BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT

POTENTIAL EFFECTS OF CHANGES TO HYDRO POWER GENERATION

APPENDIX 12:

GORDON RIVER CULTURAL HERITAGE ASSESSMENT

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June 2001

Prepared for

Hydro Tasmania

the renewable energy business

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EXECUTIVE SUMMARY

This report documents the review, survey and assessment of Aboriginal and historic cultural heritage along the Gordon River downstream of the Gordon Power Station, in southwest Tasmania. The area is part of the Tasmanian Wilderness World Heritage Area which is managed by the Parks and Wildlife Service. The study was undertaken between November 1999 and March 2000, and has been carried out by consultant team Anne McConnell (Principal and cultural heritage consultant/ archaeologist), Steve Stanton (Aboriginal Heritage Officer/Consultant) and Lindy Scripps (historian). The study was commissioned by the Tasmanian Hydro-Electric Corporation (Hydro) as part of a suite of studies being carried out to identify issues resulting from possible changes to the Tasmanian non-marine aquatic environment arising from changed operations with the introduction of Basslink.

This study was commissioned to identify sites and other cultural heritage values (eg, cultural landscape values) of Aboriginal and historic (European) cultural heritage significance in the Gordon River below the Gordon Power Station, as a number of cultural heritage sites are known to occur in this part of the Gordon River, and because it is considered likely that other cultural heritage sites occur in the area and may also potentially impacted by the changed flow regimes. This study specifically addresses the potential effects of the Basslink development on the cultural heritage, and to a limited extent the effects of the current power generation regime. It does not specifically consider the effects due to other causes such as long term natural changes or recreational or commercial uses of the River.

A literature review was carried out to provide a contextual historical overview, to identify the known and potential cultural heritage of the area, and to help formulate a survey design. This was followed by a on-ground survey of all areas considered to have potential for Aboriginal and historical sites and other special Aboriginal values in high erosion risk areas to be potentially impacted (ie, between the Gordon Power Station and the Denison confluence) and at Moores Landing, and by an aerial inspection of the HEC investigation camps, which had not previously been documented.

In essence there has been an extremely long term Aboriginal presence in the region, which is mainly manifest in occupied and painted caves and rockshelters in limestone bedrock areas in Gordon River tributary catchments, and in a small number of known open sites. All Aboriginal values in the area are of significance to the present day Aboriginal community. The Pleistocene cave and rockshelter sites have acknowledged World Heritage value and contribute to the justification for the listing of the Tasmanian Wilderness World Heritage Area. The integrity of the landscape in which the Aboriginal sites are located is of value to the Aboriginal community for whom the landscape is an Aboriginal cultural landscape and is an important attribute in the recognition of the Pleistocene and coastal Holocene sites of the region being recognised as being of World Heritage significance.

There has also been a European presence in the region since the early 1800s. The Gordon River corridor was important for Huon pine extraction from these early days until the 1960s, and was subject to exploration and track cutting in the 1800s and early 1900s, and to hydro-electricity development investigations and implementation from the early 1900s, and to some tourism and bushwalking, mainly in the lower Gordon, from the early 1900s. Most of these historically significant activities have left physical evidence in the landscape, including sites along the Gordon River from the Gordon Power Station to Macquarie Harbour.

Four Aboriginal sites have been identified along the Gordon River corridor below the Gordon Power Station, as well as landscape values such as plant, animal and geological resources and probable major routes of movement. No sites are known to have been impacted by the current operations, and in terms of the Basslink project there is considered to be no potential for any known Aboriginal sites, and a negligible risk for potential sites, to be affected as a result of changes to the flow regime of the Gordon River as no known sites are on or adjacent to Gordon River margins. The Aboriginal landscape values are considered well represented elsewhere, hence potential impacts from the Basslink development are considered to be negligible in respect of these values. There is considered to be some potential for as

yet unidentified sites to occur along the Gordon River, but this potential is considered very low in areas assessed as being likely to be affected by the Basslink development.

Forty nine historical sites have been identified along the banks of the Gordon River below the Gordon Power Station, with 10 of these sites being located through the present study. These sites relate primarily to historic resource utilisation in the area - nineteenth and twentieth century Huon pining, mid twentieth century hydro-electricity generation, and to a lesser extent to early exploration and track cutting for communication between Macquarie Harbour and the Derwent and Huon valleys, and tourism.

There is no evidence that the current operations have resulted in historic site degradation, although it is possible that this may occur in the longer term under a regime similar to present if no action is taken to reduce bank erosion. It is difficult however to assess the impacts from current operations given the lack of baseline studies (ie, pre-power generation studies) of both the river bank and the cultural heritage.

Only nine known sites occur within the area considered to be potentially impacted by the Basslink development, and only two of these sites occur close to the river edge and may be potentially affected by the proposed development, although both are considered also at risk from the current power generation regime. Both are considered to have minimal physical evidence. There is considered to be potential for additional historic heritage, mainly pining camps and depots, to occur along the river downstream of the Gordon Power Station, but in general sufficiently away from the river edge to be outside the likely area of impact of the proposed Basslink development. No acknowledged World Heritage historic heritage values occur in the Gordon River corridor, hence will not be impacted.

On the basis of the study heritage findings and the current predicted Basslink regime and predicted effects of this, the advice and recommendations for the cultural heritage arising from this study are -

Historic Cultural Heritage - Advice & Recommendations

With respect to the Gordon Power Station downstream area, there is no identified or potential historic cultural heritage on the Gordon River downstream of the Power Station assessed as being at risk specifically by the proposed development (the assessed potential for the altered flow regimes to affect the small number of identified historic heritage features in the 'high risk' areas is not considered substantially greater than that of the current regime).

This study therefore considered that there is no impediment to the Basslink development proceeding as planned with respect to historical heritage provided the following recommendations (H1 & 2) are adopted:

> **Recommendation H1**
> That ongoing monitoring of the banks of the Gordon River be carried out to enable assessment of the effects of the Basslink development (and/or current operations) on the river banks in order to identify any future substantial erosion along the Gordon River banks, and consequent actual and potential degradation of the historical cultural heritage, in particular the historic pining sites.
>
> **Recommendation H2**
> That the effects of the Basslink development on the historic cultural heritage be reassessed if flow heights will be significantly higher than the present predicted heights (ie, above the present high water level).

Aboriginal Cultural Heritage - Advice & Recommendations

There is no objection from an Aboriginal cultural heritage perspective to the proposed development of the Basslink project in relation to changed flow regimes from the Gordon Power Station. Accordingly, the project can proceed as planned provided the following recommendations (A 1, 2 3 & 4) are adopted.

Recommendation A1
In the event that substantial sections of the river banks and adjacent areas along the Gordon River are affected by increased erosion resulting from the Basslink project, they be inspected to ensure that any Aboriginal sites or cultural landscape values are identified. The Tasmanian Aboriginal Land Council should be contacted for advice in relation to the need and process to be adopted for further assessment in such an event. All survey for Aboriginal sites must be carried out by appropriately qualified personnel and in consultation with the Tasmanian Aboriginal Land Council.

Recommendation A2
That in relation to recommendation A1, ongoing monitoring of the banks of the Gordon River be carried out to enable assessment of the effects of the Basslink development on the river banks and to identify any future substantial erosion along the Gordon River banks.

Recommendation A3
That in the unlikely event that any Aboriginal sites are located in areas of disturbance resulting from the Basslink development, then the Tasmanian Aboriginal Land Council and the Department Primary Industries, Water & Environment be informed in order to enable further assessment of the situation as provided for under Section 14 (1) of the *Aboriginal Relics Act 1975*. Section 14 (1) of the *Aboriginal Relics Act 1975* states that -
Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director -
(a) destroy, damage, deface, conceal, or otherwise interfere with a relic.

Recommendation A4
That the effects of the Basslink development on the Aboriginal cultural heritage be reassessed if flow heights will be significantly higher than the present predicted heights (ie, above the present high water level).

ACKNOWLEDGEMENTS

We wish to thank the following people for their assistance to this project -

- Vanessa McNeair, Hydro Tasmania
- Helen Locher, Hydro Tasmania
- David Blühdorn, Hydro Tasmania
- Lois Koehnken, consultant - geomorphology & hydrology
- Peter Davies - consultant - aquatic fauna
- Don Ranson, Cultural Heritage Branch, DPIWE
- Angie McGowan, Cultural Heritage Branch, DPIWE
- Caleb Pedder, Cultural Heritage Branch, DPIWE
- Brett Noble, Cultural Heritage Branch, DPIWE
- Jason Bradbury, Earth Sciences, DPIWE, and
- the Helicopter Resources pilots who provided access to the Gordon River.

Their assistance to the project has been most useful and their helpfulness has been greatly appreciated.

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DISCLAIMER

The consultant has taken all reasonable measures to identify the cultural heritage within the study area and to provide sound advice with respect to its management in the light of the proposed development. However there may be unidentified heritage within the study area due to poor groundsurface visibility and the inability to detect subsurface heritage by standard survey means, and other management issues may arise which were not foreshadowed during this study. The consultant takes no responsibility in the event that additional heritage is identified or that new management issues arise.

SUMMARY REPORT

1 INTRODUCTION

Although an area of relatively little human use today, historic and archaeological research in Tasmania indicates that southwest Tasmania, including the Gordon River corridor, is likely to have been used extensively in the past, from at least around 36,000 years ago by Aboriginal people, and since the early 1800s by non-Aboriginal people. Evidence elsewhere in the region and an understanding of the region's history suggests that the Gordon River corridor has the potential to contain numbers of Aboriginal open sites (eg, camp sites), occupied caves, quarries, art sites similar to others in the region as well as a range of landscape based values, 19th and 20th century non-Aboriginal exploration and Huon pining sites and sites relating to important periods in the history of hydro-electricity power generation in Tasmania.

These types of cultural heritage can be of considerable significance. To Aboriginal people all physical evidence of the past Aboriginal presence in an area is of cultural significance, as well as places that were historically important, resources and landscapes that were of importance to their ancestors, and resources and landscapes that enable maintenance of cultural affinity with the land. The integrity of the landscape is also of importance to the Aboriginal community for whom the landscape is an Aboriginal cultural landscape. Non-Aboriginal cultural heritage is valued by present day communities at a range of levels, but particularly by local communities which often have close historical and personal links. This is particularly true of the Huon pining related heritage of the region. The Aboriginal sites of the region have also been evaluated as being of World Heritage significance.

Through the *World Heritage Properties Act* 1983 (federal) there is an obligation to maintain all World Heritage values of the area. The conservation of both World Heritage and other cultural heritage values is a primary objective of the *Tasmanian Wilderness World Heritage Area Management Plan* (1999), which provides the primary management direction for the area. Further, all Aboriginal sites are protected under the *Aboriginal Relics Act* 1975 (state). The *Historical Cultural Heritage Act* 1995, which applies throughout Tasmania, provides protection for all registered places and contains mechanisms to assess and list places of potential historic heritage value prior to a development if this has not already occurred.

The cultural heritage study was therefore carried out to identify and evaluate both the Aboriginal and non-Aboriginal cultural heritage values of the area that might be potentially impacted by the proposed Basslink development, to assess the potential impacts that Basslink power generation might have on identified and potential cultural heritage values, and to provide recommendations for managing significant cultural heritage and mitigating identified potential impacts. Given the rationale for the study, the focus of the study has been the potential for the Basslink development to impact on the cultural heritage. Impacts from other causes such as long term natural changes or recreational or commercial uses of the River have not been specifically investigated.

Previous research and assessment of the cultural heritage of the Gordon River corridor is limited. At the commencement of the study the only documented previous work in, or including, the study area was two reconnaissance type surveys for Aboriginal sites (Harris 1981, Jones *et al* 1983, Ranson & Harris 1986), two reviews of historic activities - one for the south west generally (Gee & Waterman 1981) and one for the Wild Rivers National Park area (Waghorn 1994), and documentation and assessment of known historic sites as far upriver as Lawn Creek (below the Olga confluence) (Townrow 1990).

2 METHODOLOGY

The cultural heritage study was undertaken between November 1999 and March 2000 by consultant team - Anne McConnell (Principal and cultural heritage consultant/ archaeologist), Steve Stanton (Aboriginal Heritage Officer/Consultant) and Lindy Scripps (historian).

The cultural heritage study was in two parts - 1) a desk top history and heritage review and 2) a subsequent field survey of areas evaluated as being potentially at risk from the proposed development, or known, or with potential, to contain cultural heritage values. The desktop review was carried out (by LS, AM & SS) to provide a contextual historical overview, identify the known and potential cultural heritage of the area, and help formulate a survey design. The survey comprised on-ground survey (by AM & SS) of all flat land and relatively flat land along the Gordon River margin (from the river bank inland to between 50m and 100m) from the Gordon Power Station tailrace downriver to the Denison River confluence and between the Olga River confluence and Moores Landing, and an aerial inspection of the HEC investigation camps which had not previously been documented. The study also included consultation with stakeholders, in particular the Aboriginal community through the Tasmanian Aboriginal Land Council (TALC), and the Cultural Heritage Branch, DPIWE.

The details of the methodology adopted for the study and the rationale behind the selection of the survey areas is provided in detail in the full report.

3 CURRENT CONDITIONS

3.1 Aboriginal cultural heritage

Landscape values such as plant, animal and geological resources and probable major routes of movement have been identified in the Gordon River corridor study area by this study. Although the Gordon River corridor study area contains only four known sites (2 potentially occupied rockshelters, 1 artefact scatter and 1 isolated artefact find) all located by previous studies, current data indicate that there has been an extremely long term Aboriginal presence in the region, which is manifest in occupied and painted caves and rockshelters and open sites (campsites). The utilised caves and rockshelters occur in limestone bedrock areas in Gordon River tributary catchments, and the open sites are scattered and are generally located on low rises in more open, lowland environments close to water or on major ecotonal junctions such as forest/heath interfaces. Given this, and the study area environment, it is considered that there is potential, although limited, for both rockshelters and open sites to occur within the study area, and potential for some open sites to occur along the river margins. It is difficult to locate these sites given the extremely poor groundsurface visibility of the study area. No identified Aboriginal heritage in the study area is listed on the Register of the National Estate or other relevant registers. Aboriginal sites in the region however, as a suite, have acknowledged World Heritage Area value.

Of the known sites in the study area, three are situated relatively high in the landscape and do not appear to have been impacted by changes in regime due to construction of, or power generation from, the Gordon Power Station. The fourth site is located in the Franklin River valley out of the zone of influence of Gordon River effects. Since there has been no monitoring of, or survey for, Aboriginal sites in the Gordon River, and since no surveys were carried out prior to the construction of the Gordon Power Station, there is inadequate data to comment on the effects of regulation of the Gordon River to date. With respect to the resource values and other landscape values identified, there are also no data. The scale of landscape disturbance from the existing power generation regime (see elsewhere this report) when compared with the extent of these values however is such that any modification of these values is considered negligible.

3.2 European cultural heritage

Forty nine historical sites have been identified along the banks of the Gordon River below the Gordon Power Station. Twenty sites are located between the Gordon Power Station tailrace and the Franklin confluence, with the highest density of sites occurring down river of this. These sites relate primarily to historic resource utilisation in the area - nineteenth and twentieth century Huon pining, mid twentieth century hydro-electricity generation - and to a lesser extent to early exploration and track cutting for communication between Macquarie Harbour and the Derwent and Huon valleys, and tourism. Very little observable physical evidence occurs at the sites. The Huon pining sites comprise mainly areas of modified vegetation, hut foundations, cut trees and/or tracks. The HEC sites identified are primarily investigation camps. These sites are mostly located close to the edge of the Gordon River. None of the sites in the study area, or greater Gordon River corridor are listed on relevant registers, including the Tasmanian Heritage Register and the Register of the National Estate. It is argued however that as part of a larger complex, the Huon pining sites might be of World Heritage value.

Expected impacts resulting from the construction of the Gordon Power Station and the modified Gordon River flow regime would be partial loss of sites from bank erosion, or from flood scour at high flows. There is no evidence that this has happened systematically along the river, or even definitive evidence for this at specific locations. However, it is difficult to assess the impacts from current operations given the lack of baseline studies (ie, pre-power generation studies) of both the river bank and the cultural heritage. It should be noted that Townrow (1990) noted the partial loss of a small number of sites below the Franklin confluence which has been assumed to have been caused by boat wake initiated bank erosion. This however has not been tested. Also, given the lack of baseline data, complete loss of an undocumented site would not have been noticed. It is possible, given the apparent extent of bank scour and collapse that is occurring in the sandy sediment banks (refer elsewhere this report), that degradation of sites close to the river edge may occur in the longer term under a regime similar to present if no action is taken to reduce bank erosion, or if it is not equilibrating. The HEC investigation camps above the Franklin confluence are however situated well above the river and clearly will not be affected by river erosion

4 POTENTIAL BASSLINK CHANGES

The assessment of the potential effects from Basslink is based on the geomorphic findings from this study (see this report elsewhere) that there will be limited bank erosion (primarily in areas of sediment banks and between The Splits and the Gordon Power Station tailrace) and limited flooding and consequent surface scouring inland. The current figures suggest that heritage values within 10m, possibly 20m, of the present river bank will be most at risk, with the degree of risk diminishing away from the river.

4.1 Aboriginal cultural heritage

There is considered to be no potential for any known Aboriginal sites, and a negligible risk for potential sites, to be affected as a result of changes to the Gordon River flow regime. There is considered to be some potential for as yet unidentified sites to occur along the Gordon River, but this potential is considered very low in areas assessed as being likely to be affected by the Basslink development. The Aboriginal landscape values are considered well represented elsewhere, hence potential impacts from the Basslink development are considered to be negligible in respect of these values.

4.2 Historic cultural heritage

Only seven known historic sites occur close to (within 50m) the river edge between the tailrace and Franklin confluence, hence will be possibly potentially impacted by the Basslink development. Only three (THPI 8012:33,35 & 36), all minor pining related sites with very limited physical evidence, are in the highest risk category (ie, within 20m of the river bank and between the tailrace and The Splits). It should be noted that these three sites are considered also to be at risk from the current power generation regime. There is considered to be some potential for additional historic heritage, mainly pining camps and depots, to occur along the river downstream of the Gordon Power Station, but in general sufficiently down river and away from the river edge to be outside the likely area of impact of the proposed Basslink development. No acknowledged World Heritage historic heritage values occur in the Gordon River corridor, hence will not be impacted.

