between two low drystone walls. However, in other areas, heavy traffic and water erosion have scoured out the earth infill to a depth of 20cm and destroyed large sections of the drystone supporting walls.

Other trails within the park were originally constructed using the older road-building technology of inboarding. This was designed to allow water to be shed from the road surface into ditches and buried culverts. However, the failure to maintain these drainage structures in the Annadel trails has resulted in water running down the surface of the trail itself, creating gullying and scouring. A further cause of the progressive degeneration of the trails has been their alignment. The original routing of some trails across low lying meadow areas prevented them from draining effectively following heavy rains. These sections of trail were being progressively widened as visitors attempted to skirt the muddy areas. Alternatively, visitors sought to avoid the worst affected areas of the official park trails, or to carve out more direct routes by creating their own way trails. Unfortunately, there are numerous instances in the park where these visitor-created trails have themselves led to severe erosion and damage to archaeological sites.

The trails have caused a substantial amount of damage to archaeological sites within the park. Sections of all the park's trails either bisect or lie directly adjacent to archaeological sites. For instance, trails have bisected and destroyed sections of the park's historic drystone walling and fencelines. However, Native American lithic sites have suffered the greatest amount of damage. Many trails lie atop grinding stones or bisect obsidian lithic scatters. The gradual widening of trails by visitors has progressively destroyed the spatial integrity of a number of these sites. Proximity to the trails has also increased the visibility of archaeological sites, leaving them vulnerable to collection and disturbance by visitors. These problems have been exacerbated by a lack of public interpretation for the archaeological values of the park.

The poor condition of Annadel's trails and the damage they cause to archaeological and environmental values has been recognized for some time. In 1997 the park obtained grants totaling $280,000 to improve trails in the western half of the park. This project was carried out in the summer of 1998. A number of trails which crossed sensitive vegetation areas such as meadows were closed completely. Others were rehabilitated and converted to narrow three-foot wide trails. Annadel has an existing program of using volunteer labor to lay out new trails. However, the 1998 project was intended to be something more akin to a surgical strike, using heavy earthmoving equipment to rehabilitate 10.3 miles of trails in approximately eight weeks. Although closely managed by the park's staff, the project was actually subcontracted to a branch of the Redwood Community Action Agency, a non-profit group which specializes in environmental rehabilitation projects. Two earthmoving operators with extensive rehabilitation experience were brought in to execute the project using two 23,000 lb excavators with toothed buckets. I was hired by the Department of Parks and Recreation as a seasonal archaeologist to oversee the treatment of archaeological issues associated with the project.

The process of rehabilitating or closing trails and roads is, in theory, quite simple. Trails which lie across a slope are constructed by cutting into the slope and pushing the soil downhill to form a flat platform upon which to lay the trail surface. This downhill soil deposit is called the berm. Closing a trail or road involves the reverse of this process. The berm is picked up and replaced against the road cut, effectively reconstructing the original slope. The 1998 trails project employed contemporary trail building techniques, which slope the surface of the trail outwards to allow for the rapid shedding of water. Other drainage techniques used in the project were the installation of dips in the trail surface, and drainage swales - shallow depressions cut downhill from the trail. As a final measure, the drainage and surface of the new trails were detailed by a handcrew, and the disturbed areas covered by straw.

Archaeological inventory surveys over the last twenty years have studied the majority of Annadel State Park (Parkman and McGuire 1981, Porter and Wilbur 1987, and Whatford 1993). Using this

database as a guide to the type and location of archaeological sites found in the park, it was possible to anticipate many of the conservation issues that might arise from trail rehabilitation works. The 1998 trails project was based on the general principle of avoiding undisturbed areas of archaeological sites. As such, earthmoving works were restricted to the existing road prism; those areas which had been previously disturbed during the trail's original construction. Although each trail presented unique conservation issues, a general process was followed for the treatment of all archaeological sites. The trail and a buffer zone of approximately 15 meters were surveyed prior to trail works, and the boundaries and features of identified archaeological sites were flagged. The condition of the trail and associated archaeological sites were recorded in notes and slides. Prior to the commencement of earthmoving works, the trail was walked by myself, the excavator operator and park staff to discuss treatment options for each archaeological site. These decisions were recorded in construction notes and diagrams. Earthmoving works in the vicinity of archaeological sites or outside the existing road prism were closely monitored for cultural material. Following the completion of trail works, archaeological sites were photographed, resurveyed for additional material, and the flagging tape removed.

