

CENTRAL PLAINS WATER ENHANCEMENT SCHEME

Peer Review of Archaeological Assessment

Prepared for Selwyn District Council

by

Southern Pacific Archaeological Research

University of Otago

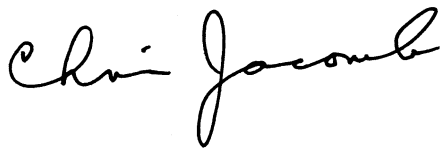
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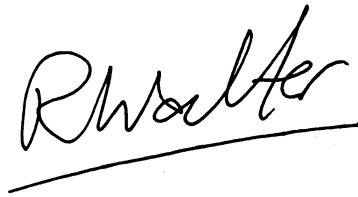
26 November 2007

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1 BACKGROUND

Selwyn District Council (“the consenting authority”) has received two notices of requirement and various resource consent applications in connection to the proposal by Central Plains Water Limited (“the requiring authority”) and Central Plains Water Trust to construct a dam, intakes, tunnels, canals, water races, bywashes and a range of ancillary works. All of these have the potential to affect any archaeological sites (recorded or unrecorded) that might be present in their vicinity. An archaeological survey (Habberfield-Short n.d.a) and an archaeological assessment (Habberfield-Short n.d.b) were commissioned from OPUS International Consultants (“the Consultant”) by URS on behalf of Central Plains Water. Effects of the proposed development on archaeological sites fall under the umbrella of matters that must be considered by Selwyn District Council before decisions can be made on whether or not to grant the resource consent applications and whether or not to recommend that one or both of the notices of requirement should be withdrawn.

Southern Pacific Archaeological Research was commissioned by Nick Boyes of Resource Management Group to undertake a peer review of the information provided by the requiring authority in respect of archaeological sites. The principle source of this information is the archaeological survey and subsequent assessment carried out by the Consultant but additional relevant information is contained in other documents including the Cultural Impact Assessment and suggested conditions of consent attached to the notice of requirement and resource consent applications. The aim of the peer review was to determine whether sufficient information had been provided by the requiring authority to enable the consenting authority to make informed decisions in respect of the resource consents and recommendations on the notices of requirement.

2 EXECUTIVE SUMMARY

For a consenting authority to make a decision on a resource consent or recommendation on a notice of requirement it requires a description and historical context of the archaeological sites affected, an assessment of the significance of their archaeological and other values and an assessment of the effects of the proposal on those values. The required assessment must also provide recommendations for avoiding, reducing or mitigating any such adverse effects.

The Consultant identified 26 sites listed in the Proposed Selwyn District Plan as lying within the project area and nine that had the potential to be directly affected. Of these nine, one (L35/22) was in an area that is not to be affected now that the long tunnel is being pursued. Of the remaining eight sites, landowner permission was refused for two sites (L35/2 and L35/3), landowners could not be contacted to obtain permission for five sites (L35/19, 20, 21 and L36/3 and L36/4) and the one site for which permission to visit could be obtained (L35/14) was not able to be found.

The archaeological survey and assessment commissioned by Central Plains Water to date does not provide the necessary information for informed decision-making on the resource consents and notices of requirement.

This report determines that no meaningful conclusions about the effects of the proposal on heritage can be drawn by the consenting authority until the following information has been provided (it should be noted that this information was essentially that sought in the request for further information dated August 2006):

- An archaeological survey of all of the land covered by the designations (including the two intakes, the canals, the dam, the reservoir and all land affected by their construction). Note that this specifically includes the land in the vicinity of the traditionally recorded Ohinekakaraiti Pa at the confluence of the Waimakariri and Kowai Rivers.
- Archaeological assessments of each archaeological site identified as having the potential to be affected by the construction of the intakes, the canals, the dam and the reservoir. In some cases this may require investigations under a s18 authority from the New Zealand Historic Places Trust to determine the location, nature and extent of individual sites.
- An archaeological assessment of the remainder of the scheme (e.g., distribution network, bywashes) to determine whether or not there are any archaeological sites present to which damage would not be avoidable by realignment.
- A heritage management plan to specify the method for identifying historic heritage places and for avoiding, reducing or mitigating adverse effects on historic heritage places; the mechanism for identifying and protecting archaeological sites; and for managing all adverse effects on historic heritage during construction, implementation, use and ongoing maintenance of the proposed dam, intakes and canal works. This should be prepared in consultation with Te Runanga o Ngai Tahu, Te Ngai Tuahuriri Runanga and Te Taumutu Runanga and the New Zealand Historic Places Trust. Any future changes to the heritage management plan would require the approval of these parties.
- An assessment of future effects of land-use intensification on the archaeological resource.
- An assessment of the visual effects on the heritage landscape, particularly in the vicinity of the dam and reservoir.

3 SCOPE OF THE PEER REVIEW REPORT

The scope of this report is to review the information provided by Central Plains Water and assess whether or not the consenting authority has sufficient information upon which to base a decision specifically in respect of archaeological sites and generally in respect of heritage when considering the notices of requirement and the resource consent applications referred to above. There are accepted national guidelines for provision of archaeological assessments to accompany applications for archaeological authorities under the *Historic Places Act* (e.g., Gumbley 1995; NZHPT 2006). Such assessments should include the following:

- A description of the archaeological sites in the study area
- A description of the physical environment in which they are situated
- Enough historical and archaeological background to allow the sites to be understood in the context of their formation (literature review)
- A discussion of the significance of the sites in a regional and wider context
- An assessment of the likely effects on the sites of the proposed development
- Recommendations for avoiding, reducing or mitigating any adverse effects

Methodologies for assessing archaeological values have been discussed by Walton (1999; 2002).

The level of information required for *Resource Management Act* purposes is generally similar to that for *Historic Places Act* purposes but can be more complex depending on the contents of District and City Plans. Heritage guidelines for *Resource Management Act* practitioners are available (NZAA 2004).

This peer review report is intended to evaluate the archaeological report and other information provided in those terms. It also considers the methodology used, the ability of the Consultant to carry out the work and make the assessments, and the overall quality of the report and its recommendations. More specifically it assesses whether or not Central Plains Water has provided sufficient information to enable the consenting authority to make a decision.