5 MANAGEMENT ISSUES

The findings of this study indicate that degradation of cultural heritage values due to non-natural factors is likely to be extremely low, hence not a management issue. It needs to be borne in mind however that this conclusion is based on extremely limited environmental and cultural heritage data which limit the ability to predict the geomorphic (including erosional) effects of the current regulated regime and a Basslink regime, and limit the ability to identify cultural heritage sites, primarily Aboriginal sites, close to the river.

More accurate prediction of the geomorphic effects of flow regulation in the Gordon River will require more investigation and long term research. Achieving better site identification in the Gordon River corridor environment however is extremely difficult, as the ability to locate sites is limited primarily by the density of the vegetation and ground cover, and regrowth since occupation. Given the status of the area as World Heritage with high wilderness value, and as a National Park, there are no acceptable methods for improving site visibility. The understanding of site location in the area can only be improved through opportunistic surveys where there is good visibility, for example after fire, and by development and refinement of current Aboriginal site patterning models. This could be most appropriately done by DPIWE as part of their ongoing management and research.

6 MITIGATION OPTIONS

Given the low assessed risk of cultural heritage values being impacted by effects of the proposed Basslink development and the poor site visibility conditions, the conclusion of this study is that there is no impediment to the Basslink development proceeding as planned with respect to Aboriginal and historical heritage provided there is regular monitoring of the degree of bank erosion to ensure it is within the limits predicted, and to check for cultural heritage values in areas potentially subject to erosion. The poor visibility conditions in the area indicate that systematic heritage survey is of limited value, and checking for heritage values can be most appropriately carried out on an opportunistic basis. Given the current understanding of the effects of flow regulation and the cultural heritage of the area, monitoring should be carried out under the present regime as well as any future modified altered, regulated regimes.

Modification of the Basslink proposed power generation regime is not considered to be required to mitigate effects on the cultural heritage, unless monitoring shows that predictions from this study have significantly underestimated the heritage values near the river banks or the rates of erosion. Relocation of cultural heritage in this instance is not considered appropriate given the physical difficulty and resultant loss of significance in doing so. Major stabilisation works in the face of ongoing degradational processes are also seen as unsuitable, as in the long term it will be unlikely that the heritage values can be preserved and such an approach is likely to be extremely expensive and to impact on other values of the area.

7 MONITORING CONSIDERATIONS

Any further monitoring of Gordon River cultural heritage issues should consider the following.

7.1 Aboriginal cultural heritage

- In the event that substantial sections of the river banks and adjacent areas along the Gordon River are affected by increased erosion resulting from the Basslink project, they be inspected to ensure that any Aboriginal sites or cultural landscape values are identified. The Tasmanian Aboriginal Land Council should be contacted for advice in relation to the need and process to be adopted for further assessment in such an event. All survey for Aboriginal sites must be carried out by appropriately qualified personnel and in consultation with the Tasmanian Aboriginal Land Council.

- That in relation to the above recommendation, ongoing monitoring of the banks of the Gordon River be carried out to enable assessment of the effects of the Basslink development on the river banks and to identify any future substantial erosion along the Gordon River banks.

7.2 Historic cultural heritage

- That ongoing monitoring of the banks of the Gordon River be carried out to enable assessment of the effects of the Basslink development (and/or current operations) on the river banks in order to identify any future substantial erosion along the Gordon River banks, and consequent actual and potential degradation of the historical cultural heritage, in particular the historic pining sites.

- That the effects of the Basslink development on the historic cultural heritage be reassessed if flow heights will be significantly higher than the present predicted heights (ie, above the present high water level).

8 OTHER RECOMMENDATIONS

8.1 Aboriginal cultural heritage

- That in the unlikely event that any Aboriginal sites are located in areas of disturbance resulting from the Basslink development, then the Tasmanian Aboriginal Land Council and the Department Primary Industries, Water & Environment be informed in order to enable further assessment of the situation as provided for under Section 14 (1) of the *Aboriginal Relics Act 1975*. Section 14 (1) of the *Aboriginal Relics Act 1975* states that -
  Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director -
  destroy, damage, deface, conceal, or otherwise interfere with a relic.

- That the effects of the Basslink development on the Aboriginal cultural heritage be reassessed if flow heights will be significantly higher than the present predicted heights (ie, above the present high water level).

There are no further recommendations for historic cultural heritage values.

9 CONCLUSION

The conclusion of the study is that given the current proposal and predicted environmental effects, there is no identified, and limited potential, Aboriginal and historic cultural heritage in the Gordon River corridor downstream of the Power Station assessed as being at risk under the current regime or under Basslink. Specifically, the assessed potential for the altered flow regimes to affect the small number of identified heritage features in the 'high risk' areas is not considered substantially greater than that of the current regime, and this is considered very low to negligible. Given this and the poor visibility in the area for cultural heritage values (primarily sites), it is therefore considered that there is no impediment to the Basslink development proceeding as planned with respect to Aboriginal and historical heritage provided recommendations for monitoring and contingency finds are adopted.

GORDON RIVER CULTURAL HERITAGE ASSESSMENT – FULL REPORT

1 INTRODUCTION

1.1 Introduction

This report documents the review, survey and assessment of Aboriginal and historic cultural heritage of the Gordon River below the Gordon Power Station, Southwest Tasmania. The study area is the Gordon-Franklin Wild Rivers National Park and is part of the Tasmanian Wilderness World Heritage Area, which is managed by the Parks and Wildlife Service, DPIWE (refer Figure 1).

The study was undertaken between November 1999 and March 2000, and has been carried out by a consultant team comprising Anne McConnell (Principal and cultural heritage consultant/archaeologist), Steve Stanton (Aboriginal Heritage Officer/Consultant) and Lindy Scripps (consultant historian). The study is essentially in two parts - a review of previous studies in the lower - middle Gordon River corridor, and a survey for and assessment of identified cultural heritage along the margins of the middle Gordon River below the Gordon Power Station.

The inclusion of an Aboriginal heritage assessment component was endorsed by the Tasmanian Aboriginal Land Council (TALC).

The study was commissioned by the Tasmanian Hydro-Electric Corporation (Hydro), as part of a suite of studies being carried out to identify issues relating from possible changes to the Tasmanian non-marine aquatic environment with the introduction of Basslink. The Basslink development proposes to connect the Tasmanian and the Victorian electricity grids via a submerged cable across Bass Strait. This will change electricity demand patterns, therefore the way in which the Hydro generates electricity. Computer modelling has predicted that the Gordon and Poatina power schemes will be the most likely to be affected, and consequently potential impacts are expected downstream of these power stations due to the changed water release/flow regimes resulting from the changed demand patterns (refer Project Brief - Attachment 1).

The expected changes in water release/flow regimes at these two locations are for more water to be released over what are now lower demand periods, including over the winter period, and for shorter length but more frequent water releases. It is considered unlikely that flooding or higher water levels will result from the changed release/waterflow regimes. The main potential downstream effects of this changed water release regime are considered to be increased erosion of the river banks.

A number of cultural heritage sites are known to occur in the Gordon River below the Gordon Power Station and it is considered likely that other cultural heritage sites occur in the area. Given the potential for impacts along the Gordon River, this consultancy was commissioned to identify sites and other cultural heritage values (eg, cultural landscape values) of Aboriginal and historic (European) cultural heritage significance in the Gordon River below the Gordon Power Station. The study was required to assess the potential impacts and to make recommendations for heritage management and impact mitigation in relation to the proposed Basslink development probable environmental effects for areas potentially to be impacted by the proposed Basslink development (refer Project Brief - Attachment 1).

At this stage the exact nature and scale of the likely environmental effects are not known as the studies necessary to evaluate potential impacts with a high degree of reliability are being carried out concurrently with the cultural heritage studies. The cultural heritage evaluation of the potential impacts has relied on the best currently available data, primarily through discussion with other researchers (hydrologists and geomorphologists) and Hydro staff. This research indicates that potential erosional effects from the Basslink power supply, as opposed to current power generation from the Gordon Power Station are most likely to occur in the middle Gordon, between the Gordon Power Station tailrace and the downstream end of the Gordon Splits and to a lesser extent to the Denison confluence. For this reason and given the lack of previous cultural heritage studies in this area, this study has focussed on this section of the Gordon River, except in the cultural heritage review which considers the Gordon River downriver to its termination in Macquarie Harbour.

This report is essentially four parts - 1) background to the project, 2) a review of existing information, 3) a report of the cultural heritage survey and assessment of the Gordon River between the Power Station and the

Olga River, and 4) an evaluation of current and potential impacts and recommendations for impact mitigation. The report has been essentially written by Anne McConnell with contributions from Steve Stanton (Aboriginal survey results and recommendations) and Lindy Scripps (non-Aboriginal historical background). As per standard requirements, Steve Stanton has also prepared an Aboriginal Heritage Officer's report which has been provided to TALC and the Aboriginal Heritage Section, DPIWE.

A heritage survey and assessment was also carried out downstream of the Poatina Power Station (Brumbys Creek and the Macquarie River) to assess the potential impacts in relation to the proposed Basslink development with respect to power generation by the Poatina Power Station. This study is reported separately (refer McConnell *et al*, 2000).

1.2 Aims, Objectives, Scope & Limitations of Study

1.2.1 Aims & Objectives

The aim of the study (refer Project Brief, Attachment 1) was to identify sites of Aboriginal and historic (European) cultural heritage significance in the Gordon River downstream of the Gordon Power Station, particularly in the middle Gordon River, and to identify the cultural landscape values associated with the development area in order to assess the potential environmental impacts of the proposed Basslink development.

The Project Brief required that this be effected through a two stage process -

1. a review of relevant information, including literature, site listings and consultation, and
2. field survey to identify sites and cultural landscape values in previously unstudied parts of the study area.

The specific objectives of the study (as set out in the Project Brief) were -

- To locate, document and assess sites of Aboriginal and historical cultural significance within the study area.
- To identify and document the cultural landscape values associated with the study area and immediate surrounds.
- To provide recommendations for managing the significant sites and cultural landscape values identified in relation to the potential effects from the changed flow regimes.

Specified tasks (refer also Project Brief) were -

- To access and review the Tasmanian Aboriginal Site Index (TASI) and Tasmanian Historical Places Inventory (THPI) for sites within and adjacent to the study area.
- To consult with the Cultural Heritage Branch, Parks and Wildlife Service (PWS) in designing the fieldwork methodology.
- To liaise as necessary with relevant government and non-government bodies, including the Tasmanian Aboriginal Land Council (TALC), on matters relating to sites of Aboriginal and historical cultural heritage significance.
- To provide documentation of the study in the form of a project report, site record forms (TASI & THPI forms), and maps showing survey transects.

The aim of the Aboriginal assessment component, from the viewpoint of the Aboriginal community is to ensure that -

- any Aboriginal sites, or other cultural heritage values or places, which may be present within the study area are identified in order to develop culturally appropriate management strategies to provide for their future protection and maintenance,
- that with respect to potential landscape changes resulting from the proposed Basslink development the Aboriginal community's heritage interests are maintained, and that any Aboriginal values identified in the study area are maintained and afforded culturally appropriate future management according to community aspirations, and
- the views and any concerns which might be held by the Aboriginal community in relation to this project are covered through consultation with TALC as representatives of the Aboriginal community.

1.2.2 Study Area

The delineation of the study area was partly set by the Hydro (refer Project brief) and partly by the project through consultation with the Hydro, other Basslink development environmental assessment researchers, and staff of the Cultural Heritage Branch, DPIWE. In essence it has been defined as that part of the Gordon River that will be potentially measurably affected by the changed flow regimes in the Gordon resulting from changed power generation for Basslink power supply. As noted above, the exact nature of the potential effects is still under investigation, however currently available data from Hydro computer modelling and preliminary hydrological and geomorphological research provides the best available information for determining the cultural heritage assessment study area.

Based on an assessment of cultural heritage factors (eg, site patterning (McConnell 1995) and known site locations (refer Review, Section 2 and Tables 1 & 2), the geomorphology of the area (maps, air photo interpretation & J. Bradbury (pers comm)), the predicted flow regime from the Gordon Power Station under Basslink (V. McNeair, pers comm), the geomorphological & hydrological assessment (preliminary) of areas likely to be affected by the changed water flow regime (L. Koehnken, pers comm & 28/1/2000), then the best information assessment is that the Basslink effects are not likely to result in erosion above present high water level, but will possibly increase bank erosion in more erodible areas (mature sandy bank sections). The geomorphological and hydrological information indicate that the erosion potential from changed water flow will be largely dampened by the gorges, in particular The Splits. The main area of potential erosion is considered to be essentially between the tailrace and The Splits and to a lesser extent between the First Split and Ewarts Gorge, with little to no erosion likely downriver of Ewarts Gorge (above the Olga River confluence).

The confluence of the Denison River is an area known to have identified and potential heritage values, particularly since it is an area of karst geomorphology and is an additional reason to include the Denison confluence area in the study. The *study area* has therefore been defined as the Gordon River margins between the Gordon Power station tailrace to just below the confluence of the Denison River (refer Figure 2). This equates to geomorphological zones 1, 2 and 3 identified by the Hydro. This area is considered the priority area to be surveyed in relation to assessing the Basslink effects from changed water release from the Gordon Power Station.

The study area was subsequently further extended to include investigation of the Olga Camp and the Moores Landing area just below the Olga River confluence as these were the only areas of identified historic heritage which had not been previously inspected and documented, and would otherwise have remained undocumented. Given that the potential Basslink development environmental effects will be limited to bank erosion, the study area was restricted to the bank margins and up to c.50-100m inland depending on the local topography. The actual areas selected for survey were located within the study area (refer Section 3 and Figure 4).

In order to determine the nature of the known and potential cultural heritage downstream of the Gordon Power Station, the full length of the Gordon River below the Power Station has been considered as a *special interest area* (refer Figure 2). Given the focus of the study, the 'special interest area' was defined as a corridor along the River, in the order of c.1km width. This was in effect the study area for the background review (Section 2), and helicopter reconnaissance was also carried out in this larger section of the river, primarily for better determination of cultural landscape values.

The background review also extended beyond the 'special interest area' to take in the greater catchment of the Gordon River and its tributaries in its middle and lower sections in order to provide relevant contextual background. This area is referred to as the *study region* for this project. The study region has not included the coast and coastal hinterland.

1.2.3 Scope & Limitations

The agreed scope of the project (McConnell, 11/11/99) was that for the specified areas (ie, those areas considered to be potentially measurably affected by the proposed Basslink development) that -

- The study will address both Aboriginal and European (historic) sites and cultural landscape values.
- The background review will focus on the specified areas, but will summarise the nature of known and potential cultural heritage along the Gordon River generally.
- The historical research undertaken will be limited to the specified areas and will comprise overview research focused on identifying sites and cultural landscape values in the specified areas, and only a very general level historic overview. Archival research of primary resources may be restricted to maps and plans.
- The field survey will be limited to the specified areas and while covering the full study area will not comprise a 100% survey (not considered feasible or warranted given the terrain to be studied), but will focus on areas considered to have visibility for sites, or potential for sites and landscape values. All sites will be recorded to TASI and THPI standards.
- Consultation for the study will be with relevant agencies and organisations (Hydro, PWS, Tasmanian Heritage Council (THC), and TALC), although some additional consultation may be carried out for assessment purposes and/or background historical and contextual information if deemed necessary.
- Assessment and the formulation of recommendations will be in line with the standard accepted guidelines for cultural heritage assessment and management in Australia, in particular the *Burra Charter* (Australia ICOMOS 1988).

- Consultation to establish 'social values' will not formally be carried out, except for that required by TALC for assessing Aboriginal significance.

1.3 Study Area Description

1.3.1 Setting & Management

The Gordon River flows a distance of more than 150 kms through Southwestern Tasmania, from the King William Range in the Central Highlands to the northeast, south to Gordon Bend, west to its confluence with Orange River, then northwest to Macquarie Harbour receiving water from major tributaries such as the Denison, Olga, Sprent and Franklin Rivers in this section. The terrain is dominantly Precambrian quartzites, with minor belts and pockets of volcanic and sedimentary rocks, including karst rich carbonates of Lower Devonian to Ordovician age, and is mostly rugged and mountainous with strongly north-south trending ranges, many of which have been glaciated in the past. It is also remarkable for its high rainfall and its wet forests, rainforests, and buttongrass moorlands on high exposed ridges and plateaux and in low lying poorly drained valleys. The region is dissected by numerous rivers, many of which flow into the Gordon, but with others which flow out to the sea on the southwest coast. Where the Gordon River flows south and northwest, the Gordon River flows in a broad well valley, but in its westward flowing section it cuts across several major ranges, often flowing in deep narrow gorges.

The Gordon River flows almost exclusively through the Tasmanian Wilderness World Heritage Area (TWWHA)(inscribed in 1982 and expanded in 1989) within the Franklin - Gordon Wild Rivers National Park. The Gordon River is dammed for hydro-electricity generation just above its confluence with the Serpentine River resulting in a large area of open water termed Lake Gordon. Apart from the hydro-electricity generation development in the area and nineteenth and twentieth century timber getting, the region has remained largely undeveloped by Europeans, but is known to have been extensively used by Aboriginal people prior to the arrival of Europeans. It is a combination of values resulting from its natural environment, Aboriginal occupation and lack of European modification which gives rise to its World Heritage status.

The Franklin - Gordon Wild Rivers National Park is managed by the Parks and Wildlife Service of the Department of Primary Industries, Water & Environment. The management of the area is prescribed by the *Tasmanian Wilderness World Heritage Area Management Plan* (1999). The overarching management objective for the TWWHA is "To identify, protect, conserve, present and, where appropriate, rehabilitate the world heritage and other natural and cultural values of the WHA, and to transmit that heritage to future generations in as good or better condition than at present" (TWWHA Management Plan 1999, 30). The Hydro have responsibility for administering Lake Gordon and its perimeter and other limited areas, and all other hydro-electric infrastructure in the region under the *Electricity Supply Industry Act 1995*. Under this Act the Hydro has the authority to do any works connected with electricity supply in all these areas of management responsibility, but subject to the Statutory Powers in the *Tasmanian Wilderness World Heritage Area Management Plan* (1999). In relation to developments in the TWWHA, the Hydro is required under the Statutory Powers to "liaise with the Service to ensure appropriate environmental impact assessment and mitigation strategies are followed" (TWWHA Management Plan 1999, 193). Within Tasmania, Aboriginal cultural heritage is subject to the *Aboriginal Relics Act 1975*, and historic cultural heritage of assessed state significance is subject to the *Historic Cultural Heritage Act 1995*.