This paper can give only a brief overview of the 1998 trails project. However, a short case study of the rehabilitation of North Burma Trail may illustrate in more detail the types of conservation issues encountered. One section of the North Burma Trail is part of an historic roadway associated with Roundtop Basalt Quarry. This quarry, thought to have been operated by a contractor named Borg c.1893, is one of the more complete quarry complexes within the park. Its features include extensive extraction pits, tailing piles, a blacksmith's workshop and artifact dumps, many of which lie directly adjacent to North Burma Trail. However, this section of the trail, aside from possessing historical values, also has very poor drainage following rains. Normally, the issues of drainage and historic preservation could be balanced by retaining the trail itself, but installing rolling dips and drainage swales to divert water from the trail's surface. This is the strategy that was successfully followed in the treatment of sections of the Wymore Quarry tramway bed. However, closer survey of the North Burma trailbed indicated that it had been constructed on a thick bench of basalt tailings. The option followed in this case was to leave untouched and unrehabilitated a short stretch of trail immediately adjacent to the quarry's larger tailing piles. This, it was hoped, would conserve something of the original configuration of the quarrying landscape. Beyond this section of unrehabilitated trail, a new narrow trail was effectively carved into the tailing pile. One of the unexpected consequences of this option was that the creation of the new trail exposed a large area of tailing debris. This is unusual in Annadel, as generally the areas previously denuded by basalt quarrying have long since revegetated. Interpretation of this section of trail could be one way of giving park visitors some appreciation of the rocky barrenness that was characteristic of substantial areas of the park during its use for basalt quarrying.

It is hoped that the work of the 1998 project has halted the progressive damage to archaeological sites adjacent to the rehabilitated trails. However, these trails will require a season or two of weathering in which to settle. As such, it may be some time before the success of the project can be gauged in terms of reducing both the damage to archaeological sites and the amount of sediment eroded into the park's creeks. Success in these regards will be crucial to obtaining further grants to extend the rehabilitation work to trails in the eastern areas of the park.

The 1998 trails project was focused on rehabilitating the physical fabric of Annadel State Park. However, parks are as much conceptual as physical landscapes. How a park is perceived by its staff as well as by different visitor groups will dictate how they value and ultimately behave in an area. Comments at a recent public meeting in Santa Rosa, which was called to discuss trail works within Annadel, indicated that many visitors believe that the park's primary value lies in offering a beautiful place for recreation. As one participant commented: "Parks are for people." Such a perspective is somewhat opposed to that of park management which is required to also conserve a state park's natural and archaeological values. This

suggests that one of the goals of park management should be to encourage Annadel's visitors to value the conservation of natural and cultural values as, at times, preeminent to the values of recreation. Perhaps one way of doing this is to use the concept of the cultural landscape to challenge how visitors perceive the park.

A number of incidents during the 1998 project suggested how the concept of the cultural landscape could be a powerful theme for interpreting the human history of an area. Annadel's trail system is based on a network of historic roads and tramways. Visitors walking or riding along these trails are exposed to a similar spatial perspective on the land as the original creators and users of those roads. And yet, discussions with numerous park visitors during the 1998 trails project suggest that for many people, the cultural landscapes of the park were almost invisible. People were largely unaware of the park's rich Native American and European history, and recognized nothing around them that might suggest an ongoing process of landscape modification. Indeed, a number of visitors characterized Annadel as a 'natural' park and explicitly compared it to other parks such as Jack London State Park which were seen as 'historic.' Visitors did not appear to have the knowledge or perspective to understand the landscape as the result of dynamic processes in which human activities had played an important role. Consequently, it could be argued, some visitors may not fully appreciate the effects of their own behavior on the fabric of the park.

The common perception of Annadel as a 'natural' landscape may be due in part to the lack of public interpretation for cultural sites in the park. One approach to interpreting the park's cultural history may be to place archaeological sites and human modifications within the context of the evolution of the park's landscapes. This would perhaps balance the apparent perceptions of many visitors that Annadel is a relatively static, natural landscape. Public interpretation could demonstrate the role of both natural and cultural forces in shaping the land. Such an approach could help people to understand not just a particular archaeological site. It could also give them the knowledge and a process to read the landscape around them, and appreciate the effect of their behavior on that landscape.

Damage to Annadel's archaeological and environmental values has not only been caused by the original design and construction of the park's trails. It has also been exacerbated by how these trails have been used by many park visitors. The 1998 trails project has helped to correct the problems of trail alignment and drainage. However, these advances may be short-lived unless there is a concomitant change by visitors to see the park not as static scenery, but as a dynamic landscape which can be affected by their actions. An interpretive program, which uses the concept of the cultural landscape to emphasize people's historical role in shaping the park's landscapes, could be a valuable tool in encouraging a change in visitor attitudes.

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