The level of information required for a large-scale project with little flexibility in the location of the “impacts” is different from that required for most smaller-scale or less intensive projects. Once the Notice of Requirement is confirmed, virtually all of the land within its footprint will be affected, resulting in the effective destruction of all archaeological sites and other heritage features, including unrecorded ones, that lie in its path. For this reason, it is vital that a reasonable level of knowledge is provided before the designation is confirmed, not afterwards. The level of archaeological information required for a notice of requirement (and for a resource consent) is different from that required for an archaeological authority under the *Historic Places Act* (HPA). The HPA only requires that archaeological assessments provide a specific range of information (site description, proposal description, archaeological and other values, effects of proposed activity on those values). The RMA, or more specifically, the instruments that councils are mandated to prepare under the RMA, often go beyond this and require assessments of *significance*. For the vast majority of archaeological sites in New Zealand it is impossible to assess significance without some form of intrusive investigation. A site that may be all but invisible from the surface, such as the iconic “Moa hunter” sites of Wairau Bar (Duff 1950) and Rakaia River Mouth (Duff, 1950; Jacomb 2005), may contain extensive and internationally significant archaeological evidence concealed beneath the surface. The Consultant quite rightly points out that a proper understanding of the importance and extent of the sites in the scheme area requires investigation pursuant to an authority under s18 of the HPA (Habberfield-Short n.d.b: 14).

Although covered in other reports it is worth reiterating that, in addition to the statutory provisions of the HPA, archaeological sites fall explicitly under the *Resource Management Act* definition of heritage, and that heritage is a matter of national importance under the RMA (Pt2 s6f).

4 QUALIFICATIONS AND EXPERIENCE OF THE AUTHORS

Southern Pacific Archaeological Research (SPAR) is a research unit in the Anthropology Department at the University of Otago. SPAR undertakes pure and applied research, and provides policy advice in the fields of archaeology and cultural heritage management.

Chris Jacomb is an archaeologist with an MA in Anthropology and approximately 25 years experience in the field. This includes three years as an archaeologist with the Department of Lands and Survey, 14 years as a museum curator and administrator, five years as a regional archaeologist with the New Zealand Historic Places Trust and

two years as a director of SPAR. He is a member and past president of the New Zealand Archaeological Association and a member and past board member of ICOMOS.

5 LEGISLATIVE ENVIRONMENT

There are two main pieces of legislation in New Zealand that regulate work affecting archaeological sites. These are the *Historic Places Act 1993* and the *Resource Management Act 1991*. In addition, there are provisions in the RMA for the application of other legislation and planning documents and their roles and applicability are outlined in this section, as follows:

5.1 Historic Places Act 1993

The New Zealand Historic Places Trust administers the HPA. The HPA contains a consent (authority) process for any work affecting archaeological sites, where an archaeological site is defined as:

“Any place in New Zealand that

(a) Either –

(i) was associated with human activity that occurred before 1900; or

(ii) is the site of the wreck of any vessel where that wreck occurred before 1900; and

(b) Is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand” (HPA section 2)

Any person who intends to carry out work that will damage, modify or destroy an archaeological site, or to investigate a site using invasive archaeological techniques, must first obtain an authority from the Historic Places Trust. The process applies to sites on land of all tenure including public, private and designated land. The HPA contains penalties for unauthorised site damage or destruction.

The archaeological authority process applies to all sites that fit the HPA definition, regardless of whether or not the following apply:

- the site is recorded in the New Zealand Archaeological Association Site Recording Scheme or registered by the Trust,
- the site only becomes known about as a result of ground disturbance, and/ or
- the activity is permitted under a district or regional plan, or a resource or building consent has been granted
- the land is the subject of a designation

Note: The *Historic Places Act* regulates damage to archaeological sites but only provides indirect protection for other historic heritage through its Register. This indirect protection is only given regulatory effect through the provisions of District Plans.

5.2 Resource Management Act 1991

The Resource Management Act 1991 (s6) identifies the protection of historic heritage from inappropriate subdivision, use and development as a matter of national importance (RMA Amendment Act 2003). In carrying out their functions under the RMA local authorities must, in relation to managing the use, development, and protection of natural and physical resources, recognise and provide for matters of 'national importance'.

Historic heritage is now defined in the RMA (by *RMA Amendment Act 2003*). Historic heritage is defined by the RMA (s2) as follows:

"Historic heritage:

- (a) means those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities:
 - (i) archaeological:
 - (ii) architectural:
 - (iii) cultural:
 - (iv) historic:
 - (v) scientific:
 - (vii) technological; and
- (b) includes -
 - (i) historic sites, structures, places, and areas; and
 - (ii) archaeological sites; and
 - (iii) sites of significance to Maori, including wahi tapu; and
 - (iv) surroundings associated with the natural and physical resources."(RMA s.2)

Local authorities have a responsibility to protect historic heritage within their district or region. Protecting historic heritage involves identifying historic heritage places, managing adverse effects and promoting the protection of heritage values in accordance with conservation principles (NZHPT 2004).

In respect of recommendations relating notices of requirement, the consenting authority must, under s171(1)(a) of the RMA, consider the effects on the environment of allowing the requirement having particular regard to any relevant provisions of the following:

- a national policy statement
- a New Zealand coastal policy statement
- a regional policy statement or proposed regional policy statement
- a plan or proposed plan

5.3 National Policy Statement

There is no national policy statement for historic heritage.

5.4 Coastal Policy Statement

There are no identified direct effects on coastal heritage that would be caused by the requirement. [Note, however, that an indirect effect could be caused to coastal archaeological sites northeast of the Rakaia River

Mouth if reduced river flows resulted in a deficit of sediments available to replenish shorelines through longshore drift. There is already a severe coastal erosion problem along this coast that is affecting sites of national significance (e.g., see Jacomb *et al.* 2004, Jacomb 2005), and any further loss of sediment supply should be avoided. This is not our area of expertise but the Council may wish to consider requiring an investigation into the possible effects of reduced sediment supply to the coast that might result from this scheme going ahead.]

5.5 Regional Policy Statement

The Environment Canterbury *Regional Policy Statement* identifies the following as Objective 4:

“Protection or enhancement of the historical and cultural heritage sites, buildings, places and areas, including their cultural, recreational and amenity values, that contribute to Canterbury’s distinctive character and sense of identity”.

Policy 5 of the ECAN *Regional Policy Statement* states that:

“(a) Historic sites, buildings, places or areas that meet the relevant criteria of sub-chapter 20.4(1)¹, including their associated cultural and heritage values, should be protected from adverse effects of the use, development, or protection of natural and physical resources, and their conservation should be promoted. The particular sensitivity of these historic sites, buildings, places or areas to regionally significant adverse effects in terms of sub-chapter 20.4(2) [Regionally Significant Effects] should be reflected in the provisions of district plans in the region.”

The *Regional Policy Statement* directs district councils, in the “preparation, variation, change or review of their district plans, through the exercise of their functions” to consider provisions to protect and enhance heritage values under Policy 5.