1.3.2 Description

As noted above, the study area is essentially that part of the middle Gordon River from the Gordon Power Station tailrace, just upriver of the confluence with the Serpentine River, downriver to the

confluence with the Denison River. This is a distance of some 15km. The Denison confluence in turn is some 7km upriver of the Olga River confluence, 20km upriver of the Franklin River confluence, and some 40km upriver of the Gordon River mouth on Macquarie Harbour.

Within the study area the main tributaries to the Gordon River are (in downstream order) the Serpentine, Albert, Orange and Denison Rivers. The terrain comprises north-south trending ranges, which are from east to west the Wilmot Range, the Hamilton Range, Nicholls Range, Dohertys Range and an unnamed range of low hills between the Gordon River and the Olga River. These ranges are between c.1,060m and c.350m asl, with intervening valleys and plains at between c.30m and c.100m asl. At the Denison confluence the river banks are c.30m asl, rising to c.100m asl at the Serpentine River confluence.

Where the Gordon River cuts through the ranges the valley is extremely deep and steep walled. Recognised gorges are the Gordon Splits between the Albert and Orange Rivers, Abel Gorge immediately upriver of the Albert River confluence, and the c.3km section downstream of the Gordon Power Station, including the Serpentine River confluence. Much of the rest of the Gordon River in the study area also has relatively steep valley walls with no to minimal flat riparian land.

Benches, terraces and clearly demarcated flood plains are absent in the study area, but there are several limited areas of relatively flat land, mainly at confluences with rivers and major creeks. The largest areas of open valley are the c.1.5km section downriver of the Albert River confluence, and at the Denison confluence (up river c.2km and down river c.5km). The apparently flat land along the edge of the Gordon River is not in fact flat, but comprises a river edge levee bank, often a series of parallel levees (J. Bradbury, pers comm), rather than a single bank edge levee. In some places the levees occur 'en echelon'. The levee bank has not been emplaced as a continuous ridge and is further dissected by creeks and small streams that flow into the Gordon River from the hinterland. The levee banks, which generally sit on a surface that is c.1-4m above the river, vary in height from 0m to 6-8m, and are clearly defined ridges, usually with a narrow (<c.5m wide) crest. The bank edge levees usually occur on the edge of the river bank and it is rare that there is bank top bench or any flat land in front.

The river bed itself is variable and has quite a different appearance at different levels of flow. Above the Albert River confluence it is a narrow rocky channel with frequent rock bars. Downriver from the Albert River, it is broader and alternates from bedrock or cobble bar rapids and riffles, to open pools, with frequent cobble bars along the edges on either bank. Some of the cobble bars occur as islands in the river, and some of these have vegetation and trapped sediment. Below the Limestone Creek confluence the river flows in a broad sediment filled valley, and the river tends to have much fewer cobble bars, and has short sections of limestone cliff along the river.

The study area is mapped as Precambrian quartzites (Southwest Tasmania 1:250,000 geological map), except for the Gordon River valley below The Splits (start Zone 3) which has been mapped as Gordon limestone (detailed Hydro geological mapping, L. Koehnken, pers comm). The limestone is karstic in this area and at least one cave is known in the area of the Gordon/Denison confluence. No other significant carbonate bedrock is known to occur in the study area, and no other rock types are known in the study area.

The vegetation of the study area is primarily mixed forest and rainforest, with dense tea tree and cutting grass thickets in poorly drained low lying areas. The river edges in the flatter areas are mostly mixed forest, dominantly rainforest which is generally a mosaic of implicate and thamnic rainforest, but with occasional small patches of more callidendrous (open understorey) rainforest, mainly in marshy or in well drained, flatter areas. The better drained river margins and valley footslopes have larger trees and a greater proportion of eucalypts, and there is Huon pine along the river banks and in places on the levee banks. The steep rocky slopes upriver are largely bare, but with scattered scrubby vegetation, while the tops of the ranges in the area are mainly open buttongrass dominated moorlands.

1.3.3 Predicted Potential Basslink Effects

The geomorphological field investigations (Koehnken, 28/1/2000) conducted as part of the Basslink development environmental impact assessment have found evidence of erosion below current high water levels along the rocky banks above Abel Gorge and in the Snake Rapids area, and suggest that this erosion is induced by the current regulated flow regime. The investigations also found widespread dewatering features (piping, small sand splays, eroded peat/sand contacts) in sandy bank areas in the study area above the Denison confluence, with the extent and size of the features generally decreasing with distance downriver from the Gordon Power Station. This, as well as the height of this erosion compared with similar erosional features in tributary rivers, suggests that this type of erosion is a natural process, but has been exacerbated around the high water mark above the Denison River confluence by the current regulated flow regime. At its most extreme this piping extends back 'several' metres into the bank. The cobble rich banks were found to be relatively erosion resistant, with slight notching due to scour and some erosion of overlying peats where the sediment bank height is below high water mark.

While it is difficult to establish the exact potential erosional effects of the proposed Basslink development since there is already some effect from natural processes and the current regulated flows, the above indicates that potential Basslink effects will be -

- at or below high water mark,
- primarily above the Denison confluence,
- restricted to mature sand banks, and to sediment below high water level in rocky areas, and
- above the Denison confluence may extend several metres inland from the river edge where peat overlies sand at, or slightly above, high water mark.

It is this assessment that is used in assessing the potential impacts of the Basslink development on the cultural heritage of the Gordon River (refer Sections 3.2.2 and 3.4.2, below).

2 HERITAGE REVIEW

2.1 Methodology

2.1.1 Aboriginal Heritage Review

The Aboriginal heritage review has essentially comprised review of the following for the study area and middle and lower Gordon River more generally -

- Tasmanian Aboriginal Site Index (TASI) and associated site records,
- Aboriginal heritage survey reports, and
- secondary sources, including review articles.

TALC staff authorised access to TASI, in order to allow necessary background research associated with this project.

Consultation was also carried out with Caleb Pedder, Don Ranson, Angie McGowan and Brett Noble of the Cultural Heritage Branch, DPIWE, to ensure that all the relevant sources had been accessed, and to obtain first hand information about some of the field survey and sites located.

The sources used in the review are cited in the text and referenced in Section 5.

2.1.2 Historical Heritage Review

The historical heritage review comprised two parts - an historical review and a heritage review. Most of the information reviewed came from secondary sources, as there has been a number of reviews of the history and heritage of the region which have comprehensively researched the primary sources, particularly the archival sources and oral sources. Some archival research for historic plans and maps however was undertaken to try and build a more detailed understanding of the past non-Aboriginal use of the middle Gordon and potential sites, since there was relatively little information for this area. However since land in this area has never been offered for sale or lease there are no survey plans covering this area and other plans are limited.

Sources reviewed therefore were -

- the Tasmanian Historical Places Inventory (THPI)
- secondary historical sources
- maps & plans in the Survey Section, DPIWE
- historic archaeological reports for the region
- review articles, in particular Gee & Waterman (1981), Coroneos (1993) and Waghorn (1994).

As for the Aboriginal heritage review, consultation was also carried out with staff (Angie McGowan and Brett Noble) of the Cultural Heritage Branch, DPIWE, to ensure that all relevant sources had been accessed. The Tasmanian Heritage Register (THR) was not reviewed as the Tasmanian Heritage Council have not yet assessed sites in this region.

The sources used in the review are cited in the text and referenced in Section 5. Gee & Waterman (1981) and Waghorn (1994) provide more comprehensive, detailed information on the sources of historical information for this area.

2.2 Aboriginal Heritage Review

2.2.1 Previous studies

There have been only two previous archaeological surveys of the Gordon River proper. The first in January 1981 concentrated on karst features in the Nicholls Range area (Denison/Gordon Rivers confluence) within the study area (Harris, S. 1981a & b). The second survey assessed the area of the Gordon River above the Franklin but below the Olga and took place in February/March 1983 (Blain, B. *et al* 1983).

There have however been a number of other studies of Aboriginal archaeology of the study region (refer Kee *et al* 1993, McGowan *et al* 1993, McConnell & Hamilton 1999). Apart from Bannear (1991) which focussed on the Aboriginal archaeology of the north side of Macquarie Harbour and its hinterland, these other studies have comprised surveys and limited excavations in a number of the major rivers and their tributaries which drain into the Gordon River. Sim & West (1993) carried out a study of the southwest coast hinterland, but this did not extend inland into the Gordon River catchment. Unlike most other parts of Tasmania there has been no regional Aboriginal cultural heritage study carried out for southwest Tasmania.

The archaeological studies that have been carried out in the region include -

- Andrew River Valley survey in 1984 (Jones & Allen 1984)
- Frenchmans Cap area (from Lyell Highway) in 1999 (McConnell & Hamilton 1999).
- Acheron River Valley survey in 1984 (Jones & Allen 1984)
- Acheron valley excavations in 1991 (Allen 1991)
- Algonkian River survey in 1990s (LaTrobe University)
- Kutikina Cave excavation on the Franklin River in 1981 (Jones *et al* 1983, Kiernan *et al* 1983),
- Franklin River survey in 1982 (Jones *et al* 1983),
- Maxwell River survey in 1986 (Ranson & Harris 1986)
- Maxwell River valley excavations in 1990 (Allen 1990)
- Denison River survey in 1989 (Brown, S. *et al* 1989)
- Lake Gordon margins survey (Wedge Forest block) in c.1984 (Prince 1984)
- Lake Gordon margins survey (du Cros 1992).

Immediately outside the study region to the north, intensive survey and some excavation of the King River Valley which also drains into Macquarie Harbour has also been carried out by Macfarlane & Coates (1991), Pocock (1992) and Freslov (1990, 1991) prior to the flooding of the valley as part of the King River power scheme. The Hydro themselves carried out a survey of caves in the southwest of Tasmania for the Gordon River Power Development Stage 2 assessments (Baynes 1983, Forster *et al* 1983, Wilson 1983), however this study did not use either archaeological expertise or Aboriginal people. It is therefore generally not considered to provide useful information on the Aboriginal occupation of caves in the region, particularly given the results of some of the later studies (see above), which located sites in caves considered not to have occupation by the 1983 Hydro study or not inspected by the study.

A number of studies, mainly the earlier studies, were primarily scientific research studies, focussed on developing an understanding of where Aboriginal sites were located in the region, and the time depth and nature of occupation of the region by Tasmanian Aboriginal people. The other studies (Prince 1984, Bannear 1991, du Cros 1992, Lehman 1995, TALC 1996, McConnell & Hamilton 1999) have been much more focussed on the management of the Aboriginal values of the region in the light of the areas management for conservation, recreation, timber getting and hydro-electricity generation. The results of a number of the studies were summarised in limited review papers, mostly presented to a Royal Society Symposium on the *Tasmanian Wilderness - World Heritage Values* (Kee *et al* 1993,

McGowan *et al* 1993, Thomas 1993). McConnell (in press) also reviewed the Aboriginal archaeology of the region in 1995, particularly focussing on the Gordon and Huon-Serpentine impoundments.

Only one of the above studies for the region has considered Aboriginal values more broadly than Aboriginal sites. This is the most recent survey and assessment in the area by McConnell & Hamilton (1999) which was part of a broader project to assess the Aboriginal values of the Frenchmans Cap and Overland Track areas, and has explored the notion of what constitutes broader values within the Tasmanian Wilderness World Heritage Area. The Tasmanian Aboriginal Land Council (1996) carried out an earlier study which reviewed the Aboriginal values of the Tasmanian Wilderness World Heritage Area (TWWHA) at a more general level, although it did not identify any specific Aboriginal values in the study region. A related study the previous year looked at how the Aboriginal values of the TWWHA should be presented (Lehman 1995), but also included an assessment of some of the broader Aboriginal values of the TWWHA.

2.2.2 Historical Background

The following historical overview is taken largely from McConnell & Hamilton (1999), Kee *et al* (1993), McGowan *et al* (1993) and Thomas (1990 and 1993) - all of which provide reviews related to the region.

The evidence from excavations in the region shows occupation from at least 35,000 years ago. Occupation of the excavated sites in this region is concentrated in the last glacial period (the Pleistocene). Very little of the region except the glaciated edges of the Central Highlands area would have been inaccessible and the region generally would have been open to travel. It is argued (Cosgrove 1995) that the changed climatic conditions of this period would have resulted in more extensive open country in the region, in particular grasslands, with forest limited to riparian zones (ie, river edges), hence easier travel and a greater abundance of game.

There is some question as to whether the region would have been continuously occupied from 35,000 years to present (refer McConnell (in press) and McConnell & Hamilton 1999). The lack of Holocene deposits in excavated shelters in the region has been taken to suggest that Aboriginal people largely moved out of this region to more resource rich or resource stable areas in eastern Tasmania at the end of the last glacial maximum. This has been alternatively interpreted however, as merely indicating a local change in occupation to open sites, and the evidence from the King River valley provides conclusive evidence that Aboriginal people were occupying inland western Tasmania in at least open valley environments in the early and late Holocene. The lack of continuous occupation evidence in most excavated sites in the region is considered (Thomas 1993) to reflect a shifting focus of occupation within localised areas in the past by Aboriginal people, rather than evidence of discontinuity of past Aboriginal occupation or use of the region.

In most parts of Tasmania there is considerable evidence for a changed, possibly more intensive, land use and occupation from about 4,000-3,500 years. The reason for this change is not clear, but a range of reasons, including increased population, further adaptation to the increasingly ameliorated conditions, or changes in Tasmanian Aboriginal social organisation have been postulated. While there is insufficient evidence to support such change in this region, it is unlikely that the inland area of the southwest were isolated from these widespread changes. The dated evidence from the Nelson River - King River area supports a change in land use in the late Holocene at least in that part of the region, but neither the archaeological nature of the changes nor the reasons for change are clear from the currently available evidence (Pocock 1992).

The nature of the sites in the region and their patterning suggest that everyday life included the range of standard activities - hunting, plant food collecting and consumption, tool stone collection in a range of environments, and short term camping in a range of environments, with more permanent camps

focussed in the river valleys, including in areas with rockshelters and caves. The stone artefacts in the sites indicate that while there was a predominant use of local stone, some particular stone types (eg, Darwin glass) were transported long distances, at least across the region.

It is suggested (McConnell & Hamilton 1999) that Aboriginal people moved through the country in a range of ways, and Thomas (1987, 18) suggests that for most of the time "people travelled in a less constrained manner [than taking fast direct routes], travelling up and down side tracks on both ridges and valleys, yet still moving in the decided or necessary direction" which allows for groups to "splinter and coalesce according to resource availability, social obligation and weather constraints". Robinson's observations (Plomley 1966) provide evidence that major routes were also recognised and used for long distance travel. Although he provides no evidence for such routes within the region, it is likely that the major open valleys of rivers such as the Upper Franklin, Olga, Denison and Gordon Rivers would have been major travel routes. Bannear (1991) and Sim & West (1993) both suggest that the coastal hinterland areas in the southwest, including Macquarie Harbour and the mouth of the Gordon River, were not heavily used in the past by Aboriginal people in spite of the relative ease of travel via the higher open country or by water. This is possibly a reflection of low level resources in these hinterland areas, while the nearby coast had abundant resources.

It is likely, as suggested by Thomas (1993) and McConnell & Hamilton (1999), that the pre-invasion Aboriginal history of the area included a diverse and complex use of the most of the country given the diversity of resources and values throughout the area. This diverse past usage does not mean that large numbers of people were utilising all parts of the area nor doing the same things, but rather is likely to mean that different people were using different localities at different times for different purposes, although there may have been a seasonally based component to this. The evidence for past Aboriginal burning, for example in the Loddon and upper Franklin valleys (McConnell & Hamilton 1999), indicates that some areas of land in the region were actively managed.

The post invasion Aboriginal history is of the region is extremely poorly known, although Robinson (Plomley 1966) provides information about Aboriginal people along the southwest coast in the 1820s. It appears from Robinson's information that at least at this time, Aboriginal movement and occupation was focussed on the coasts. Robinson also mentions the incarceration of a number of Aboriginal people at the Sarah Island penal settlement for part of this period, but there is no mention of them having worked in the convict pining parties on the Gordon River. The early historical observations relating to an Aboriginal presence in the inland part of the region are restricted. In the upper Gordon (in the Vale of Rasselas) Goodwin and Connelly saw huts and met with Aboriginal people in 1828, and Darke noted Aboriginal huts in the same general area in 1833. On the north west margin of the region Sharland (in 1832) and Calder (in 1840) noted considerable evidence of an Aboriginal presence in the Upper Franklin and in the Loddon Plains - huts with drawings inside, recently butchered kangaroo, a discarded spear, footprints, and in 1840, voices in the Frenchmans Cap area (refer Thomas 1993, McConnell & Hamilton 1999).

In spite of the limited historical information, it is reasonable to assume that for the Aboriginal people of the region, the arrival of Europeans in Hobart and Launceston and their relatively rapid settlement of surrounding areas started a sequence of changes that resulted major impacts on Tasmanian Aboriginal culture. Clearly, this would have resulted in major changes in how Aboriginal people were using the country. In the project area this change may have been relatively delayed as it is one of the most remote from European activities and encroaching land use.

2.2.3 Heritage Information

2.2.3.1 Established heritage values

A review of the TASI revealed that there are three previously recorded and registered Aboriginal sites located along the Gordon River downriver of the Gordon Power Station (refer Table 1 & Figure 3). These sites consist of two rockshelters/caves TASI 494) and TASI 48, and a small stone artefact scatter (TASI 488).