5.6 District Plan

Managing effects of activities on sites or buildings with heritage or cultural values is largely a function of district councils under Section 31(1)(b) of the RMA. The Selwyn District Council has made provisions for both Maori and

¹ Matters of Regional Significance in the *Regional Policy Statement* include 20(4)1:g – “Heritage sites, places or areas that contribute to or reflect the cultural or spiritual identity, or evolution of the Canterbury region, including the different stages of human occupation. In selecting these heritage sites, places or areas, factors to be considered include: (i) The extent to which the place reflects important or representative aspects of Canterbury’s or New Zealand’s history; (ii) The association of the place with the events, persons, or ideas of importance in Canterbury’s or New Zealand’s history; (iii) The potential of the place to provide knowledge of Canterbury’s or New Zealand’s history; (iv) The importance of the place to tangata whenua; (v) The community association with, or public esteem for, the place; (vi) The potential of the place for public education; (vii) The technical accomplishment or value or design of the place; (viii) The symbolic or commemorative value of the place; (ix) The importance of historic places which date from periods of early settlement in Canterbury; (x) Rare types of historic place; (xi) The extent to which the place forms part of a wider historical and cultural complex or historical and cultural landscape; (xii) The integrity and state of preservation.

The fact that a particular site, place, or area meets these criteria will not necessarily mean that the site, place, or area is of regional significance. The Regional Council or other parties should take these criteria and criteria (a) to k) into account together with other relevant considerations, in deciding whether or not a site, place, or area is of regional significance.”

European heritage in its *Proposed District Plan*. In terms of cultural heritage values”, the first objective in the *Plan*, Objective 1, states that:

“Sites of wahi tapu, wahi taonga, mahinga kai and other importance to tangata whenua are protected in partnership with local runanga and landholders.”

The relevant policies are as follows:

“Policy 3(ii). Protect areas identified in the Plan as Wahi Taonga Sites, Wahi Taonga Management Areas and Mahinga Kai sites, from damage or destruction, whenever practical.”

“Policy 7. Allow modifications, alterations or additions to the heritage sites and structures or the subdivision of heritage sites or sites containing heritage structures listed in Appendix 3, provided any such alterations, modifications, additions or subdivision does not adversely affect their heritage values, wherever practical.”

“Policy 8. Discourage the demolition or destruction of heritage sites or buildings listed in Appendix 3, or the removal of heritage trees as listed in Appendix 4, except where necessary to:

- Avoid danger to people or property; or
- Allow reasonable use of the site; and
- There are no appropriate options to retain the site, building, or tree” (Selwyn District Council 2007)

The Proposed Plan also states that:

“In addition the [New Zealand Historic Places] Trust is an affected party for resource consents involving places of heritage value.” (Issue 3.3:1:v)

In addition to these statutory and planning mechanisms, there are others that deal specifically with Maori heritage concerns, including iwi management plans and the *Ngai Tahu Settlement Act 1998*.

5.7 Iwi Management Plans

Under the RMA, territorial and regional authorities must “take into account” iwi management plans when they are preparing or changing policies and plans (RMA sections 61(2), 62(1)(b), s66(2)(c), and s74(2)(c)).

An Iwi Management Plan (IMP) is a written statement that consolidates iwi knowledge on resource management issues such as cultural heritage. Some IMPs address economic, social, political and cultural issues as well. Iwi management plans can include any iwi planning document, tribal policy statement, strategic plan or development plan. In addition to the RMA requirements for heritage under Part II (s6f) detailed above, consent authorities are required to make provision for the consideration of Maori perspectives in the planning and decision making process under the following sections of the RMA:

Section 6(e). The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga

Section 7(a). Kaitiakitanga

Section 8. concerning ... the principles of the Treaty of Waitangi.

The following iwi management documents are relevant to the current project:

Ngai Tahu Archaeological Site and Maori Rock Art Policy (Te Runanga o Ngai Tahu 1995)

Te Whakatau Kaupapa: Ngai Tahu Resource Management Strategy for the Canterbury Region (Tau *et al.* 1990)

Central Plains Water Enhancement Scheme – Cultural Impact Assessment (Jolly n.d.)

The first of these contains a number of foundation principles as well as policies specific to rock art but has one policy that has particular relevance to the current project, as follows:

“Policy 6.1. Where a kaitiaki runanga or iwi representative has concerns about change in land uses in relation to known archaeological sites, or where the traditions and histories of an area suggest that it is likely to contain such sites, then a full surface survey should be undertaken by an archaeologist acceptable to Ngai Tahu.” (Te Runanga o Ngai Tahu 1995)

The second contains more general guidelines in relation to archaeological sites and includes a list of sites identified in the New Zealand Archaeological Association (NZAA) Site Recording Scheme as of 1995.

The *Cultural Impact Assessment* carried out on behalf of Te Runanga o Ngai Tahu and the two affected papatipu runanga by Dyanna Jolly identified archaeological and other Maori cultural heritage sites as being important to iwi. It noted that further sites in addition to those listed in the SDC District Plan almost certainly exist and also noted the high likelihood of burial sites being present in the Waianiwaniwa valley (Jolly 2005: 26).

The CIA makes 38 recommendations of which six relate directly to archaeological issues. These include a request for an archaeological survey of the upper Waimakariri intake (Recommendation 5), of the Waianiwaniwa valley surrounds (Recommendation 12) and, if the proposal proceeds, various protection and monitoring mechanisms and protocols (Recommendations 13 and 22). It also recommends that an archaeologist be involved in the routing of the canals to avoid archaeological sites (Recommendation 21) and that an archaeological survey be carried out of the canal route from the Waimakariri intake to Springfield (Recommendation 23).

To sum up, all of the relevant planning documents have policies relating to heritage that need to be considered by the consenting authority.

5.8 Ngai Tahu Claims Settlement Act 1998

Under the Ngai Tahu Claims Settlement Act (NTCSA), local authorities within the Ngai Tahu claim area must attach to all regional policy statements, district plans, and regional plans (including proposed plans and proposed policy statements) from time to time prepared pursuant to the *Resource Management Act* 1991, information recording all statutory acknowledgements affecting statutory areas covered wholly or partly by such policy statements or plans, either by way of reference to this Part or by setting out the statutory acknowledgements in full. The following is extracted from the NTCSA:

“Without limiting sections 216 to 219 of the NTCSA, the only purposes of the statutory acknowledgements are—

- (a) To require that consent authorities forward summaries of resource consent applications to Te Runanga o Ngai Tahu, as required by regulations made pursuant to section 207; and
- (b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to the statutory acknowledgements in relation to the statutory areas, as provided in sections 208 to 210; and
- (c) To empower the Minister of the Crown responsible for management of the statutory areas, or the Commissioner of Crown Lands, as the case may be, to enter into deeds of recognition, as provided in section 212; and
- (d) To enable Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui to cite statutory acknowledgements as evidence of the association of Ngai Tahu to the statutory areas, as provided in section 211."

There is a Statutory Acknowledgement Area at the Kowai River, the outlet of which is close to the proposed Waimakariri Intake (see Selwyn District Council Planning Map 36: Site ST6). Through the NTCSA (s26), the Crown acknowledges Te Runanga o Ngai Tahu's statement of Ngai Tahu's cultural, spiritual, historic, and traditional association to the Kowai River, as set out below.

"The Kowai River once provided an important mahinga kai resource for North Canterbury Ngai Tahu. Traditionally, the river was known for its tuna (eel) and inaka (whitebait), although those resources have now been depleted

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngai Tahu today.

Nohoanga (settlements) were located at points along the length of this river, with some wahi tapu located near the mouth. Wahi tapu are places holding the memories, traditions, victories and defeats of Ngai Tahu tupuna, and are frequently protected by secret locations.

The mauri of the Kowai River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngai Tahu Whanui with the river." (NTCSA s26)

The effect of the Kowai River Statutory Acknowledgement Area, in terms of the notices of requirement and the resource consent applications, is to reinforce the importance of the Kowai River to Ngai Tahu and therefore of the significance to Ngai Tahu of any archaeological sites that are present therein.

6 REVIEW OF CONSULTANT'S REPORT

6.1 Scope of Consultant's report

The Consultant's Archaeological Assessment (Habberfield-Short n.d.b) is based closely on an earlier Archaeological Survey (Habberfield-Short n.d.a).

The scope of the Consultant's first report was described as follows:

“To identify the precise locations of the items noted in the SDC database to allow comment on whether they will be disturbed by the scheme works. At this point these items are located only by property and it is impossible to say where they are within those properties.

The Cultural Impact Assessment authored by Dyanna Jolly (2005) identified and recommended site specific surveys in the Kowai/Waimakariri confluence and the Waianiwaniwa reservoir. The second task was to locate more precisely and perhaps more extensively within the general bounds of the two areas of main concern, the cultural items that have the potential to be affected by the scheme works.” (Habberfield-Short n.d.a: 2)

The following limitations were identified in the Consultant’s study:

“This document only reports on a survey of visible and known/recorded archaeological features, artefacts and material culture on the landscape surface within the designation footprint. Therefore this study does not represent a survey of the archaeological values (known and unknown) in totality for the scheme nor does it represent an assessment of the impact of the scheme footprint on those values. Some land owners withheld permission to survey sites on their land.” (Habberfield-Short n.d.a: 2).

There is considerable ambiguity in the wording of this scope of works. It appears that the Consultant was only expected to visit previously recorded sites in the project area in general, and “more precisely and perhaps more extensively within the general bounds of the two areas of main concern [Kowai/Waimakariri confluence and the Waianiwaniwa reservoir]” and “comment on whether they would be disturbed”. There are two problems with this which need to be discussed. The first is that a “comment on whether they would be disturbed” is not an archaeological assessment as understood in a framework of national and international practice. The second is that it is not clear what was either intended or what actually took place in the “two areas of main concern” identified in the CIA.

In relation to the first, the level of work called for in the Consultant’s Scope of Works is not adequate for its intended purpose. The consenting authority requires a minimum standard of information upon which to base its decision. Given the status of heritage in the RMA it is not enough to simply know that there is a site or sites that will be disturbed. The minimum information required is detailed above (Scope of Peer Review Report). The resulting initial report (Habberfield-Short n.d.a) did not provide the minimum standard of information and the consenting authority therefore requested further information, in May 2007 (which it had, in fact, already requested in its Request for Further Information of August 2006). The second archaeological report (Habberfield-Short n.d.b), was the response to the May request.

In relation to the second problem, it is not clear from the Consultant’s report whether they were asked to carry out comprehensive surveys of the two specific areas recommended by the CIA (Jolly 2005) or just to try to more specifically locate the recorded sites, although the latter seems to be what was attempted. It appears, for example, in the Waianiwaniwa Valley that the Consultant only intended visiting the recorded sites, since the report only refers to making attempts to contact the Selwyn Plantation Board, which does not own all of the land in the valley, but does own the land on which three of the recorded sites are situated. Similarly, in the Kowai/Waimakariri confluence, they only refer to a single land owner refusing access permission. In any case, neither of the two “areas of concern” to Ngai Tahu were surveyed as requested in the CIA.

Finally, a project of this magnitude requires a comprehensive archaeological survey of all of the land that has the potential of being affected, including both intakes, the canals and tunnel portals, the dam and reservoir, and the

distribution races and bywash structures as well as all ancillary works such as roads, dumps and stockpile areas, buildings and excavations for underground services. The Consultant's report correctly recommends a scheme-wide archaeological survey. This is a sensible recommendation and is clearly going to be necessary at some stage. The question that needs to be considered is whether this can be left until after the designation is confirmed in the District Plan or should more appropriately be done before.

Leaving the scheme-wide survey and assessment until after the designation is in place presupposes that there are no sites within the designation footprint that are particularly significant. If it is true that there are no sites present that are significant according to the criteria identified in Section 4, above, then it would be appropriate to leave the survey and assessment until after the designation is decided. However, if it is not true, and the designation goes ahead, then the time to make a decision based on knowledge of significance will have passed.

Although it is possible that aspects of the distribution network have sufficient flexibility in their design that any significant archaeological sites could be avoided after the decision is made, we are in no doubt that the survey of the proposed designation land must be undertaken beforehand. It is clearly impossible for the submitters or the consenting authority to make informed decisions about potential RMA s6 matters if they are not provided with the necessary information.

Comment: The Scope of Works as described by the Consultant was inadequate and ambiguous.

6.2 Ability of the Consultant to carry out the work

An archaeological assessment of this sort requires skills in historical research and field work, as well as knowledge of archaeological theory, cultural resource management theory and practice, and any relevant legislation. The Consultant has an advanced degree in archaeology, which is the appropriate qualification for a professional working in New Zealand cultural resource management archaeology. He has several years' full-time experience working as an archaeological consultant including in a leadership role on relatively large projects such as the Clarence North Passing Lane, as well as on a range of smaller projects.

Comment: In our opinion the Consultant has the qualifications necessary to carry out an archaeological assessment and to provide a suitable report on the results of the assessment.