TASI 494 is a potentially occupied rockshelter/cave located on the southern side of the Gordon River at Ewarts Gorge between the Smith and Olga River confluences. TASI 487 is a small cave which lies on the northern side of the river, about half way between the Denison River confluence and the Smith River confluence, and in c.250m from the river. It is recorded in TASI as a potentially occupied rockshelter/cave as opposed to a cave with occupation deposit. Jones *et al* (1983) comments that a few small flakes were found c.1m below the surface in an excavation of the cave, however Don Ranson, who participated on the excavation does not believe the flakes were Aboriginal artefacts and believes the cave was unlikely to have been occupied as it was a doline cave (sinkhole) and quite small and wet (D. Ranson, pers comm). Both these sites are well above the Gordon River therefore well beyond the area of potential disturbance associated with the Basslink Development. TASI 488 however is on relatively low terrain on the north bank of the Denison River about 150m upstream from its confluence with the Gordon River (D. Ranson, pers comm). Artefacts from this site consisting of a core and several flakes found in a clear area below the roots of a large upturned tree from which they are believed to have eroded (D. Ranson, pers comm). These artefacts from TASI 488 and the 'flakes' from TASI 487 were collected by Jones at the time of the fieldwork in 1981 (Harris, S. 1981b).

The other studies in the Franklin, Denison and Maxwell River valleys have revealed the presence of numerous highly significant Aboriginal sites consisting of art sites, occupied caves, rockshelters, isolated artefacts and artefact scatters. The closest of these sites to the Gordon River consists of an isolated artefact (TASI 1837) located on a shingle bank, midstream in the Franklin River, c.1km upstream from its confluence with the Gordon River, but this is considered to be well beyond the potential effects of the Basslink development. Other studies (Prince 1984, du Cros 1992) in the Gordon above the Gordon Power Station also indicate that open sites, such as artefact scatters and isolated artefacts occur in the Upper Gordon, including on the margins of the present day Lake Gordon.

The previous studies (Jones *et al* 1983, Blain *et al* 1983, Jones & Allen 1984, Prince 1984, Allen *et al* 1988, Jones *et al* 1988, Brown *et al* 1989, du Cros 1992, Kee *et al* 1993) have highlighted the abundance and richness of Aboriginal sites in the area, although below the Gordon Power Station site distribution patterns indicate a concentration of sites in tributaries of the Gordon River rather than in the Gordon River corridor itself, primarily in association with karst areas (in limestone and dolomite). The lack of known sites in the middle and lower Gordon River corridor and the apparent concentration of sites in areas of karst is also likely to be a reflection of the poor visibility for Aboriginal sites in this heavily vegetated environment. This is supported by studies of similar environments with some disturbance, as in the King River valley (Macfarlane & Coates 1990, Pocock 1992) and Gordon River upriver of the Gordon Power Station (Prince 1984, du Cros 1992), although the apparent paucity of sites in the lower Gordon may be real (Bannear 1991). The site patterning evidence in the upper Gordon River, combined with the other studies in the region, show a concentration of sites generally on valley floors in the wider, more open valleys of the region.

The sites range in age from at least 35,000 years BP, and the known rock paintings are assumed to be at least of Pleistocene age.

Aboriginal landscape values and site associations, eg., plant and animal, have not been considered in the context of their Aboriginal significance by past studies, except for the Frenchmans Cap area (McConnell & Hamilton 1999).

The listed World Heritage Aboriginal values which are a suite of the above sites and values are discussed in Section 3.3.2.

2.2.3.2 Potential heritage values

On the basis of the work already carried out in the region (refer *Previous Studies* above), and the site patterning information for other similar environments in inland western Tasmania (refer *Previous Studies* above and McConnell 1995) some predictions can be made about those environments along the Gordon River corridor which are likely to have a high potential for Aboriginal sites and other values.

These studies suggest a complex use of the country, using a range of environments (although there is no data for the range tops), but possibly favouring large open valleys which are sheltered, easily travelled and resource rich, with less use of the hilly and heavily forested areas. There appears to be no particular relationship between water sources and site location, certainly a less strong relationship than for inland central and eastern Tasmania, although large numbers of sites are found within view of, and frequently on the banks of, the rivers of the area. The studies also indicate a very strong association of sites, mainly campsites but also art sites, in shelters and caves in the region. While this association occurs primarily in karst areas (Gordon River limestone and dolomites), there is also some evidence for occupied shelters in other rock types (eg, quartzites & conglomerates).

The importance of the forest/heath interface areas for past Aboriginal use, common in most other parts of the state, is not addressed by the regional studies in this area. There is also no clear association of sites, either campsites or quarries, with good quality tool stone outcrops in this region as in other parts of the state. Although there is strong use of local stone, most types of stone can come from a range of sources within the local region, and there is not a one to one relationship between the occurrence of potential raw material and the occurrence of a quarry or associated site. This to a large extent is considered to be a reflection of the widespread abundance of tool quality material in region as bedrock and reworked deposits, and also that Aboriginal people were being very selective about where they obtained stone from as well as the criteria for selection including attributes that are not clear today and are not easily predictable. Overlying all of this, is the uncertainty of what is being missed due to the poor visibility for sites, and only a very incomplete picture of Aboriginal occupation and use of the country over time.

In summary then -

Sites are highly likely to occur -

- close to water (the highest potential is within about 200m of water);
- where there are special values such as high scenic quality, eg, waterfalls;
- in all rockshelter/cave forming rock types and particularly in karst landscapes, in cliff line type and boulder overhang type shelters and in caves, where these are not difficult of access;
- in association with regular routes of Aboriginal movement, including in major valley floors, and at travel nodes;
- in places with the above attributes and which also have a range of resources or other values associated.

Sites may occur preferentially -

- in raised locations on plains and on the floors of major open valleys;

- at forest heath interfaces;
- at or near sources of quality tool stone.

Although Aboriginal landscape values and site associations eg. plant and animal, in the region have not been considered in the context of their Aboriginal significance by past studies except by McConnell & Hamilton (1999), it is likely that they exist along sections of the Gordon River. The studies of Aboriginal values more broadly in the TWWHA (TALC 1996, McConnell & Hamilton 1999) indicates that broader Aboriginal values include Aboriginal initiated and/or managed landscapes, traditionally used plants, animals and minerals, old and new tracks or routes, other places with strong associations with earlier generations of Aboriginal people, and places with spiritual associations or high aesthetic value. The WHA Plan (1999, 101) defines potential Aboriginal values as "including, but not limited to burial grounds, caves, traditional animals, plants and minerals, fire, sites (landscapes), interpretation, native forests, and old and new tracks. Most of these values potentially exist in the Gordon River corridor.

2.3 Historical Heritage Review

2.3.1 Previous studies

There has been very limited previous non-Aboriginal historic research of the study area. It appears from a review of the literature and other heritage information that there has been no previous field studies conducted in the area for historic heritage. In 1981 however, Gee & Waterman completed a review of the archaeology and history of Southwest Tasmania as part of the South West Resources Survey (Gee & Waterman 1981). While their historical review is comprehensive and very informative, their archaeological information is restricted to Aboriginal Site data held in the DPIWE at the time and no historic site information is included. Almost no cultural heritage survey work had been carried out in inland Southwest Tasmania when the review was carried out.

There is however more work done at a regional level more recently, mainly for the lower Gordon. The Parks and Wildlife Service have carried out two overview studies for the southwest Tasmania part of the Tasmanian Wilderness World Heritage Area (TWWHA), which combined provide an overview of the history and heritage of the study region. These two studies are a historic sites inventory project with historical context for the Southwest National Park by Coroneos (1993) and an historical overview of the Franklin-Gordon Wild Rivers National Park, with discussion of known and potential sites in this area, by Waghorn (1994). Neither of these studies involved field site survey. McConnell (in press) also reviewed the history and produced a listing of known and potential sites for the Huon- Serpentine Impoundment area in 1995. This drew heavily on Coroneos' (1993) study.

Studies which have involved field survey and historic site identification are limited to the lower Gordon River and Macquarie Harbour, and have all been carried out by Cultural Heritage Branch staff of the DPIWE. The first work in the Lower Gordon was carried out in 1886 by Townrow (1990) who investigated the river banks (with short forays into the bush) from its mouth upriver to Lawn Creek (c.2km below the Olga River confluence). Bannear (1991) carried out a survey of the north shore and hinterland of Macquarie Harbour in 1989, but did not include the Gordon River, in part because of work already carried out by Townrow (1990) in this area. The only other reported historic heritage study on the Gordon River is a cultural assessment of the Sir John Falls camp (Noble 1993). A study of weed infestation in the TWWHA and peripheral areas (Ziegler 1990) has also contributed to the understanding of the historic heritage of the region.

Studies of the Sarah Island and Strahan historic heritage are not considered here as they are considered to lie outside the study region, and the history of the area is included in historical overviews in other studies (eg, in Bannear (1991) and Waghorn (1994)). Historic heritage field based studies which have

been carried out in the broader region are mainly related to mining on the periphery of the study region, and are also not considered relevant to this study.

Although there have been a small number of individual site studies, there has been no systematic study carried out to date of heritage related to the Hydro and hydro-electricity generation in Tasmania, other than for a small number of individual power generation facilities. *The Industrial Heritage of Power Generation* (Godden Mackay 1995), an Australia-wide study, focuses narrowly on power stations, and does not consider the related types of places such as the townships, dams, canals and developmental sites associated with power stations or electricity supply (distribution) infrastructure. In particular it does not consider dam and power station investigative study and construction related sites, which are the types that occur within the study area.

2.3.2 Historical Background

The following historical overview is taken largely from Waghorn (1994), Townrow (1990) and Coroneos (1993), with some information derived from Gee & Waterman (1981), Binks (1989), Bannear (1991), Scripps (1991), Kerr & McDermott (1999) and McConnell (in press). Waghorn (1994) provides a relatively detailed history for the middle and lower Gordon River, including a discussion of methods used in the various industries.

The history of the southwest of Tasmania is somewhat different to the Australian norm because of "its lack of "traditionally" exploitable resources in the form of suitable agricultural land, extensive stands of timber and economically viable mineral deposits" and because "the harshness of the environment and difficulty of the terrain coupled with the poverty of its soils and mineral reserves were, and still are, influential factors in the shaping of the history of the region" (Coroneos 1993, 7). These factors resulted in very little activity in this region. The ruggedness of country, its remoteness, and poor conditions for agriculture meant that European history in region is limited essentially to exploration and primary resource exploitation, primarily Huon pine extraction, hydro-electricity generation and recreation/tourism. A special aspect of the region's more recent history is the role that this area has played in natural environment conservation in Australia.

2.3.2.1 Initial exploration

By the 1820s, European settlement in Tasmania had spread out along the major river systems from the camps established at Sullivans Cove and Port Dalrymple in 1803 and 1804. Large areas of the colony remained unsettled, although occupational grazing licenses were held in the east and north west long before permanent settlements were established. The rugged terrain of the west and south west discouraged land exploration but as early as 1815 individuals interested in the economic potential of the area explored by boat.

Macquarie Harbour and the Gordon River were discovered and named by James Kelly on his exploratory voyage late in 1815. As a result of Kelly's exploration, in 1816 Thomas Birch applied for, and was granted, a one year licence, to exploit the Huon pine in the area. However in December 1815 Dennis McCarty navigated his whale boat up the Gordon River and returned to Hobart with the first load of Huon pine cut from along the banks of the river.

The first exploration of the inland areas of the region was by Sharland who reached the top of Sharlands Peak on Frenchmans Cap in 1832, travelling from the Central Plateau via the Derwent headwaters, the upper Franklin and the Loddon River. From Sharlands Peak he could see across to Macquarie Harbour, although he proceeded no further in that direction. In 1833 Darke, under Surveyor General Frankland's instruction, set off to investigate the upper headwaters of the Gordon River. He left from the Marlborough (Bronte) area and travelled down the Nive to Wylds Crag and the Vale of Rasselas and Teneriffe Marshes, but proceeded no further having achieved their goal. His party

included Goodwin who had escaped from the penal settlement in Macquarie Harbour and had travelled overland via the upper Gordon (Vale of Rasselas) in 1828, possibly travelling up the lower Gordon as far as Connellys Creek. It was not until 1835 that the source of the Gordon River was located by a party under Calder.

In 1835 Frankland launched a large scale, multi-pronged expedition into western Tasmania. As well as trips into the Central Highlands, Calder and Wedge were in the southwest in 1835 on their way from the Derwent to the upper Huon. On this trip they travelled from the Wylds Crag - Vale of Rasselas area down the Gordon River to Gordon Bend, past the Thumbs, west of Mt Wedge, the Sentinels and the Coronets to Lake Pedder, and from there returned to Hobart via the Huon. It is possible that an 1829 party who started up the Huon bound for Port Davey reached the Lake Pedder area, but it is not clear from the existing records how far inland they reached. In 1836 a bridle track up the Huon to the Arthur Plains was completed, and later this was completed through to Port Davey.

The impetus for exploration in the west and southwest of Tasmania largely ceased with Frankland's death in 1838, although from c.1847 Sprent spent considerable time in the region conducting Tasmania's first statewide trigonometrical survey for the Survey Department. This is evidenced by the well built rock cairns on many of Tasmania's peaks. There was also some interest in an overland route to Macquarie Harbour, and in 1840 Calder explored for a route from Derwent Bridge via Frenchmans Cap, across the lower Franklin and the approximate route of the Eagle Creek track and into the lower Gordon. He retraced the same route in 1842 with Sir John and Lady Jane Franklin. Binks (1989) comments that Alexander McKay continued to make trips onto western Tasmania in the late 1830s and 1840s, but that these were not documented.

2.3.2.2 Convict settlement

The remoteness of the area and the timber resources were major factors in the selection of Macquarie Harbour as the site of a convict settlement in 1821. The settlement was on Sarah Island, with a range of activities occurring in nearby areas of Macquarie Harbour. The logging of Huon pine took place in Macquarie Harbour and along the banks of the Gordon River, a convict gang being based at the limekilns, which were constructed in 1824 to make lime for the penal settlement. The gangs returned to camp from the logging sites each day which restricted the field of operations and their activities appear only to have extended to Butler Island, although there was some exploration beyond this, possibly as far as the Sprent River rapids. Access to the penal settlement was by sea only, and penetration of the inland areas was discouraged to minimise convict escapes overland. The remoteness of the area was also a factor in the closure of the Macquarie penal settlement in 1834, although a brief attempt by the government to establish logging by convicts, again based at Sarah Island, took place between 1846 and 1847.

2.3.2.3 Timber getting/pining

Pining however was to be a consistent resource utilisation activity in the region, although the level of activity fluctuated. The extent of this Huon pine resource is indicated in Kerr & McDermott (1999, map 5). Huon pine extended the length of the river up to about the Serpentine confluence, with significant areas of hinterland Huon pine downstream of the Sprent River, and with substantial stands also on the Lower Olga, Denison, Orange and Albert Rivers and the upper Smith River.

It was not until the 1850s that pining appears to have become established, with reports of large numbers of piners, mostly cutting illegally. Logging on the West Coast in the 1850s to 1870s was mainly in the Port Davey area, however it appears that there were two families living in Macquarie Harbour and pining. One was the Lloyd family, the other possibly the Dohertys who are known to have been one of the earliest families to have moved to Macquarie Harbour from Port Davey in the mid 1800s, or the Heather family.

In the 1870s the government was concerned by the rate of logging of the Huon pine in southwest Tasmania, mainly in the Gordon River and at Port Davey, and took measures to control the cutting in these areas. They reduced the level of cutting in 1879 and imposed a moratorium on pining from 1882 to 1888, although it appears that pining continued through this period. By the 1880s however the Huon pine resource was largely exhausted at Port Davey (and logging had extended up into the Davey River headwaters to Rookery Plain), and Macquarie Harbour and the Gordon River again became the focus of the pining. The focus of pining was on the lower Gordon, and at this period as well as for later pining on the Gordon River and tributaries, logging and camps were focussed on the river, with tracks cut inland to exploit good stands of pine. The logs were dragged to the river by horse, then rafted and floated downstream and across Macquarie Harbour. The timber was milled at Strahan after its establishment in 1881, and before that was transported by boat to Hobart for milling.

The late 1880s to the 1930s were the peak of Huon pine logging in the Gordon River, correlating with mining on the west coast and a boom period in the Huon pine market. Working methods also changed from about this time, and some new practices, such as the introduction of horses for pulling the logs, enabled the exploitation of areas further inland from the river. Wooden tramways were constructed into the hinterland in the lower Gordon, but were not considered worthwhile in extended upriver or up creek conditions (Neilsen in Townrow 1990). The family tradition of pining continued into the early twentieth century, with families such as the Dohertys, Abels, Finns, Tonks, Jones and Neilsens pining in Macquarie Harbour and in the Gordon River. Although wives and families were rarely part of the piners camps, Kerr & McDermott (1999, 20) note that in the early to mid 1900s wives and/or families were present at Ghost Creek Camp, at the Tourist Hut at Jones Landing, and at a camp below Marble Cliffs and one at Wallaby Eddy.

According to Townrow (1990) by the 1880s the piners were working as far up the Gordon River as Horseshoe Bend, and by 1896 pining activity had reached at least to Lawn Creek (Innes report of meeting piners). However Waghorn (1994) comments that logging had extended as far as the Serpentine River by 1885. Waghorn (1994) reports that piners had at least investigated to within two miles of the Tyenna Track by the late 1920s and Waghorn (1994) and Kerr & McDermott (1999) report upriver exploration in c.1928/29 which located Huon pine on the 'Denison River flat' three miles north of Abel Gorge. There is also evidence of pining at the Albert River mouth and in upstream reaches in c.1918 (Tracks map 45), and from 1931 to 1934 the Abels are known to have been logging between the Splits, with some other logging being carried out above the Splits (Kerr & McDermott 1999). It appears however that the main pining in the middle Gordon, at least in the area of the Denison River and Gordon River above the Denison was not carried out until the 1950s and 1960s.

Pining continued in spite of a post World War I slump, with the Stubbings and Morrisons becoming involved in pining at this time. By the 1940s pining extended up most tributaries of the Gordon River. During the early 1940s pining in the Gordon River increased substantially, with piners logging in most of the Gordon and major tributaries up to the Olga River, but with exploration up to and past the Gordon Splits. In the 1940s the Morrisons began logging in the Denison, above Marriotts Gorge. The horses were taken by boat to Goulds Landing then walked upriver as far as Lawn Creek, the farthest upriver horses were known to have been used (Kerr & McDermott 1999, 63). They were used in teams to drag logs to the river banks using iron log shoes. In the early-mid 1900s semi-permanent camps were established on the Gordon River at the mouth of tributaries, while the logging sites had temporary camps.

After World War II, there was a major decline in markets for Huon pine and the logging in the Gordon River area, indeed generally in Tasmania, declined to very low levels. Logging has remained at very low levels since, with most Huon pine being taken as salvage from the Gordon impoundment between c.1974 and the late 1980s, and more recently from the Teepookana Plateau. In the Gordon River the Abels and Morrisons continued to log Huon pine after World War II. In the 1950s and 1960s pining was occurring in the relatively remote upstream areas of the Gordon River in the upper part of the Gordon River below the Gordon Power Station, including in the Denison and Maxwell valleys. Gee & Waterman (1983) recount that Olegas Truchanas encountered intensive logging in the Denison River

above Marriotts Gorge in the 1960s. Bannear (1991) reports that some piners were even helicoptered into some areas at this time. The last pine, cut in the Denison, was floated out in 1966.

The timber getting in the Gordon River historically has been primarily Huon pine logging, although there was extensive timber getting in other areas of Macquarie Harbour and in the King River valley and along the Lyell Highway to provide timber for the mines in the Queenstown area from the late 1800s.

2.3.2.4 Mining & prospecting

Concurrent with the nineteenth century private commercial logging developments on the west coast, exploration and mineral prospecting had been increasing in the region. The discovery of gold in New South Wales and Victoria in the 1850s led to exploration in the north end of the study region between the Eldon Ranges and Macquarie Harbour by the government geologist, Charles Gould, in the early 1860s. On his third expedition in 1863 Gould travelled through the region and study area, essentially paralleling the course of the Gordon River (refer *Transport & communication*, below). However it was not until the discovery of tin at Mt Bischoff in 1871 that prospecting began in the region in earnest. The main prospecting in the region was in the King River area in the 1880s and 1890s. Government geological investigations were limited, although the Government assisted mineral exploration in the region by cutting tracks to improve access.

Very little mineral exploration and no mining ventures occurred in the Gordon area, with most activity being focussed on the Lyell, Zeehan, Heemskirk and Pieman mineral fields to the north, or in the extreme east of the region in the Jane River and Adamsfield areas. The lower Gordon was used to some extent, mostly as an access point to the main areas of interest to the east. The main mineral exploration in the vicinity of the study area was Twelvetrees' 1909 trip from the Tyenna River to the Gordon River about four miles above the Serpentine confluence (just to the east of the study area), presumably using the South Gordon Track. There were also a small number of mineral exploration tracks cut in the area (refer to the history of track cutting below).

2.3.2.5 Transport & communication

Because of the rugged terrain of this area, access to the west coast had generally been by other routes and their are no roads and few tracks. In general the tracks established by exploratory expeditions in the area run considerably to the north and south of the study area although running parallel to the Gordon River. The tracks were cut to facilitate movement in the region, primarily for mineral exploration, but also to access Huon pine logging areas and settlements and to improve communication between the west coast and Hobart.

The first track cut into the area was along the Huon to the Cracroft River in 1835, and extender to the Arthur Plains in 1836, and later further west to link up other tracks (from the Derwent/Tyenna) to connect to the west coast. In 1840-42 Calder cut the first track through to Macquarie Harbour. This track went from the Marlborough area on the Central Plateau, via the upper Franklin and the Loddon Plains to the lower Franklin and then into the Lower Gordon.

In c.1863 Gould's third expedition cut a major mineral exploration track along the length of the Gordon River from Goulds Landing in the lower Gordon River up to Gordon Bend to meet the convict constructed Dawsons Track (c.1850) to the Derwent near Hamilton. One of Gould's working parties, that under Ibsen, cut a track (Ibsens Track or the 'post track') from Goulds Landing on the Gordon River south over the King Billy Range, into the headwaters of the Wanderer River, just west of Frederick Hill and then east across the Olga River, Orange River, Albert River and Serpentine Rivers (some 5-10kms south of the Gordon River), across the upper Serpentine plains and through to McPartlans Pass where it picked up Calder's 1835 route. Ibsens track enabled travel from Goulds Landing through to Hamilton in less than a week, even in bad weather. The other working party under Burgess were engaged cutting a track up the west bank of the Franklin River.

Other exploration tracks that were cut along the Gordon River include Counsel's or Jones Track of c.1881. Jones cut the track from the lower Gordon, to the south of the Gordon River to the Cracroft, but when delayed was met on the Frankland Range by Counsel who travelled in via the Arthur Plains and the Serpentine Valley. In 1882 McPartlan, who had been in Jones party and had used Ibsens track in 1863, cut the South Gordon Track from Tyenna, but via the Weld River to McPartlans Pass, then along the Twelvetrees Range to the Gordon River just above its junction with the Serpentine. A 1849 map (Marsden 1898, Tracks 12) shows a plan to link a track from here through to the lower Gordon, however neither Webster in 1892 or Ewart who recut the track in 1909, cut through above the Wilmot and Hamilton Ranges, and it appears that this was never a through track (see also Hales 1918 map (Tracks 45)).

The 1890s and first decade of the 1900s appear to have been the period of most active track cutting in the region. In 1892 E. Webster cut a track along the north bank of the Gordon River from about 3km below the Franklin confluence to its termination opposite the Serpentine River. The track kept close to the Gordon River but deviated inland for some distance below the Smith River and from the Nicholls Range (near the Denison confluence?) upriver to its end. In 1896 G. Meredith cut a track along the north bank of the Gordon River, from the Franklin confluence to the Gordon River about 4kms above the Gordon River and Serpentine River confluence, but for most of the route he was forced to cut away from the river banks. He appears not to have used Websters Track. In 1909 Ewart recut Websters 1892 track starting at Goulds Landing, and its extension upriver to the Denison River. Both tracks are known as the Gordon River Track or Public Works Track. At this time Ewart also recut part of the track cut by Marriott in 1907-08 linking Websters track with the Gordon River at the Vale of Rasselas. Waghorn (1994) notes that the Gordon Track was marked by cut stakes and at least on the lower section had made bridges and culverts.

In 1896 E.G. Innes cut a track from the Florentine valley via McPartlans Pass to the lower Gordon on the south side of the Gordon River. Innes crossed the Serpentine and "followed the river to its junction with the Gordon, hoping to lead his track along the bank of the Gordon itself. He realised that this was utterly impossible as soon as he saw the great gorge below the site of the present Gordon Dam" (Binks 1989, 242), and instead took his track along the Frankland Range into the Olga River valley (naming the Olga River after his youngest child) and met up with Jones 1881 track which they followed to the Charles Range. Finding the country extremely difficult Innes headed downslope to the Gordon River at about Limestone Creek (just below the Olga confluence - possibly Moores Landing) and was taken downstream by a party of piners. Having decide that a track along the Gordon below the Denison was impracticable, Innes recut Ibsens 1863 then Jones 1881 track from Gould Landing back to rejoin his abandoned track.

In the southeast, the Port Davey Track was cut by Marsden in 1898 from the Tyenna River through the upper Huon and Serpentine and through to Port Davey. This was later widened and graded to pack horse standard. In 1900 on the western margin of the region T.B. Moore cut a new track from Birch Inlet on Macquarie Harbour to Port Davey which ran quite close to his 1879 route. (In 1879 T.B. Moore explored a route from Macquarie Harbour through to Port Davey while prospecting in this area. He undertook the trip alone except for his two dogs (after which the Spero and Wanderer Rivers are named), and without any backing. He travelled from Birch Inlet close to the D'Aguilar Range, then south to Moores Lookout, Table Top, Mt Jean and into the Giblin River, and along the Giblin Plains and Lower Hut Plains to Kelly Basin).

In the same year (1900) his brother, J.L.A. Moore, was commissioned to cut a track from the Linda Track to the lower Jane River to open the area through to the Gordon River for mineral exploration. Moore's track ran from the Upper Franklin into the Loddon Valley and via Calder Pass to the Surveyor Range and the Jane River, then downstream to Goodwins Creek (Eva Creek). In 1908 Thirkell re-cut and extended the track down Goodwins Creek and into the Smith River valley, and in 1909 while track cutting up the Gordon River towards the Denison River, Ewart cut in from the Gordon River to attempt to meet it, but failed to do so.

In 1907 and 1908 E.D.B. Innes, E.G. Innes son, also cut a track from the Linda Track, but this ran from near the Navarre River, via the eastern side of the King William Range, into the Denison valley to a pass north of Mt Humbolt in the Prince of Wales Range. This exploration track was cut as part of a survey for a route for the Great Western Railway from the Navarre River via the Denison River to Pyramid Island in the lower Gordon. The survey was not further completed and the railway was never constructed.

2.3.2.6 Hydro- electricity generation

Hydro-electricity generation was introduced early to Tasmania when the first hydro-electricity in Australia was produced for a woollen mill in Launceston in 1888. It was not until the 1910s that the Government became involved in hydro-electricity generation, mainly to encourage and supply industry. Because of the Tasmanian environment hydro-electric power generation had high potential in Tasmania, and a number of schemes have been developed, mainly in central and western Tasmania to supply power since the 1910s. The hydro-electric schemes were initially focussed on the Central Plateau, but later in southwest Tasmania.

Although there was some investigation of the potential of the 'Gordon River System with hydrological studies of the Franklin River and investigation of the Gordon Bend in the 1910s, and Robert Sticht extolled the virtues of the Gordon River for generating hydro-electric power in his 1928 expedition to locate the Gordon Splits, it was not really until after World War II that the development of hydro-electric power schemes began in western Tasmania (other than small scale schemes for mining, for example the Mt Lyell Mining Company Lake Margaret power scheme in 1914). The difficulty and cost of investigations and construction in the southwest made earlier developments unattractive and prohibitively expensive.

The first development in the region was the Gordon River Stage I Power Development, which was approved in 1967, although investigations had started in 1961 on the Gordon River (upriver of the study area). This scheme involved the flooding of part of the Gordon River above the study area to form the Gordon River impoundment, and damming of the Serpentine above its confluence with the Gordon River to form the Huon-Serpentine impoundment, with the water from both used to generate power at the Gordon Power Station at the Gordon Dam. This power scheme was fully operational in 1978.

A second power generation facility was also planned for the Gordon River, the Gordon River Stage II Power Development. This second stage was intended to provide additional economic return from waters already utilised by the Stage I development. In the early 1960s and 1970s a number of potential dam sites were investigated on the Gordon River upriver from Butlers Island. Over this period drilling occurred at Butlers Island, near the Franklin River confluence, above the Olga River confluence and near The Splits. Survey transects (chain sawn swathes) were cut at a number of locations on the Gordon , Hardwood, Olga and Franklin rivers (Christian & Sharp-Paul 1979, P. Davies (pers com)). This work was done by crews based at camps at several locations, mainly along the Gordon River. The Gordon River camps included the Knob at the damsite, the Albert Rapids Camp, the Splits Camp, the Denison (Nicholls) Camp, the Olga Camp and Sir John Falls Camp. The camps were of prefabricated and transportable materials and housed up to about 30 people, and were serviced by generators and gas. Because of their location the camps were accessed by water or by helicopter, and few tracks or other infrastructure was developed.

From the early 1970s there was public concern about the environmental impacts of the additional power generation developments on the Gordon River, and the Hydro-Electric Commission looked at alternatives which included various combinations of dams on the King River, the Franklin River, at the Albert rapids, and below the Serpentine confluence in the middle Gordon River, as well as the sites previously considered. In 1979 they presented two alternative development proposals, a *Separate* and an *Integrated* proposal to Parliament for consideration. Again the conservationist were concerned about the environmental impacts of the proposals and the matter was not resolved until 1983, when the

incoming Federal Labour government determined that no dams would be built in the Franklin - Gordon Wild Rivers National Park area, although the State government had given approval for the Gordon-below-Franklin option to go ahead in 1982. Instead, approval was given for the construction of the King River Power Scheme.

The lead up to the Federal Government decision involved a major campaign by environmentalist to sway public opinion and also to prevent the works that were going ahead in the lower Gordon. The latter involved a 'Blockade' which set up two camps, Regs Camp downstream from Abels Creek and one on the south bank of the Gordon River opposite Butlers Island. At this stage the HEC crews were stationed at Sir John Falls camp and work was proceeding at Warners Landing.

2.3.2.7 Conservation, recreation & tourism

Recreational interest followed closely on the mining exploration phase, and from early this century there has been bushwalking in the region, with the number steadily growing. The post World War I period saw a major increase in the interest of bushwalking in the southwest. In 1924 the Southwestern Expeditionary Club was founded to promote recreational interest in the region, and by 1939 the region was attracting out of state bushwalkers. The interest was such that in the 1950s and 1960s old tracks were being reopened, and new tracks cut. The 1960s were also a period of 'epic' walks in the region, including by Olegas Truchanas, who spent a great deal of time in southwestern Tasmania. In the Macquarie Harbour and lower Gordon area, recreational use has included hunting and camping, mainly by west coast residents. In the 1970s there was also an increased interest in the 'wild rivers' of the area for canoeing and rafting, with commercial rafting on the Franklin and lower Gordon River by the late 1970s. These recreational uses have led to the use of old tracks and huts. Since the 1970's new infrastructure has been established by the Parks and Wildlife Service to cater for the numbers of people recreating in the area. No infrastructure however has been developed in the lower Gordon above the Franklin confluence nor in the middle Gordon.

While there has been a tourism interest and presence in the region from the late 1800s/early 1900s, the inaccessibility has restricted tourism development in the area. Although access posed a problem, most of the more accessible areas such as Macquarie Harbour and along the King River to Queenstown, around Lake St Clair, and around the Mt Field area had regular tourism. Because of its accessibility by water, the Gordon River was also on the early tourist itinerary. By 1896 the pining family, the Grinings, were running regular trips up the Gordon River, and by 1908 tourists were visiting the Gordon River as far up river as 8 miles above Butler Island (approximately to Moores Landing). The opening of the West Coast Road in 1932, increased the levels of tourism in the Macquarie Harbour part of the region. More recent tourism has continued to focus on these areas, but has expanded to include the Lyell Highway corridor, and the Lake Pedder and Lake Gordon areas. Gordon River tourism has been recently restricted to some extent to downriver of Limekiln Reach due to the bank erosion effects of the cruise boats. Tourism today is essentially restricted to these areas as the wilderness values of the rest of the region mitigate against further tourist infrastructure development. Scenic flights by either plane or helicopter however do occur over the region.

As noted above, the HEC activities resulted in a significant period in Tasmanian conservation activism - the fight to prevent flooding of Lake Pedder in the late 1960s and early 1970s, and then in the late 1970s and early 1980s the campaign to 'Save the Franklin', which in essence resulted in the abandonment of the Gordon River Stage II Power Development. These campaigns are regarded as of major importance in the history of conservation in Australia. Tied to these campaigns has also been the conservation push to conserve the wilderness values of this region, which has resulted in the inscription of this area on the World Heritage list, not only for its wilderness values, but also for outstanding natural and cultural values. It should be noted that no specified cultural World Heritage values occur in the study area or on the Gordon River below the study area. Since 1982 the region has been part of the Tasmanian Wilderness World Heritage Area, and has been managed by the Parks and Wildlife Service.

2.3.3 Heritage information

2.3.3.1 Established heritage values

Known historical cultural heritage in the Gordon River corridor below the Gordon Power Station is focussed along the river and becomes increasingly dense down river. Forty sites have been identified in the Gordon Corridor between the Gordon Power Station and the river mouth (refer Table 2 and Figure 3), with an additional site c.3-4kms up the Sprent River from its confluence with the Gordon River (THPI 8012:20). All the identified sites are listed on THPI which records all known sites on land managed by the DPIWE. No known sites have been included in the Tasmanian Heritage Register (THR), but at this stage sites in southwest Tasmania have not been assessed for listing on the THR.

It is important to note that no previous survey has been carried out in the study area, and that sites above Lawn Creek are from literature sources and have not been inspected in the field, hence have not been assessed (including the accuracy of their location) and have not had their physical evidence documented. Known and recorded sites below Lawn Creek have all been inspected and recorded in the field except for some of the Hydro related sites and one pining site in the lower Gordon.

Only five sites are known from the study area. These are all Hydro Gordon River Power Development (Stages 1 & 2) related sites and are -

- HEC Knob campsite (THPI 8012:30)
- HEC Gordon River Road (THPI 8012:24)
- HEC Splits campsite (THPI 8012:25)
- HEC Nicholls Range (Denison) campsite (THPI 8012:26)
- HEC Gordon above Olga campsite (THPI 8012:27)

These sites have been listed on THPI as a result of the historic heritage review of the Franklin - Gordon Wild Rivers National Park (Waghorn 1994). It is unclear what criteria have been used in listing the sites, particularly when major construction features such as the Gordon Dam are not included. It is also likely that there is pining related evidence in the study area, but since no specific sites are mentioned in the literature and the area has not been surveyed, then it has not been possible to identify these.

Other known sites between the study area and the Franklin confluence relate to pining (mostly twentieth century). They are (moving progressively down river) -

- Lawn Creek Hut (pining) (THPI 8012:13)
- South Sprent Camp (pining) (THPI 8012:15)
- North Sprent Hut (pining) (THPI 8012:12)
- Sandstone Camp (pining) (THPI 8012:14)
- Grinings Landing (pining) (THPI 8012:9)
- Regs Depot (pining) (THPI 8012:16)

The remaining 30 sites are below the Franklin confluence and comprise a range of types. There are two sites which relate to convict period lime burning, 20 which relate to post-convict pining (mainly camps with tramways, but including one sawmill), one Forestry Commission related site (a house), one track cutting and exploration related camp/depot, four Gordon River Power Development related sites (assessment and construction), two sites which are related to the Franklin River 'Blockade' and regarded as 'conservationist' sites; and one tourist related site (hut)(note - some sites related to more than one past use). Some sites are single objects (1 - a log shoe) or bottle dumps (2), which are most probably related to pining. The bottle dumps are possibly, but less likely to be, related to nineteenth century exploration and track cutting. Townrow (1990) notes that these sites are all between 25m and

100m from the Gordon River, although the individual site information in Townrow (1990) suggests that a number of the sites extend to the river edge. The sites are listed in Table 2.