6.3 Methodology

a) Legislative environment

There is no discussion of the legislative environment pertaining to archaeology or heritage generally. Such a discussion is a necessary part of a specialist's report because it provides the client with important knowledge about the regulatory environment within which the project has to develop. It outlines the statutory mechanisms that apply as well as the range of planning regulations, documents and policies which have to be understood. As a result it provides the client with a good understanding of what is required in an archaeological or heritage assessment and of what the legal or regulatory implications are of any proposed development.

Comment: There is no discussion of the legislative environment.

b) Literature review

There is adequate provision of the prehistoric archaeological context within which to frame the results of the study. A summary of all previous archaeological work carried out in the study area is provided. This is necessary to allow the reader to know, for example, whether or not there have been any systematic surveys in the study area or whether the sites that are recorded were just sporadic reports on accidental discoveries. It is important for the consenting authority to know that there have been no such surveys and that the density of recorded sites is very unlikely to bear any resemblance to the real situation. A review of the archaeology of the district is important because it allows the sites that are recorded to be placed in an archaeological context. There is no review of the European history of the scheme area nor is there any discussion of the types of historical archaeological sites that might be encountered. A historical review is important because of the insight it can give into the types of site that can be expected in a given area. For example, a brief examination of one publication showed that there were at least 16 pastoral runs taken up in the study area before the end of 1852, all of which will have left some archaeological remains (Homebush (1851), Haldon (1852), Camla (1852), Dunsandel, (1853), Broadlands (1851), The Desert (1851), Milton (1852), Hororata (1852), Ledard (1851), Racecourse Hill (1852), Waireka (1852), Malvern Hills (1852), Rockwood (1852), The Point (1852), Easedale Nook (1851)) (Acland 1930). In addition there are six buildings or groups of features that are identified on the Historic Places Trust's *Register* (Homebush Station woolshed, stables, water tower, turbine and grain store; the Terrace Station homestead; the Homebush Station homestead; Coton's Cottage (Hororata); The Point house and garden; Steventon Homestead). There were seven accommodation houses in the study area (Jacomb 2000) some of which may be in areas likely to be affected by the distribution system. In addition it is well known that there were numerous historical coal mines close to the proposed reservoir as well as brickworks, potteries and so on in the general vicinity of the headrace designation. Other historic sites that might be expected include ferry landings, fords, old roads and tracks, homesteads, outbuildings, yards, sheep dips, wells, and sites relating to the railway.

Finally, the combined information gleaned from the historical and archaeological reviews would allow some attempt to be made in the area of predictive modelling. In other words, it allows predictions to be made about the likelihood of archaeological sites of various types being present in areas that have not been surveyed or where site visibility is poor.

Comment: There is adequate information provided on the prehistoric context, both locally and regionally, but there is a lack of information on the historical context. It is not made clear in the Consultant's report that the scheme area has never been the subject of an archaeological survey and that the few recorded sites were opportunistically recorded on the basis of farmers' reports.

c) Field work

The Consultant obtained NZAA site record forms (SRFs) for the ten sites listed in the SDC Proposed District Plan and navigated to them using the locational information provided. The intention was to take GPS coordinates of any sites which were visible. In the event, none of the sites identified as being potentially affected were able to be found, including two for which land-owner permission was refused, four for which the land owner could not be

contacted to obtain permission and two for which the Consultant couldn't get access onto the land (see Table 1, below). Of the two sites for which land-owner permission was obtained, only one was found by the Consultant, and this one is no longer in the affected area, having been withdrawn in favour of the long tunnel proposal from the Upper Waimakariri Intake.

It should be noted that none of the sites were found during the NZAA upgrade project that was undertaken in 2000. This does not necessarily mean that they have been destroyed. Most had been originally discovered during cultivation, vegetation clearance or road formation and it is more likely that they have since become overgrown. The original site location information is not adequate to relocate them, but they are almost certainly still present, although damaged during their original discovery.

It takes careful reading of the Consultant's report to determine that none of the nine sites potentially affected by the proposal was sighted during the field work and that only two of the nine were the subject of ground searches.

Table 1 Sites with high probability of being impacted upon by the project.

Site No	Result of 2007 OPUS survey	2000 NZAA Upgrade information
L35/2	Landowners refused permission	Not visible but landowner said site still there
L35/3	Landowners refused permission	Not visible, 1961 SRF says site levelled by ploughing
L35/14	Site not found (original SRF says found while cultivating but grid reference places site in mature forest).	Site not found (very poor information in original SRF (1966))
L35/19	Couldn't contact landowner to obtain access	Searched but site not found. Area heavily modified for forestry. Aids to relocation no longer useful.
L35/20	ditto	ditto
L35/21	ditto	ditto
L36/3	Couldn't get access onto land	Searched but site not found.
L36/4	ditto	ditto
M36/146	Couldn't contact landowner to obtain access	ditto

The result of the field work, therefore, is that none of the previously recorded sites that have been identified as being potentially affected by the proposal have been assessed for significance, or for significance of effects.

Of more importance is the scope of the field survey itself. The consenting authority requires a minimum standard of information about the presence, nature and significance of the sites affected and the nature and significance of the effects before it can make a decision in respect of a notice of requirement (ref. RMA s171 and ECAN *Regional Policy Statement Policy 5*). This information cannot be provided unless a systematic archaeological survey has been undertaken. Although the scope of works as described by the Consultant was ambiguous in specifying whether or not a survey was being asked for or just a visit to previously recorded sites, the outcome was that a systematic survey did not take place.

Comment: The field survey was not adequate to obtain the information required by the consenting authority to make a recommendation in relation to a notice of requirement or decision on a resource consent. The focus of effort in the CPWES study should not have been solely on trying to locate sites which had already been shown to have been invisible, but on trying to determine what sites in total might be present in the land proposed to be designated.

d) Description of the archaeological sites in the study area

The Consultant provides a brief description of all archaeological sites recorded in the SDC Proposed District Plan as lying within the area subject to the notice of requirement. No description of the sites searched for beyond that provided in the SRFs was possible since none of them were found during the field study (apart from the one that is now not going to be affected).

Where the sites could not be found or visited the Consultant indicated a sensitivity zone with a 100 m buffer. A buffer zone is consistent with good practice; however, its size and location needs to be considered in the context of what is known about the site. Site locations were recorded in the New Zealand Archaeological Association Site Recording Scheme in the days before GPS to 100 m grid references. This means that they were originally located according to the south-west coordinates of the 100 x 100 m grid square in which they were situated. To complicate matters, the sites in Table 1 were recorded before metrification of the New Zealand map grid. Grid references were only estimated by eye from NZMS1 (1:63,360) maps and errors of ± 100 m (yards) were common (potentially leading to a ± 200 m error). When the metric map grid was introduced, the Site Records were updated to the metric grid references through the use of a computer calculation. This led to the introduction of further errors of up to ± 100 m meaning that many grid references were now potentially out by up to 300 m. To rectify this problem, the New Zealand Archaeological Association has undertaken to upgrade the information on all recorded archaeological sites in New Zealand using GPS and standardised written descriptions. Selwyn District Council has participated in the upgrade project, and all but one of the sites identified in the Consultant's report were included. (The one that was not visited would only have been affected if the "short tunnel" option was to be pursued.) However, none were able to be found, so their existing grid references, with their potential 300 m errors, remain. Unless there is written information that locates them more accurately, the "sensitivity zones" should be a circle of 300 m radius around the existing grid reference.

Comment: The description of archaeological sites within the study area is inadequate for the purpose of understanding the archaeological values of the sites and the effects of the proposal on those values. In the first place it only includes the few opportunistically recorded sites and in the second place it does not include any first-hand description. Furthermore, the buffer zone around each site's location to provide a sensitivity zone is inadequate and needs to be increased to a 300 m radius.

e) Description of the physical environment in which the sites are situated

The Consultant's report does not contain much detail on the physical environment in which the sites are located; however, this has been provided in other reports commissioned earlier, particularly in the resource consent applications. If the proposal proceeds then archaeological authorities will be required under the HPA and a higher level of information on physical environment will be required.

Comment: The description of physical environment, although missing from the Consultant's report, is adequately provided in other documents.

f) Significance assessment

The Consultant was not able to find any of the sites that are recorded in the SDC Proposed District Plan as lying within the currently proposed footprints of canals, intakes and reservoir. Furthermore, the footprint has not been surveyed to identify any unrecorded sites. This makes any assessment of the archaeological values of the individual sites all but impossible. The Consultant recognises this and recommends further investigation under a s18 authority from the Historic Places Trust. This is a sensible recommendation and is consistent with current practice in New Zealand. An assessment of the importance of archaeological sites in the vicinity in general is provided, which is useful to assist both Central Plains Water and the consenting authority to understand the likely significance of any sites that are present but have not been recorded, visited or re-examined. Also identified are some potential research questions to which investigations under s15 of the HPA could potentially contribute.

The absence of a significance assessment is a major shortcoming of the information provided by Central Plains Water. The Consultant makes sensible recommendations about how the significance of the recorded sites could be assessed. However, that does not alter the fact that the applicant has not provided sufficient information about the significance of the sites. This information is required by the consenting authority and should have been provided by Central Plains Water.

Before the consenting authority has sufficient information relating to the nature, extent and significance of the archaeological sites within or adjacent to the study area, it will need to be provided with a systematic survey of the whole of the designation area. In addition to the survey, there will need to be some form of s18 investigations in those parts of the designation that have been identified by Ngai Tahu as having a high likelihood of significant archaeological sites being present. Specifically these include the Waianiwi Valley and surrounds and the Upper Waimakariri intake.

Comment: The information provided does not contain an assessment of the significance of the archaeological sites likely to be affected.

g) Significance assessment in a regional and wider context

See comments for 'f'.

h) Assessment of the likely effects of the proposed development on archaeological sites

The Consultant's report specifically notes that it does not represent a survey of the archaeological values in totality for the scheme nor does it represent an impact assessment of the scheme footprint on the totality of those values (Habberfield-Short n.d.b: 4). The report includes a section entitled Assessment of Effects which simply lists nine sites identified in his survey (Habberfield-Short n.d.a: Appendix 13) and a further site, M35/146) identified by URS NZ Ltd that will either be affected or have a high potential to be affected. It notes that there will be localised effects during the construction phase but does not go into any detail on what the effects would be. It is logical to assume that all sites within the construction footprint would be destroyed, and this is what is conveyed in a response to the consenting authority's request for further information (Kim McCracken to Nick

Boyes 24 October 2006). However, an assessment of effects should include the effects on the wider heritage landscape of the destruction of all sites within a project design footprint.

The Consultant notes that the construction of the scheme would have localised landscape effects on archaeological heritage during the construction phase, and that the intensification of farming practices would have potential impacts on the heritage resource in a wider sense. It is the latter point regarding the future management of archaeological sites which the Consultant identifies as being of most concern. This concern would be best addressed in a heritage management plan and, for the consenting authority to be confident that its RMA s6 matters have been addressed, recognised and provided for, the heritage management plan should be prepared before any designation is in place.

Comment: There is no specific assessment of effects on archaeological sites, recorded or unrecorded. Central Plains Water has separately advised that it should be assumed that for the purposes of notification all sites lying within the designation footprint will be destroyed.

i) Recommendations for avoiding, reducing or mitigating any adverse effects

There are no specific recommendations for avoiding, reducing or mitigating any adverse effects on individual sites. Of course, any specific recommendations are impossible until the affected sites have been pinpointed. This is recognised by the Consultant, who sensibly recommends further survey and s18 investigations to determine the locations and boundaries of the sites, including unrecorded sites in areas where reasonable cause exists to suspect the presence of archaeological sites. The Consultant's report advises in general that a main focus of location for sites is the "elevated terraced landforms adjacent to river courses", and that "particular care should be taken along riparian zones within the designation". It also advises that care be taken in areas with intact landforms where there is no knowledge of previous ploughing or disturbance (Habberfield-Short n.d.b: 14). This is good general advice. Further detail on how the requiring authority will avoid or reduce damage in specific areas of the project will have to wait until an archaeological survey has been completed.

Similarly, the provision of mitigation recommendations will not be possible until the survey and assessment has been completed. Archaeological mitigation usually takes the form of monitoring of earth disturbance, combined with archaeological excavation of sites that appear likely to have the potential to yield significant new information. Any disturbance of an archaeological site requires an authority under the HPA (under sections 11, 12, or 18).

The Consultant states that the requiring authority will have to apply for a s12 authority from the HPT if investigation work is not carried out under a s18 authority. This is not strictly accurate. In fact, it is a statutory requirement that an authority under s11 (for individual sites) or s12 (for all sites or types of site in a specific area) is obtained from the HPT irrespective of whether a s18 investigation has been carried out beforehand, if there is reasonable cause to suspect the presence of an archaeological site. Indeed, the HPT is highly likely to require that s18 investigations be undertaken before it will process a s12 application, so that it will be able to make an informed decision on the latter.