Above the Gordon Power Station the only site close to the Gordon River that has been identified is the South Gordon Track (THPI 8112:22), although the section of this track within the Gordon River corridor is now below the waters of the Lake Gordon. Other sites in the general region above the Gordon Power Station are primarily historic exploration and communication tracks (some used later by walkers) and associated huts and campsites, and Hydro related sites such as canals, camps, tips, quarries and the Strathgordon townsite (Coroneos 1993).

There are no listed World Heritage historic values within the Gordon River Corridor (refer discussion 3.4.2).

2.3.3.2 Potential heritage values

Although the Gordon River above the Franklin confluence has not been heavily visited or utilised in the past, the history of the region indicates that there has been a human presence from mid last century to present. This, combined with the lack of previous field survey for historical evidence in this area, suggests that there is a range of as yet unidentified historic heritage in this area. The highest potential for historical sites is considered to occur in the previously unsurveyed section of the Gordon River upstream of Lawn Creek, although given the dense vegetation and poor consequent visibility for sites along the Gordon River and its margins it is likely that there is more (but limited), as yet unidentified, historic evidence between Lawn Creek and the Gordon River mouth. A number of potential sites in this part of the corridor are identifiable from the detailed historical information in Waghorn (1994).

The historic record suggests that most historic activity was focussed on the banks of the Gordon River. On the basis of Townrow's (1990) findings, sites will be most likely to occur on well drained banks above flood level (but not too high and steep), with low swampy land behind and/or near tributary creeks). The exception will be some of the Huon pine logging areas and tramways, which were mainly located up tributary valleys along the tributary creeks, and the late nineteenth and early twentieth century tracks that were cut in the region, as only Websters Track is understood to have run along the Gordon River, although it is not clear from the available maps just how close to the river it actually ran. Other starting and ending points such as Moore's landing just below the Olga confluence are also likely to have some remnant historical evidence. The Tracks 45 map (1918) also indicates that one of the piners, C. Doherty had cut a track from the Albert River confluence up the Albert River some 4-5 kms then branching up into the hills to the east. It is likely that the most common sites however will be pining camps, tracks and cutting areas. Information in Kerr & McDermott (1999) indicates that there was a piner's hut at the confluence of Howards Creek (originally Foucha Creek) and that the Abels had a camp immediately below the First Split and about half a mile above the First Split, both on the north bank.

It is considered that later (mid-late 1900s) activities have not left much in the way of unidentified sites as these activities were generally well documented. What might be expected are the remains of bushwalkers' temporary campsites and camps and survey lines of Hydro survey and assessment teams. The campsites are unlikely to be visible except where rubbish has been left behind. Although not potential sites, the identified Hydro sites above Lawn Creek also warrant field investigation and assessment as to date they have not been studied.

Within the study area potential historic sites are therefore -

- scattered Huon pine stumps and downers along the river banks (mid 1800s to the 1960s);
- pining camps at intervals on the river banks, particularly at the confluence with tributary creeks and rivers (mid 1800s - mid 1900s) (huts were probably not erected this far up the Gordon River);
- a pining camp at the Albert River confluence and a track leading up the Albert River (Doherty's camp and track)(early 1900s);

- a 1931-34 pining camp (Abels) about half a mile above the First Split and between the two Splits on the north bank;
- a 1931-34 pining depot & camp (Abels) below the First Split on the north bank;
- a c.1930s piners hut on the south bank at the Howards Creek confluence;
- an 1896 piners camp visited by Innes when track cutting near the Gordon confluence with Limestone Creek - possibly Moores Landing; and reused or additional camps in the same area from piners between 1934 and 1940 (leases in area held by R.G. Smith and F. Grining);
- remains of Websters Track and possibly camps on the north bank of the Gordon River near the Denison confluence and the Albert confluence (1897) (the track is shown as running relatively close to the north bank of the Gordon River from the Franklin valley up river to approximately half way between the Franklin and Denison Rivers, and then again in the Albert River flats (Tracks map 9, 1897));
- remains of Ewarts (1909) track cutting between the Smith and Denison Rivers (north bank) (Ewarts recutting of Websters Track is shown as being close to the river only between the Smith and Denison Rivers (Tracks 45, 1918));
- bushwalker temporary campsites (1950s onwards);
- a Hydro (Gordon River Stage II) camp at the Albert Rapids;
- Hydro camp c.2km (1 mile) down river of the Sprent confluence (noted in 1958 by Truchanas and at that time including a hut and river gauging cage);
- Hydro survey lines and temporary campsites (1960s onwards) six of which cross or link to the Gordon River (refer Christian & Sharp-Paul 1979, fig 12).

Additional potential sites downriver of the study area are -

- a pining camp in the Platypus Creek area related to logging by E. Kowlie & R. Waddle of Strahan on a 100 acre lease opposite Platypus Creek in 1932/33;
- a pining camp c. 1km up river from Grinings Landing on east bank on a major bend in the Gordon River and opposite the end of the track from Goulds Landing (this site (bottles) was noted by a PWS group in 1983 (D. Ranson & B. Blain, pers comm));

The archaeological record suggests that most sites will be located within c.50m of the Gordon River, with most of these being on the actual river banks. On the basis of Townrow's (1990) findings, sites will be most likely to occur on well drained banks above flood level (but not too high and steep), with low swampy land behind and/or near tributary creeks).

Potential sites above the Gordon Power Station are not considered as they lie outside the study area and the broader area of special interest, ie, the Gordon River corridor below the Gordon Power Station.

3 SURVEY AND ASSESSMENT

3.1 Survey & Assessment Methodology

The following methodology was used in carrying out the field survey and assessment for the study.

3.1.1 Determination of survey area and transect locations

As discussed in Section 1.2 (*Study Area*) the selection of the study area was based on a combination of factors, including an assessment of the areas of the Gordon River that was likely to be potentially impacted by the Basslink development, the areas considered to have potential for cultural heritage, and gaps in previous heritage studies.

As no known sites occurred in the high erosion risk areas, the actual locations for on-ground survey (ie, transects) was determined to be those areas of high cultural heritage potential, with priority given to areas with highest erosion potential. With respect to Aboriginal cultural heritage, areas of high heritage potential were considered to be those sections of the Gordon River with relatively flat banks, particularly around the creeks and river confluences, areas with limestone geology with potential for karst development, areas lying on likely travel routes or other routes of movement, and any special features that might have special significance. The topography of the study area was assessed by detailed air photo interpretation by one of the authors (AM) in early December 1999. For historic heritage, areas of high heritage potential were those where past European activities were known to have occurred, particularly where structures were known to have been made (eg, camps, jetties, tracks, tramways).

Using the above criteria the areas selected for survey were -

- Gordon Power Station tailrace area
- Piguenit Rivulet
- Albert River flats (from the confluence downriver)
- Creek mouth between the First & Second Split
- Orange River confluence
- Denison River confluence
- Moores Landing - Howard Creek area
- HEC Investigation camps (Albert Rapids, Splits, Denison, Olga).

The areas surveyed are shown in Figure 4.

3.1.2 Survey Method

The field survey was carried out over 3.5 days with the half day being for historic heritage only. The field survey was carried out on foot. The survey was of the river margins and included all areas with some groundsurface visibility up to c.50m from the river edge. Groundsurface visibility was mainly in the bank sections, in the sediment in and underneath the roots of upturned trees, and in areas of animal activity (eg, around burrows, or diggings, along tracks). Where visibility and access were good and the terrain was considered to have higher than general potential for heritage, then the survey extended up to c.100m inland, although this was well beyond the zone of potential impact. The river banks which offered the best visibility in most survey areas were inspected where it was possible to walk or wade along the bottom of the banks. This resulted in approximately 50% bank section survey for the areas surveyed.

In general the procedure for surveying consisted of one person walking along the levee crest and/or flats above the river bank, then returning along the edge of the river in order to inspect the bank section, or vice versa. Some parts of the surveyed areas (Moore's Landing, Howard Creek, and the east half of the north bank below the Albert confluence) had a greater density of survey as they were surveyed by at least two people in both directions. The survey areas were accessed by helicopter, except for the Gordon River tailrace area which was accessed by car.

Given the helicopter access, the time constraints of the project and their distance from the river, the HEC camps were all inspected from the air only, as it was not possible to land the helicopters at the sites. This was considered an adequate level of assessment as these camps are all located well above the river, hence out of the zone of potential impact, and they were inspected primarily for comparative and contextual reasons.

A helicopter reconnaissance flight was also carried out from the Gordon Dam downriver to the Franklin confluence in order to assess broader cultural landscape values and to assess potential thoroughfares or corridors, as indicated by terrain or vegetation patterns, which may have been used in the past by Aboriginal people to access or pass through the Gordon River valley. The flight was also useful in terms of observing outcrops of limestone karst downstream from the Denison confluence. It was not considered necessary to overfly the section of river from the Franklin River to Macquarie Harbour as both A. McConnell & S. Stanton were already familiar with that section of river. The reconnaissance flight comprised a slow, low level flight above the river to enable the river to be inspected for altered vegetation, for rock outcrops, including limestone, or for other special features, and a high level flight back to assess the hinterland with respect to the terrain and vegetation, and for potential routes of movement.

The areas surveyed (ie, the transects), including the HEC camp helicopter inspections, are shown in Figure 4.

3.1.3 Reporting

Heritage features located were recorded in the field, as they were located. Field documentation included mapping the location, drawing sketch plans and written notes. Selected colour slides and colour prints were taken of representative sections of the river in areas surveyed, and of heritage features located by the survey.

The historic heritage features located and inspected by the survey have been recorded on Site Record Forms to a standard compatible with THPI. Site record forms for historic sites identified and inspected have been provided to the Cultural Heritage Branch, DPIWE. As no Aboriginal sites were located, no Site Record Forms have been completed for Aboriginal heritage.

Copies of the Aboriginal Heritage Officer's report have been provided to TALC and to the Aboriginal heritage Unit of the Cultural Heritage Branch of DPIWE, Hobart.

3.1.4 Consultation

Consultation in relation to the survey and assessment was limited to staff of the Cultural Heritage Branch of DPIWE as the PWS are the manager for this area, and to the Tasmanian Aboriginal Land Council with respect to Aboriginal cultural heritage. No formal consultation was carried out for assessing cultural significance, especially social significance, since this was considered beyond the scope of the study, particularly given the nature and amount of heritage located by the study.

There is a need to inform and consult with the Tasmanian Aboriginal community on all matters concerning Aboriginal cultural heritage. Consultation with the Aboriginal community has therefore been through TALC. At the completion of the field survey and prior to the writing of this report, a

meeting was held with the TALC in order to provide a mechanism for the inclusion of any Aboriginal community concerns regarding the project, or management recommendations for Aboriginal values. TALC has also reviewed the draft recommendations concerning the Aboriginal cultural heritage of the study area.

3.1.5 Assessment of Cultural Significance

Statements of significance contained in the report in relation to Aboriginal cultural heritage reflect current community views, which are that all Aboriginal sites are of significance, and that landscape values and other values, referred to as broader Aboriginal values, may attach to the land. The nature of the broader Aboriginal values considered in this study are outlined in studies such as Maynard & Smith (1996), Smith *et al* (1996), TALC (1996) and McConnell & Hamilton (1999).

With respect to historic heritage, assessment of cultural significance is based on the criteria in the *Burra Charter* (Australia ICOMOS 1988) and in the *Historic Cultural Heritage Act* 1995. These criteria reflect historical, scientific, social, technical or aesthetic values a place may have or, at a comparative level, their rarity or representativeness. Because the study area is within a World Heritage Area, assessment has also taken into account potential World Heritage values, including cultural landscape values, and integrity and authenticity as defined in the World Heritage Convention Operational Guidelines (UNESCO 1997).

3.2 Survey Area Description

The environment and visibility conditions for heritage of each of the survey areas is descried below. This has implications for the effectiveness of the survey and for assessing the potential for as yet unidentified cultural heritage.

In essence all the survey areas except for the Gordon tailrace area had very similar environments and visibility conditions. The river was broad with cobble bars and high, usually sandy banks in most areas. The river banks are primarily mixed forest but with dominant rainforest comprising typical species (eg, myrtle (*Nothofagus cunninghamii*), sassafras (*Atherosperma moschatum*) and celery top pine (*Phyllocladus aspleniifolius)*), and in places Huon pine (*Dacrydium franklinii*). The forest along the river generally has a very thick understorey comprising horizontal (*Andopetalum biglandulosum*), bauera (*Bauera rubioides*) and cutting grass (*Gahnia grandis*) and a range of ferns and other common rainforest species, but is more open in flatter, usually flooded or poorly drained, low lying areas. The forest floor generally has a thick carpet of leaf litter. At their confluence with the Gordon River, most rivers and creeks were narrow and choked sediment and fallen logs.

3.2.1 Gordon Power Station Tailrace Area

The is area is c.250 upriver of the Serpentine River confluence. The river valley in this area is a deep gorge. The valley floor is over 300m below the main land surface and is only c.50m wide, with close to vertical valley walls. The river bed and valley walls are rocky, and flat areas are limited to small discontinuous rocky ledges. The vegetation is sub-alpine scrub type.

This area has been extensively modified by construction due to the construction of the Gordon dam and power station. The tailrace tunnel and cutting are constructed and there is a benched area c.200-250m long along the south bank of the river which has also been excavated back into the hillslope. Within this area there appears to be no original surfaces left. This means there will be no Aboriginal heritage in the area. Visibility for historic heritage is good given that with the rocky substrate there has been relatively slow regeneration since the 1970s when the area was abandoned.

3.2.2 Piguenit Rivulet

The river here is wide with large cobble bars, but there are sections with deep pools. The banks are of moderate height, but lower at the Piguenit confluence. The levee banks are of moderate height and less clearly delineated than in the survey areas downriver. This partly due to the levee banks on the area of flat downstream of the confluence being 'en echelon', and possibly anastomosing. The river banks are mixed forest with some Huon pine along the banks, with generally very thick understorey comprising horizontal, bauera and cutting grass and a range of ferns and other common rainforest species.

Groundsurface visibility inland is extremely poor (<1%) except for the bank sections which have c.60% visibility.

3.2.3 Albert River Flats

This is an extensive area of relatively flat land, with the flatter land occurring on both sides of the river for c.2.5kms. The river is deep and wide but has a few gravel bars across the river just below the Albert River confluence, and has several cobble banks along the river on both sides. This area has lower banks than most other survey areas, with banks being between c.1m and 4m. The banks tend to be lowest near major creek confluences. There is a clear levee ridge along the bank of both sides of the river, with parallel inland levees (at least one). The levees on the south bank appear to be the higher and better defined. The vegetation is mixed forest with dominant rainforest and with patches of Huon Pine. The Huon pine is mostly restricted to the banks of the river and to lower areas behind the lower banks, but mostly on the ridges rather than in the swales. The understorey ranges from dense to relatively open, particularly in the swales.

In the upriver section on the north bank an area of carbonate rich bedrock was noted. Exposed rock had solution features and the north bank had a number of 'sink hole' type features in the sediment banks which were larger than the piping features noted in other survey areas, and generally in or behind the first levee.

The groundsurface visibility is poor (<1%) except in the banks where visibility is relatively good (c.30%). Access to the survey the banks was restricted by relatively high river levels.

3.2.4 Creek between First & Second Split

Although the catchment for the creek between the Splits is only a few square kilometres in area, the creek appears to be a permanent flowing creek, with a flow during survey similar to that in the Orange River. Upriver of the confluence there is a relatively flat and open lobe of sediment, and below the confluence there is a medium high bank with a medium size levee above. The vegetation is mixed forest with dominant rainforest and with a dense to moderately dense understorey, although this area has drier forest than most other survey areas. There are few large trees, with the largest trees being myrtle and blackwood, which suggest that the larger trees, including eucalypts, have been cut out and/or there has been some other historic disturbance of the area. There is relatively high density of mature Huon pines lining the bank downstream of the confluence, and Huon pines seedlings are prevalent in the sand banks above the river.

Visibility above the banks is very poor (<1%) except on the upriver side of the confluence where it is slightly better, but the ground in this area is most likely recent alluvium. The banks have moderately good (c.25-30%) visibility except in the most downriver 100m which had very poor visibility.

3.2.5 Orange River Confluence

The Gordon River is relatively broad in this area and has a distinctive wide, horizontal, rough, rocky (schistose) bed which has an incised channel in which water flow is contained when the water in the river is low. The bank is moderately high, with a surface peat and root layer (c.1m thick) and underlying sands. There is a levee on the bank but this is set back slightly (2-4m) from the bank edge resulting in a narrow bench occurring along the top of the bank. The levee is of moderate height and is steep with a narrow crest, and is heavily dissected by creeks and gullies. The vegetation is mixed forest, predominantly rainforest with a dense to moderately dense understorey (which is very dense on the inland side of the levee), and appears to be undisturbed. Few large trees were noted however, and the Huon pines which line the bank are also medium to small sized trees.

The visibility in the bank is relatively good (c.60-70%) all along the surveyed section, but elsewhere, including along the Orange River, is very poor (<1%).

3.2.6 Denison River Confluence

This area is similar to the Albert River flats area, with the Gordon River in this section being deep and wide, but with a few gravel bars across the river just above the Denison confluence. There are a number of cobble banks along the river on both sides, and with the higher and better defined levees on the south bank. The south river bank is very high (4m-6m), while on the northern bank upriver of the confluence it is lower (c.2-3m). The levees on the south bank (at least the first two) are also high (6-8m). On the south bank the levee is set slightly back from the edge, resulting in a semi-continuous bench above the river. The vegetation is mixed forest with a less dense understorey than in other survey areas, although there are patches of horizontal, cutting grass and thick fern. The understorey tends to be open with scattered fern and dense leaf litter on the south bank and moderately open shrubs and ferns and leaf litter on the north bank. The Denison River is narrower than the Gordon River and has a rocky bed. On the east bank there are levees which join to the Gordon River levees. The banks are primarily sandy and c.3m-5m high on the east side, and 10-15m high on the west side.