Comment: Although the Consultant provides reasonable recommendations for care in the future and recommends that Central Plains Water undertake further investigation to determine the boundaries of the sites in

relation to the earthworks so they can be avoided (Habberfield-Short n.d.b: Recommendation 1), there are no specific recommendations for avoiding, reducing or mitigating any adverse effects on individual sites. These will have to await the recommended wide area survey and s18 investigations.

j) Indirect effects

The *Historic Places Act* regulates direct effects on archaeological sites. The Consultant's report comments on the downstream effects on archaeological heritage that would result from intensification of land use. This is a useful comment and is followed up with a recommendation that "an assessment of the cumulative impact of both the proposed earthworks and the future effects of the irrigation-linked land-use intensification on the archaeological resource be undertaken" (Habberfield-Short n.d.b: Recommendation 4). We concur with the Consultant's report in this respect but have concerns about further indirect effects, in particular the potential visual effects on what can be described as a heritage landscape (Stephenson 2001). The *Resource Management Act* provides for protection of heritage from inappropriate development that might affect the "surroundings associated with the natural and physical resources" (RMA s.6(f)). Such effects can include visual effects on a heritage landscape. The issue of indirect effects on heritage landscapes should be dealt with in the information that is provided to the consenting authority.

It should be noted that assessment of such indirect effects is not necessarily something that would be expected to fall within the scope of an archaeological assessment. It is a specialised subject that is probably best dealt with by a planner with experience in heritage planning – particularly in heritage landscape planning. It is possible that these indirect effects have already been assessed in one of the other reports but we offer these comments in case they have not.

Comments: The Consultant has made an appropriate recommendation in relation to assessing future effects of land-use intensification on the archaeological resource. The requiring authority should comply with this before the notices of requirement and resource consent applications are considered. Central Plains Water should also provide an assessment of the visual effects on the heritage landscape, particularly in the vicinity of the dam and reservoir.

7 REVIEW OF SUGGESTED CONDITIONS

7.1 Suggested conditions for the resource consents

The requiring authority has offered a number of suggested consent conditions, the following of which relate to heritage:

"10. Cultural Impacts

10.1 An accidental discovery protocol shall be prepared prior to construction commencing and copies lodged with Te Runanga o Ngai Tahu and the Selwyn District Council. This protocol shall cover both prehistoric (Maori) and historic sites, and shall be prepared in consultation with the New Zealand Historic Places Trust (NZHPT) and Ngai Tahu. The protocol shall require assessment by a qualified archaeologist of an potential archaeological site discovered. If such a

site is determined to be an archaeological site as defined by the *Historic Places Act* 1993, the NZHPT and Ngai Tahu shall be contacted and appropriate responses received before construction work recommences. Then the site shall be recorded, trial excavations carried out followed by more thorough excavation if this is considered necessary by a suitably qualified archaeologist.

10.2 Before commencing any vegetation clearance or earthworks in any area listed in the Proposed Selwyn District Plan as a Wahi Taonga site, Wahi Taonga Management Area of Mahinga Kai site, the consent holder shall contact local runanga for advice as to the most appropriate methods for avoiding, remedying or mitigating adverse effects of the proposed activity."

"11. Heritage

11.1 Prior to commencing construction, the consent holder shall obtain the appropriate consents to destroy, damage or modify any archaeological site, historic site or historic building classified under the *Historic Places Act* 1993, from the NZHPT for the work required to complete that stage of the project

11.2 Prior to commencing construction the consent holder shall prepare a Heritage Management Plan which shall be lodged with the Selwyn District Council and the NZHPT. This plan shall be complied with and shall cover any destruction, damage or modification of any archaeological site, or historic site or building classified under the *Historic Places Act* and identify any conditions to be complied with in relation to heritage."

Comments:

While there is merit in these suggested conditions some comment is necessary, as follows.

Condition 10.1, which concerns the development of an accidental discovery protocol, is the suggested condition that is of most concern. Accidental discovery protocols are not an alternative to carrying out a systematic archaeological site survey. They are also not an alternative to making all reasonable efforts to ascertain the nature, distribution and extent of archaeological sites in a particular development area ahead of the development.

Accidental discovery protocols are a useful means of dealing with sites that are found accidentally during a project for which no sites were expected and no applications are being made for archaeological authorities. The CPWES is a project where it is inevitable that archaeological sites will be affected. For that reason Central Plains Water will require archaeological authorities from the New Zealand Historic Places Trust and protocols for dealing with archaeological sites encountered during works are a standard part of any archaeological authority.

This condition should be modified to say that an accidental discovery protocol will be developed for any areas which, following a systematic archaeological survey and archaeological assessment, are deemed not to be likely to contain any archaeological sites. The accidental discovery protocol can be prepared after the hearing provided that it has to be signed off by the HPT and Ngai Tahu (including both runanga).

Condition 10.2, which concerns runanga advice, is useful, but should take note of the fact that any modification of an archaeological site through vegetation clearance or earthmoving will require an archaeological authority from the HPT.

Condition 11.1, which would require the consent holder to obtain the appropriate consents [authorities] from the HPT is a good reminder. Central Plains Water authority should note that the HPT is allowed three months to

process an authority and that this period can be increased by three months if necessary to allow further information to be obtained.

Condition 11.2, would require the consent holder to prepare a heritage management plan.

Heritage management plans are a very good idea but their scope needs to be less restricted than suggested here. They need to cover both the construction phase and the long-term management of the heritage values in the design footprint. The following outline is more typical of what a management plan should contain:

A heritage management plan to specify the method for identifying and protecting (where possible) historic heritage places (including archaeological sites) and for avoiding, reducing or mitigating adverse effects on historic heritage places; and for managing all adverse effects on historic heritage during construction, implementation, use and ongoing maintenance of the proposed dam, intakes, canal, and distribution network. This is to be prepared in consultation with Te Runanga o Ngai Tahu, Te Ngai Tuahuriri Runanga and Te Taumutu Runanga and the New Zealand Historic Places Trust. Any future changes to the heritage management plan would require the approval of these parties.

The question of when the heritage management plans should be prepared needs some consideration here. It is suggested in the resource consent applications and in the NOR that the plans would be produced close to the commencement of construction and that they would be based on consent conditions, "and are applied to the specific designs for the project, the staging of its components and the methods of construction, all of which will only be known as the Scheme nears construction."

Although this may apply to aspects of specific heritage management plans we do not consider that the preparation of an overall management plan as outlined above should be delayed until after a decision is made on the resource consents and notices of requirement. A heritage management plan would provide both the consenting authority and submitters with vital information on how the heritage values affected by the scheme would be managed. As a bare minimum Central Plains Water should be required to enter into an agreement with the parties identified above as to what will be contained in the overall heritage management plan.

7.2 Suggested management plan conditions in the notice of requirement

The notice of requirement document has offered a number of suggested management plan conditions, the following of which relate to heritage:

"8.1.5 Heritage Management Plans

Heritage management plans will be prepared to cover any destruction, damage or modification to any archaeological site or historic site or building classified under the *Historic Places Act* and will identify any conditions to be complied with."