The groundsurface visibility is poor (<1%) except in the banks where visibility is moderate (c.40%). Access however is difficult except on the north bank of the Gordon River and east bank of the Denison River. Recent slumping of sediments on the east bank of the Denison just above the confluence provides very good visibility (c.90%) fresh bank sections which were inspected. This survey area also had a number of fallen trees (refer figure 4) which provide some groundsurface visibility above the banks in the sediment in the tree roots and in the exposed area underneath.

3.2.7 Howards Creek - Moores Landing

The south bank of the Gordon River is relatively high (c.3-6m) in this area, except in the area of the confluence with Howards Creek where the bank is low (c.1m) along the river edge. The levee height in this area tends to be moderate (c.3-4m). The river bed comprises pools and rocky shallows, and the few cobble bars along the river edge, including at the mouth of Howards Creek, are large. Howards Creek appears to have some flood plain development with the low banks extending back for up to c.50m, and on the east bank rising inland in a series of low terraces. The bedrock in this area is limestone and above Howards Creek on its west bank there are a number of areas of outcrop and sinkhole features. The vegetation is mixed forest with a less dense understorey than in other survey areas. The understorey tends to be scattered fern and dense leaf litter, but in the low lying area on the west side of Howards Creek it is marshy and the vegetation is implicate rainforest, with some patches of grass (possibly introduced), and on the low flats east of Howards Creek there is tea tree (and/or melaleuca) thicket.

The groundsurface visibility is poor (<1%) except in the higher bank sections where visibility is moderate (c.40%), although access is difficult.

3.3 Aboriginal Heritage

3.3.1 Survey Results

3.3.1.1 Aboriginal Sites

No Aboriginal cultural heritage resources (sites) were identified along the Gordon River margin between the Gordon Power Station and the Gordon River mouth by the study, including in areas which may potentially be affected by the Basslink development project.

3.3.1.2 Landscape Values/Resources

Aboriginal landscape values such as traditional plant and animal resources were identified in the study area, however, they are well represented throughout the south west and in many other parts of Tasmania. Plant types noted in the survey areas which have been used traditionally by Aboriginal people include native currants (*Coprosma quadrifida*), bracket fungi, cutting grass (*Gahnia spp*.), and tea tree (*Leptospermum spp*.) which were utilised for food and a variety of other purposes. Few animals were noted during the survey.

With respect to mineral resources, abundant quartz and quartzite, some of tool stone quality, occurred in the river gravels, and may have been an Aboriginal resource. No karst features were noted in the survey areas, although some of these areas have limestone bedrock. Some limestone cliffs were noted along the river edge downriver of the survey areas between the Olga and Franklin confluences during the helicopter reconnaissance, but none had conspicuous karst development. There are known limestone caves in the area of the Denison confluence (refer Review, Section 2), but these were not inspected as they are considered to be beyond the area of potential impact from the Basslink development, at least with respect to impact on the Aboriginal heritage values.

Other landscape values and associations considered were travel routes and foci in the study area. No definite historic Aboriginal routes of movement were defined, but the survey and reconnaissance suggest that probable historic preferred routes of movement were -

- the Olga River valley, possibly extending north along the Gordon valley to at least the Franklin confluence, and
- from the Maxwell and Denison valleys south to the Albert River flats and then south down the Albert River, possibly crossing into the Orange River.

Both these alignments provide long, broad, relatively flat corridors containing extensive tracts of relatively open heathy and moorland terrain, possibly more extensive in the past with regular Aboriginal burning. They provide relatively easy routes through terrain that is otherwise difficult for travel, and provide access to areas known or likely to have been foci of past Aboriginal occupation, eg , the Maxwell and Denison valleys, the Franklin Valley and the southwest coast via the Davey and Giblin Rivers - all known to have had past Aboriginal occupation, and to Rookery Plain and the Upper Giblin River moorlands, which are considered to have high potential for past Aboriginal use and occupation if places such as the King River valley and Lodden Plains can be considered parallels (Macfarlane & Coates 1990, Pocock 1992, McConnell & Hamilton 1999).

3.3.1.3 Cultural landscapes

As a landscape, the area is relatively intact. Given the minimal modification of the landscape in the last c.200 years, this landscape can be considered to be similar to the landscape experienced by Aboriginal people in the region 200 and more years ago, hence to a large extent an Aboriginal landscape.

Under the World Heritage criteria (Operational Guidelines 1997) the landscape would be considered an 'associative' cultural landscape in terms of its resource value and value to the community as a place used by the old people. As a landscape modified by past Aboriginal occupation it would be considered an 'organically evolved' cultural landscape. To what extent it is an organically evolved landscape is not established as the extent to which it has been modified by past Aboriginal occupation, and the changes which will have occurred through the absence of ongoing Aboriginal management, for example vegetation changes resulting from a lack of regular burning of the country, are unknown.

3.3.2 Assessment

3.3.2.1 Assessment of significance

All the Aboriginal values identified in the study area and in the broader Gordon River corridor are considered to be of significance by the Tasmanian Aboriginal community. The area is considered part of a "rich and dynamic cultural landscape demonstrating an equally dynamic history, that for over 35,000 years has been, and continues to be, an important place to Tasmanian Aborigines. The cultural values of the area are evident in more than just the physical cultural materials of the past, they include the rights and interests of the Aboriginal community today" (TWWHA management Plan 1999, 95).

Although Aboriginal landscape values such as traditional plant and animal resources were identified in the study area and are culturally significant as both past and ongoing resources, they are well represented throughout the southwest and in many other parts of Tasmania, and not considered to be especially significant in the areas that may potentially be affected by the Basslink development. Likewise the mineral resources, ie, quartz and quartzite of tool stone quality, are also common throughout Tasmania and therefore not considered to be especially significant in the areas to be potentially impacted by the Basslink development. The other landscape values and associations, ie, the probable travel routes, are also potentially significant large scale features, and minor additional erosion of the Gordon river banks is not considered to affect the significance of these probable routes of movement. As a landscape, the area is relatively intact, hence has value as a cultural landscape and has an integrity value.

The Aboriginal cultural values which are included as World Heritage values (DASETT & Government of Tasmania 1988, TWWHA Management Plan 1999) as part of the listing are the suite of Pleistocene sites, including the painted caves, and Holocene coastal sites. The relatively intact nature of the landscape, specifically in relation to the coastal sites, is considered to be an important attribute with respect to this suite of sites being considered to be of outstanding universal value. The listed values do not specifically include inland Holocene sites as few of these had been identified at the time of nomination, or the TWWHA as an Aboriginal cultural landscape.

The criterion under which the Aboriginal values have been included as World Heritage Values are criterion 24 a (iii), (v) and (vi) as follows (respectively) -

- the Pleistocene archaeological sites, including the painted caves collectively bear a unique and exceptional testimony to a civilisation (ie, an Ice Age society) which has disappeared;
- the Pleistocene archaeological sites and the Holocene coastal sites together constitute a suite of sites which are an outstanding example of a traditional human settlement which is representative of a culture which has become vulnerable under the impact of irreversible change; and

- the Pleistocene rock art is tangible evidence for common expressive responses which tell us something about human behaviour, hence is directly and tangibly associated with ideas or beliefs of outstanding universal significance

The integrity of both the sites and the landscape in which the suite of sites occurs is an additional recognised value.

3.3.2.2 Assessment of impacts - the legal and policy framework

In terms of assessing impacts on Aboriginal cultural heritage, the main legislation relating to Aboriginal cultural heritage values, the *Aboriginal Relics Act 1975*, sets out what legally constitutes unacceptable impacts. The *Aboriginal Relics Act 1975* is the primary Act which governs the treatment of Aboriginal cultural heritage (any place, site or object made or created by, or bearing the signs of the activities of, the original inhabitants of Australia or descendants of such inhabitants in or before 1876) in Tasmania. It is administered by the Tasmanian Parks and Wildlife Service. The main provisions are:

- all relics are protected under the Act and it is illegal to 'destroy, damage, deface, conceal, or otherwise interfere with a relic' without a permit,
- it is illegal to 'cause an excavation to be made or any other work to be carried out on Crown land for the purpose of searching for a relic' without a permit,
- it is illegal to 'sell or offer for sale a relic', or 'to cause or permit a relic to be taken out of Tasmania without a permit',
- persons who own or who have knowledge of a relic shall inform the Parks and Wildlife Service of this, and provide information about the location of the relic(s), and
- the ability to declare sites and objects as 'protected' sites or objects which are required to be managed by the Parks and Wildlife Service.

The main statutory regulations and policy that apply for Aboriginal heritage in the Gordon River corridor relate to the status of the area as a World Heritage Area and are set out in the *Tasmanian Wilderness World Heritage Area Management Plan 1999*. The key objectives for Aboriginal heritage under this plan are to manage the on-going protection and conservation of World Heritage and other cultural heritage values, and within the wider community and in partnership with the Aboriginal community to 'cultivate' the appropriate management and conservation of Aboriginal values. The stated policy framework is the Australia ICOMOS Burra Charter, the Conservation Plan (Kerr 1996) and the Richmond Communique (Australian Committee for IUCN 1995).

TALC act as the representative of the Aboriginal community, and has established various protocols and policies with state government agencies, local governments, private developers, and other parties. These mechanisms are aimed at ensuring that the Aboriginal community's cultural heritage interests are maintained and protected, and they also assist in ensuring that matters pertaining to Aboriginal heritage are dealt with in an expedient manner.

3.3.2.3 Assessed impacts from the Basslink development

No known Aboriginal sites are considered to be potentially affected as a result of changed flow regimes in the Gordon River from the proposed Basslink development, as there are no known sites along the margins of the Gordon River. The known Aboriginal sites closest to the Gordon River (TASI 487, 488, 494 and 1837) are well above the level of the Gordon River or are considered to be sufficiently distant from the Gordon River to be impacted (refer Table 1). Given the apparent paucity of low level sites along the margins of the River, it is also unlikely that Aboriginal sites have been lost through erosion from the present power generation regime.

Given the very poor visibility for sites, except in the river bank sections, and given that one open site is known on the banks of the Gordon River, then it is considered that there is potential for as yet

unidentified open sites to occur along that part of the Gordon River likely to be affected by potential effects of the Basslink development. The nature, location and density of potential heritage cannot be determined from the existing data, or from the pattern of Aboriginal use of the Gordon River area which remains unclear. Given the results of the survey and site patterning elsewhere in western Tasmania in similar environments (in particular in the King River valley), then the number of potential sites which will occur in areas that may be potentially affected by the Basslink development is considered very low.

The Aboriginal landscape values (various plants, animals and geological resources), which are regarded as traditional resources, and that occur along the Gordon River banks may potentially be impacted by bank erosion resulting from the proposed Basslink development. While these resources are of significance to Aboriginal people, these resources are abundant throughout the southwest and other parts of Tasmania, and hence the minimal potential impact from the Basslink development on these resources is not considered to constitute an impact to these Aboriginal values.

The other landscape values identified (ie, the travel routes, and evolved and associative cultural landscape values) are geographically broad values and not considered to be especially significant in the areas likely to be potentially affected by the Basslink development given the restricted extent of the potential impacts. The limited potential impact to these by the Basslink development is however not considered to affect the cultural landscape values.

The impact on the cultural landscape as part of the landscape value and World Heritage values of the area is difficult to assess. An important aspect of the World Heritage values is the integrity of the landscape. This integrity may be considered to be slightly compromised if there is additional bank erosion in the upper parts of the Gordon River below the Gordon Power Station as the result of Basslink power generation. However, given that there is ongoing bank erosion in this stretch of the river which is considered at least in part to result from power generation from the Gordon Power Station, which was an accepted land use in the TWWHA at nomination, and given that the likely additional erosional effects from the Basslink development are unlikely to be substantially greater than the erosion of the Gordon River banks from the existing regime, then potential landscape degradation as a result of the Basslink development is considered to result in a minimal negative effect on the cultural landscape values that attach to the region.

On the basis of the above assessment, the potential impact from the proposed Basslink development is not considered to negatively affect the recognised World Heritage Aboriginal cultural values of the Tasmanian Wilderness World Heritage Area.

3.4 Historical Heritage

3.4.1 Survey Results

The field survey resulted in the location of a number of Huon pining related heritage along the Gordon River - cut Huon Pine stumps, a camp, and two probable camps. The survey also inspected the four known HEC camps in the study area by helicopter and photographed these, and inspected the HEC features in the area of the Gordon Power Station tailrace. No evidence of tracks or tramways, early exploration related sites or 1960s Hydro transects which were also identified as potential sites in the study area (refer Section 2.3.3) was identified.

The results of the survey are discussed below by survey area, except for the HEC camps, which are discussed as a group at the end of the discussion. The location of all features identified is shown in Figure 4, and the sites are listed in Table 2.

Site record forms have been completed for all features identified within the study area, but not for individual Huon pine stumps or cut sections unless they occur as a cluster.

3.4.1.1 Gordon Power Station Tailrace Area

The tailrace is a tunnel which opens to a broad, deep vertical sided cutting c.50m long opening into the Gordon River. The tunnel entrance is coated with sprayed cement to prevent rock fall. Two modern (aluminium clad) huts have been constructed on the east side of the cutting, a flying fox runs from the huts to the opposite bank, and there is a scatter of iron posts and wire on the banks.

Approximately 100m upstream of the tailrace on the same bank and c.2-4m above the river bed are a line of concrete and rubble building foundations in a cutting between the road and the slopes. These occur over a length of c.100m along the bank, but set back c.50m from the bank. Three building foundations were noted, some with entrance steps, and some with bitumen or concrete aprons. A tunnel is cut into the hill, presumably to connect to the tailrace tunnel and this has a reinforced concrete entrance.

3.4.1.2 Piguenit Rivulet

There is no evidence of the non-Aboriginal use of this area. There is however a large amount of European rubbish which appears to washed in from the damsite. This survey area contained the greatest amount of rubbish which comprised wooden planking, black plastic tubing, plastic pipe, plastic sheet, rubber gloves, and a yellow raincoat.

3.4.1.3 Albert River Flats

Four sets of features relating to historic pining were noted in this area, all on the south bank. Two may be piners campsites with associated Huon pine cutting and the other two features are cutting areas only. The cutting evidence is in the form of cut stumps and/or downers between the bank and as far back as the second levee, and the campsites are areas that appear to be unusually open with respect to the understorey and with low trees and have evidence of tree cutting nearby. No artefactual objects however were located. One campsites is located just downriver of the Albert River confluence and the other is immediately upstream of the tributary creek confluence at the west end of the flats.

3.4.1.4 Creek between First & Second Split

No evidence of non-Aboriginal use was located in this survey area. There was however some washed in rubbish along the river edge in 3 locations which included black rubber and plastic hose/pipe, sawn timber planks and beams, a 44 gallon drum, and a c.5 gallon stainless steel drum.

3.4.1.5 Orange River Confluence

A Huon pine log dump was located c.200m downriver of the Orange River confluence (just past the second outflow creek). The dump comprises an irregular pile of Huon pine logs, mostly horizontal, balanced on the crest of the first levee. The logs are not large, with most being c.30-50cm diameter, some with pointed cut ends. The logs are moss covered. This is interpreted as an early-mid 1900s piners log dump. Some 70-80m upriver a cut stump with a pointed end was also located. A small area (c.2m x 3m) which appeared to have been cleared was also located on the bank bench c.50-75m downriver of the Orange River confluence. This may be natural or may be a modern campsite, probably a post-HEC or bushwalkers campsite.

3.4.1.6 Denison River Confluence

No historic features were located in this area. One small diameter cut tree stump with a pointed cut end was noted on the northeast corner of the confluence of the Denison and Gordon rivers and this is considered to be a marker tree, but of probable 1960s or later age and probably related to Hydro investigations. A recently installed Hydro gauging station is located on the south bank a short distance downriver of the confluence.

3.4.1.7 Howard Creek - Moores Landing

At the mouth of Howards Creek there is evidence of a 1930s piners camp. The area is relatively open with small trees and was probably cleared in the past. There are 3 cut stumps and downer sections, and a fallen marked tree on the east side of the creek at the confluence. There is also an area of grasses which may be introduced on the west side on the edge of the swampy area. If this is the case this may indicate the presence of horses and the location of a previous stable. Some evidence of Huon pine cutting was located further downriver above a high bank section on the crest of the first levee and in the swale behind.

3.4.1.8 HEC Investigation Camps

Within the study area four HEC camps, used to carry out investigations relating to the proposed damming of the Gordon River were set up in the 1960s and operated into the late 1970s. These were the Albert Rapids Camp between the Serpentine Confluence and Piguenit Rivulet on the north bank of the Gordon River, the Splits Camp just above the First Split on the south bank, the Denison (or Nicholls) Camp on the Denison River (west bank) c.1km upriver from the Gordon River confluence, and the Olga Camp situated on a ridge on the south bank of the Gordon river between the Smith River confluence and Ewarts Gorge. These four camps are all extant. They are located well above the rivers, hence well above flood level, and appear not to have been demolished or removed when use ceased.

The camps are of similar construction - timber framed, single storey, corrugated iron clad buildings which rest on piers and have skillion, corrugated iron roofs. The individual buildings are linked by verandahs, walkways and steps. The different camps have a different number and arrangement of buildings which essentially contained dormitory buildings, a kitchen/mess building, and ablutions blocks. All buildings at each camp are intact and in reasonable condition. There is little corrosion of the corrugated iron visible from the aerial inspection and the roofs, doors and windows appear to be intact. At the Splits Camp, one of the three buildings has slid off its piers and has rotated and slipped slightly downslope. The area around each camp has been cleared of vegetation, but only minimal land preparation appears to have been done (ie, limited benching or excavations), although with the exception of Olga Camp, they are all located on relatively steep slopes. Today there is significant vegetation regrowth around the camps obscuring ground features, but still allowing the original area of clearing to be easily seen.