"8.1.9 Accidental Discovery Protocol

An accidental discovery protocol will be developed to cover instances where archaeological sites (prehistoric (Maori) and historic) are unearthed during the construction phase. This protocol will require an on-site assessment by a qualified archaeologist, notification of the NZHPT and Ngai Tahu, and further excavations, examinations and recording where necessary." (URBIS n.d.a: 124-126)

Comments:

The comments provided in section 6.1, above, in relation to heritage management plans and accidental discovery protocols apply here equally.

8 DISCUSSION

The Consultant's report has been assessed above in terms of the standards expected of an archaeological assessment by the HPT and in terms of the RMA matters that have to be considered by a consenting authority. There are accepted national guidelines for both (NZHPT 2004; 2006). The Scope of Works that the Consultant was given does not ask for the level of detail that is required for either the HPA or the RMA process. The resulting report is of variable use therefore for either the HPT (as an affected party in the SDC Proposed District Plan) or the consenting authority and submitters to base their assessment of the effects of the proposal on heritage (including archaeological heritage).

The following is a summary of our assessment:

- The Scope of Works as described by the Consultant was inadequate and ambiguous. The Consultant should have made clear to Central Plains Water the standard of information that would be necessary for the consenting authority to consider before recommending that the designation proceeds.
- In our opinion the Consultant has the qualifications necessary to carry out an archaeological assessment and to provide a suitable report on the results of the assessment.
- There is no discussion of the legislative environment. Such a discussion might have helped Central Plains Water to appreciate the importance of providing the further information previously requested.
- There is adequate information provided on the prehistoric context, both locally and regionally, but there is a lack of information on the historical context. It is not made clear in the Consultant's report that the scheme area has never been the subject of an archaeological survey and that the few recorded sites were opportunistically recorded on the basis of farmers' reports.
- The field work was not adequate to obtain to the information required by the consenting authority to make a recommendation in relation to a notice of requirement or a resource consent.
- The description of archaeological sites within the study area is inadequate. Furthermore, the buffer zone around each site's location to provide a sensitivity zone is inadequate and needs to be increased to a 300 m radius.
- The description of physical environment, although missing from the Consultant's report, is adequately provided in other documents.
- The information provided does not contain an assessment of the significance of the archaeological sites likely to be affected, both individually and in a wider regional and national context.
- There is no assessment of effects on archaeological sites in the Consultant's report. (The requiring authority has separately advised that it should be assumed that for the purposes of notification all sites lying within the designation will be destroyed.)
- There are no specific recommendations for avoiding, reducing or mitigating any adverse effects on individual sites. The Consultant provides reasonable recommendations for care in the future and recommends that his client undertake further investigation to determine the boundaries of the sites in relation to the earthworks so they can be avoided (Habberfield-Short n.d.b: Recommendation 1).

- The Consultant has made an appropriate recommendation in relation to assessing future effects of land-use intensification on the archaeological resource. The applicant should comply with this before the notices of requirement and resource consent applications are considered. The requiring authority should also provide an assessment of the visual effects on the heritage landscape, particularly in the vicinity of the dam and reservoir.

8.1 Overall quality of the report and its recommendations

The archaeological study that was commissioned by Central Plains Water does not provide the level of information required for the consenting authority to make a recommendation on the notices of requirement or decisions on the resource consents in respect of actual and potential effects on archaeological sites.

8.2 Overall quality of the CPWES information relating to heritage

The archaeological information provided is inadequate for the purpose for which it is required.

Central Plains Water has not provided the level of information required for the consenting authority to make a recommendation on the notices of requirement or decisions on the resource consents in respect of actual and potential effects on historic heritage generally.

Although a very thorough cultural heritage assessment was commissioned on Maori cultural and historical heritage values, there is no assessment at all of European heritage values. This is a major shortcoming of the applicant's information.

8.3 Suggested conditions in Resource Consent Applications and Notice of Requirement

The suggested conditions in the resource consent applications and notice of requirement have merit but, in our opinion require modification. The accidental discovery protocol is only necessary in areas of the project for which there is no reason, following systematic archaeological assessment, to suspect the presence of archaeological sites. All other areas will be covered by archaeological authorities, which will have their own conditions relating to the discovery of archaeological sites during works.

The heritage management plan is a very good idea but, again, requires modification. The modified version suggested is included as one of the recommendations of this report, below.

9 CONCLUSIONS OF THE PEER REVIEW

The Consultant's report does not provide a level of information sufficient to allow affected parties/submitters or the consenting authority to make informed decisions.

The information provided by Central Plains Water to the consenting authority is not sufficient for any decision other than that the notices of requirement be withdrawn and the resource consent applications be declined. This

is not to say that the proposal should not eventually go ahead but simply that further archaeological and heritage information is required before a proper assessment of the CPWES proposal can be made.

10 RECOMMENDATIONS

1. That given the current level of information the consenting authority recommends that the notices of requirement be withdrawn and that the applications for resource consent be declined; and
2. That the following is required in order to alter the recommendation above:
 - An archaeological survey of all of the land covered by the designations (including the two intakes, the canals, the dam, the reservoir and all land affected by their construction). Note that this specifically includes the land in the vicinity of the traditionally recorded Ohinekakaraiti Pa at the confluence of the Waimakariri and Kowai Rivers.
 - Archaeological assessments of each archaeological site identified as being likely to be affected by the construction of the intakes, the canals, the dam and the reservoir. In some cases e.g., those parts of the designation that have been identified by Ngai Tahu as having a high likelihood of significant archaeological sites being present, this may require investigations under a s18 authority (HPA 1993) to determine the location, nature and extent of individual sites. Specifically these include the Waianiwaniwa Valley and surrounds and the Waimakariri intake.
 - An archaeological assessment of the remainder of the scheme (e.g., distribution network, bywashes) to determine whether or not there are any archaeological sites present to which damage would not be avoidable by realignment.
 - A heritage management plan to specify the method for identifying and protecting (where possible) historic heritage places (including archaeological sites) and for avoiding, reducing or mitigating adverse effects on historic heritage places; and for managing all adverse effects on historic heritage during construction, implementation, use and ongoing maintenance of the proposed dam, intakes, canal and distribution network. This is to be prepared in consultation with Te Runanga o Ngai Tahu, Te Ngai Tuahuriri Runanga and Te Taumutu Runanga and the New Zealand Historic Places Trust. Any future changes to the heritage management plan would require the approval of these parties.
 - An assessment of future effects of land-use intensification on the archaeological resource.
 - An assessment of the visual effects on the heritage landscape, particularly in the vicinity of the dam and reservoir.

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