3.4.2 Assessment

3.4.2.1 Assessment of significance

The historic heritage of the region, including the Gordon River, has been assessed as providing "an important material contribution to the historic heritage of Tasmania or are particularly significant to adjacent local communities" and some remains, including the convict ruins in Macquarie Harbour "contribute to the international heritage value of the WHA" (McGowan 1993, 72). The individual historic sites outside the study area has mostly been assessed by Townrow (1990) (refer also Table 2). As these sites are not considered to be impacted by changes due to Basslink power generation (refer discussion Section 1.2), they are not reassessed by this study.

The historic heritage within the study area, with the exception of one site interpreted as a possible recent campsite, relates to historic pining or to the 1960s-1970s HEC Gordon River damsite investigations. The sites however are small related but not key sites in relation to these histories, and to a large extent they are considered 'incidental' by people who have worked in these industries (indicated by the general lack of discussion by old timers, and the lack of knowledge of these features today). In spite of this they are the physical evidence of activities that were integral to these two industries, and have high integrity although only the HEC camps and cut stumps can be considered to be intact and in relatively good condition.

There is no existing framework for assessing power generation related sites of these types. However, given the above, the historical context of the sites and the current Tasmanian heritage context, the HEC related features are considered to have scientific, historical, social, and to a lesser extent technical and interpretive value as relatively well preserved examples of their type and period as part of the story of hydro-electric power generation in Tasmania. The HEC camps can be considered to be unique and hence both rare and representative examples. The level of significance is difficult to assess, particularly given the lack of relevant framework studies for hydro-electricity generation heritage in Tasmania. This study considers that since the sites are not key sites historically then they have low-medium state level significance.

The piners sites are also difficult to assess given the lack of overarching framework studies enabling reliable comparative analysis. Given the current knowledge of Huon pining in Tasmania and the known heritage and levels of interest in that heritage, particularly by west coasters (Townrow 1990, Bannear 1991, Waghorn 1994, Kerr & McDermott 1999, and pers obs), the probable campsites and cutting areas are considered to have historical and some interpretive and scientific significance at a regional level. Given the restriction of Huon pining to the west coast of Tasmania, but its importance to Tasmania generally, then the significance might be argued as being at the state level. The known camps, rather than probable camps, have slightly greater significance with respect to historical, scientific and social values. The log dump, which is a much rarer type feature is considered to be of slightly higher significance than the cutting areas with historical, technical, interpretive and possibly some social significance.

Significance assessments for individual features is given in Table 2.

None of the historic features identified are considered to have sufficient significance to warrant their listing on the Tasmanian Heritage Register, although there may be some argument for listing the log dump, the Howards Creek camp and at least one of the HEC campsites (probably the Olga Camp) on the Tasmanian Heritage Register as rare and representative examples of their type and period. No other identified historic features in the Gordon River corridor downstream of the Gordon Power Station are listed on the Tasmanian Heritage Register, although this is not necessarily a reflection of their lack of adequate significance.

No historic heritage in the Gordon River corridor, including in the study area, is considered to have World Heritage value as individual features or has been listed as World Heritage (DASETT & Government of Tasmania 1988, TWWHA Management Plan 1999). The convict sites in Macquarie Harbour and along the lower Gordon River however are considered "internationally significant as an example of colonisation of remote parts of the world in the 18th and 19th centuries by means of forced transportation of convicts across the world" (TWWHA Management Plan 1999, 24).

It might be argued that the pining heritage as a complex may be of World Heritage value under criterion 24 a (iii) & (vi) and 24 b (i) & (ii) (Operational Guidelines 1997) as part of an industry and traditional way of life that is no longer practised and that was of global importance (ie, in relationship to the convict involvement (refer Australian Government 1999, and TWWHA Management Plan 1999), and the use of Huon pine historically for ships that traded and whaled internationally and assisted in global migration). The suite of Huon pining sites in their setting could also be seen as comprising a cultural landscape of significance given its integrity, authenticity, and the paucity of

modifications to the region due to other non-Aboriginal historical uses (criterion 36, 39 (ii) & 40, Operational Guidelines 1997). While perhaps difficult to list as World Heritage in its own right, the location of the bulk of pining related sites within an existing World Heritage area might assist listing. Such an additional listing would more accurately reflecting the human history and cultural landscape attributes of the World Heritage Area, and should not be seen as adversely affecting the wilderness or natural values for which the World Heritage Area is primarily listed.

3.4.2.2 Assessment of impacts - the legal and policy framework

As none of the features in the Gordon River corridor are listed on the Register of the National Estate or the Tasmanian Heritage Register, neither the provisions of the *Australian Heritage Commission Act* 1975 or the Tasmanian *Historical Cultural Heritage Act* 1995 apply, although the Tasmanian Heritage Council could issue a stop work order if it was believed that the Basslink or other developments in the area would affect an historic place considered to have State level significance as defined under the *Historical Cultural Heritage Act* 1995.

The main statutory regulations and policy that apply for historical heritage in the Gordon river corridor relate to the status of the area as a World Heritage Area and are set out in the *Tasmanian Wilderness World Heritage Area Management Plan 1999*. The key objectives for the historic heritage under this plan are to manage the on-going protection and conservation of World Heritage and other cultural heritage values, and in partnership with the community to 'cultivate the value' of historical values through appropriate management, conservation and education. The stated policy framework is the Australia ICOMOS Burra Charter, the Conservation Plan (Kerr 1996) and the Richmond Communique (Australian Committee for IUCN 1995).

3.4.2.3 Assessed impacts from current operations

It is difficult to assess the impacts from current operations given the lack of baseline studies (ie, pre-power generation studies) of both the river bank and the cultural heritage.

Bank erosion studies in the Lower Gordon since the Gordon Power Station has been in operation have shown that the main source of erosion in this section of the river is boat wakes, and Townrow's (1990) pining heritage study, suggests that there is some degradation of sites along the lower Gordon River as a consequence of this boat wake generated erosion. She describes three sites (North Ghost Creek Hut, campsite THPI 8012:8, and Limekilns Guards Camp) as being eroded by the river, all of which are in the area of boat wake erosion.

Townrow (1990) does not discuss the cause of the bank erosion she documents, but does comment that sites within 4-5m from the river edge are at risk from ongoing bank erosion. Only three sites are eroding in spite of the proximity to the river bank of a number of the sites she recorded. This suggests that there is not a direct correlation between proximity to the river bank and risk of erosion, presumably due to a range of factors such as the nature of the and the form of the bank and the nature of the substrate.

It is pertinent to note that Townrow (1990) recommends that bank stabilisation is unnecessary in the area where sites are most at risk from bank erosion (Ghost Creek to the beginning of Limekiln Reach) given the limited significance of the sites at risk, and that no action has been taken to date, other than boat wake erosion control, to slow or prevent the erosion of any of the known sites.

The only investigation away from that part of the Gordon River that is affected by boat wakes and other mechanised use is the present Basslink study, and evidence of bank erosion in the Middle Gordon suggests that the operation of the Gordon Power Station has resulted in some bank erosion. No historic heritage however was located in these areas of erosion, and none is considered to have been completely destroyed by the erosion given the scale to date. There is therefore no evidence that the

current operations have resulted in historic site degradation, although it is possible that this may occur in the longer term under a regime similar to present if no action is taken to reduce bank erosion.

3.4.2.4 Assessed impacts from the Basslink development

Given the above, and that the likely predicted effects of the Basslink proposal will be restricted to limited bank erosion, primarily in areas of sandy banks above the Denison confluence, then it is unlikely that the historic cultural heritage, particularly significant heritage, identified within the study area or within the broader Gordon River corridor below the Gordon Power Station will be significantly affected by the proposed Basslink development. This however will be dependent on the lateral width of river bank erosion that will ultimately occur, with those closest to the bank being most at risk.

Within the sections of the Gordon River considered to have moderate-high erosion potential under Basslink, only seven identified historic sites occur within 50m of the River bank. Six sites only (Albert River Camp, Albert River Flats Cutting Area 1, Albert Flats West Camp (?), the Orange River West Log Dump and Howards Creek Camp) are considered to be at risk as the only part of the Gordon Power Station Tailrace historic area that will be subject to the potential impacts of Basslink proposal is the downstream edge of the tailrace itself which is extremely robust (being rock). All other features are above the tailrace. The Orange River campsite is modern, is considered to have low to no cultural significance, and has minimal physical evidence.

Although the extent of lateral erosion is difficult to determine, the extent under the current operation of the Gordon Power Station suggests that it is only those sites within 10-20m of the River bank that will be at risk from ongoing or accelerated erosion with the Basslink development. Only the Albert River Flats Cutting Area 1, Albert Flats West Camp (?), the Orange River West Log Dump and Howards Creek Camp are within 20m of the river bank. These sites, other than the log dump, are not considered to be highly significant.

The HEC camps, although set well away from the river, may have some related features below on the river bank, for example water pipe, temporary boat moorings and track ends, as well as rubbish, although no such features were noted from the aerial survey. Such features are considered to have minimal significance and are likely to have been substantially impacted already by river flooding and bank erosion caused by power generation at the Gordon dam since it was commissioned.

Although downstream of the area of likely impact (ie, below the Splits), a number (16) of the identified historic heritage sites are very close to the bank (within 5m), it is considered that likely increased bank erosion in these areas as a consequence of Basslink power generation is minimal, particularly given that below the Franklin confluence there has been erosion from boat wakes during the 1970s and 1980s.

Although there is considered to be no likely impacts to the historic heritage near to the river banks as a result of Basslink power generation alone, continued boat wake erosion, high level flooding from tributary rivers, and altered flows in the Gordon River with the ongoing general power generation are all potential erosional causes which may result in degradation of the sites in the long term. Given this, there is perceived to be need to monitor the erosion of the banks and condition of selected river edge sites as part of ongoing management. This would allow unacceptable degradation from sources that can be controlled to be mitigated.

The review (Section 2.3) indicates that there is potential for additional historical heritage, mainly pining and early exploration related, to occur along the Gordon River in areas not surveyed. There is considered to be a low likelihood of potential heritage being at risk from the likely impacts of the Basslink development as the results from this study suggest that while access to the river was critical for most historic activities in the region, the physical evidence of these activities is mainly 10m or more away from the river edges, and in the case of Huon pine cutting areas, tent camps and tramways, and early tracks, these are well away (50-100m to some kilometres) from the Gordon River and not

likely to be affected by low-moderate bank edge erosion. For future surveys, the results of this study suggest that Huon pine cutting areas and camps are commonly, but not exclusively, located on relatively low ground behind low banks with fronting cobble bars, which collectively provide easy access and egress, including a manageable log storage area by the river and a suitable boat landing and mooring. The cobble bars in the river are thought to be relatively stable (L. Koehnken, pers comm).

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Aboriginal Heritage

4.1.1 Conclusions

There is widespread recognition of the extremely high significance of Aboriginal cultural resources in the tributary valleys of the Gordon River. These places have been well documented by numerous expeditions to the area and are especially important and significant to the Aboriginal community. They are located primarily in limestone karst country and many of these special places have been identified in caves and rockshelters by previous studies. These and the Holocene coastal sites are of listed World Heritage value.

There are very limited amounts of limestone in the area between the Gordon Power Station and the Denison confluence, and no known karst outcrop on the margins of the Gordon River in the area predicted to be potentially impacted. While there are limestone outcrops along the Gordon River downstream of the Denison confluence, it appears that any cave or shelter formation is confined to areas well away from the River which are unlikely to be affected by the Basslink project.

In spite of considerable survey of high site potential margins of the Gordon River, including lengths of relatively freshly eroded bank, only four sites have been located in the study area to date, and the two on the Gordon River margins are both well above flood level.

There are, however, Aboriginal landscape values in the area in the form of various plants which are regarded as traditional resources, as well as native animal and stone tool resources. These resources however are abundant throughout the southwest and other parts of Tasmania, and hence are considered well represented elsewhere. It is worth noting that they exist along the margins of the river, and that they are of significance to Aboriginal people. They form an integral part of the Aboriginal landscape of the area which also includes other aspects such as the general aesthetics, the remoteness, and the relatively intact environment of the Gordon River.

It is difficult to assess the impacts from current operations given the lack of baseline studies (ie, pre-power generation studies) of both the river bank and the cultural heritage. However, given the apparent paucity of low level sites along the margins of the River, it is unlikely that Aboriginal sites have been lost through erosion from the present power generation operations.

In terms of the Basslink project there is negligible potential for any known Aboriginal sites to be affected as a result of changes to the flow regime of the Gordon River as there are no known sites along the margins of the River in areas of potential impact. No listed World Heritage Aboriginal values are considered to be potentially adversely affected by the proposed Basslink development.

Given that there is some potential for additional open sites to occur along the river margin in the areas likely to be impacted by the Basslink development (but which are not visible at present), and given the existence of broader Aboriginal landscape values in this area, in the unlikely event that substantial unsurveyed sections of the Gordon River margins or areas inland from the present surveyed margin are affected by erosion resulting from the Basslink project then it is the view of the Aboriginal community that these areas should be assessed in order to document any Aboriginal values which may be present and to assess the risks from ongoing erosion.

Although no Aboriginal sites were identified during this assessment, the extremely high significance of Aboriginal cultural resources in the region of the study area meant that the study was regarded as important by the Aboriginal community in terms of ensuring that any Aboriginal values were maintained and protected.

4.1.2 Advice and Recommendations

The following is the advice and recommendations arising from this study in relation to Aboriginal cultural heritage. They are based on the findings from this study, the existing requirements for Aboriginal cultural heritage protection and management, and the nature of the Basslink proposal.

There is no objection from an Aboriginal cultural heritage perspective to the proposed development of the Basslink project in relation to changed flow regimes from the Gordon Power Station. Accordingly, the project can proceed as planned provided the following recommendations (A 1, 2, 3 & 4) are adopted:

Recommendation A1
In the event that substantial unsurveyed sections of the river banks and/or adjacent areas along the Gordon River are affected by increased erosion resulting from the Basslink project, they be inspected to ensure that any Aboriginal sites or cultural landscape values are identified. The Tasmanian Aboriginal Land Council should be contacted for advice in relation to the need and process to be adopted for further assessment in such an event. All survey for Aboriginal sites must be carried out by appropriately qualified personnel and in consultation with the Tasmanian Aboriginal Land Council.

Recommendation A2
That in relation to recommendation A1, ongoing monitoring of the banks of the Gordon River be carried out to enable assessment of the effects of the Basslink development on the river banks and to identify any future substantial erosion along the Gordon River banks.

Recommendation A3
That in the unlikely event that any Aboriginal sites are located in areas of disturbance resulting from the Basslink development, then the Tasmanian Aboriginal Land Council and the Department Primary Industry, Water & Environment be informed in order to enable further assessment of the situation as provided for under Section 14 (1) of the *Aboriginal Relics Act 1975*. Section 14 (1) of the *Aboriginal Relics Act 1975* states that -
Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director -
(a) destroy, damage, deface, conceal, or otherwise interfere with a relic.

Recommendation A4
That the effects of the Basslink development on the Aboriginal cultural heritage be reassessed if flow heights will be significantly higher than the present predicted heights (ie, above the present high water level).

4.2 Historic Cultural Heritage

4.2.1 Conclusions

Forty nine historical sites have been identified along the banks of the Gordon River below the Gordon Power Station, with 10 of these sites being located through the present study. These sites relate primarily to historic resource utilisation in the area - nineteenth and twentieth century Huon pining and mid twentieth century hydro-electricity generation - and to a lesser extent to early exploration and track cutting for communication between Macquarie Harbour and the Derwent and Huon valleys, and tourism.

It is difficult to assess the impacts from current operations given the lack of baseline studies (ie, pre-power generation studies) of both the river bank and the cultural heritage. There is no evidence however that the current operations have resulted in historic site degradation, although it is possible

that this may occur in the longer term under a regime similar to present if no action is taken to reduce bank erosion.

Only nine known sites occur within the area considered to be potentially impacted by the Basslink development. Only two sites occur close to the river edge and are considered to be potentially at risk from the proposed development. One of these is assessed as modern and of minimal cultural heritage significance and the other is a probable pining tent camp site which is has minimal physical evidence. The assessed potential for the altered flow regimes from the proposed Basslink development to affect these two features is not considered substantially greater than that of the current regime. Some monitoring of the ongoing erosion along the river and of the condition of known sites along the river edge, particularly in the main area likely to be affected by the development (ie, from the Gordon Power Station tailrace to the Denison confluence) however is warranted to check this evaluation, as well as to monitor the condition of the sites.

Given that there has not been a full systematic survey along the river, and given the poor visibility for historical sites on the river banks, then on the basis of the history of the area there is considered to be some potential for additional historic heritage to occur along the river downstream of the Gordon Power Station, but these are likely to be relatively low impact sections of the river or sufficiently away from the river edge to be outside the likely area of impact of the proposed Basslink development.

No acknowledged World Heritage historic heritage values occur in the Gordon River corridor, hence no historic cultural World Heritage values will be impacted. This study considers that the Huon pining related sites as a suite may have some World Heritage values. This is not considered to have implications for the Basslink proposal as only minimal impacts to the known pining sites and the landscape in which they occur are likely. It is however an additional reason to monitor bank erosion and the condition of historical sites along the Gordon River.

4.2.2 Advice and Recommendations

The following is the advice and recommendations arising from this study in relation to the historical cultural heritage of the area. They are based on the findings from this study, the existing requirements for historical cultural heritage protection and management, and the nature of the Basslink proposal.

With respect to the Gordon Power Station downstream area, there is no identified or potential historic cultural heritage on the Gordon River downstream of the Power Station assessed as being at risk specifically by the proposed development (the assessed potential for the altered flow regimes to affect the small number of identified historic heritage features in the 'high risk' areas is not considered substantially greater than that of the current regime).

This study therefore considered that there is no impediment to the Basslink development proceeding as planned with respect to historical heritage provided the following recommendations (H1 & 2) are adopted:

Recommendation H1
That ongoing monitoring of the banks of the Gordon River be carried out to enable assessment of the effects of the Basslink development (and/or current operations) on the river banks in order to identify any future substantial erosion along the Gordon River banks, and consequent actual and potential degradation of the historical cultural heritage, in particular the historic pining sites.

Recommendation H2
That the effects of the Basslink development on the historic cultural heritage be reassessed if flow heights will be significantly higher than the present predicted heights (ie, above the present high water level).

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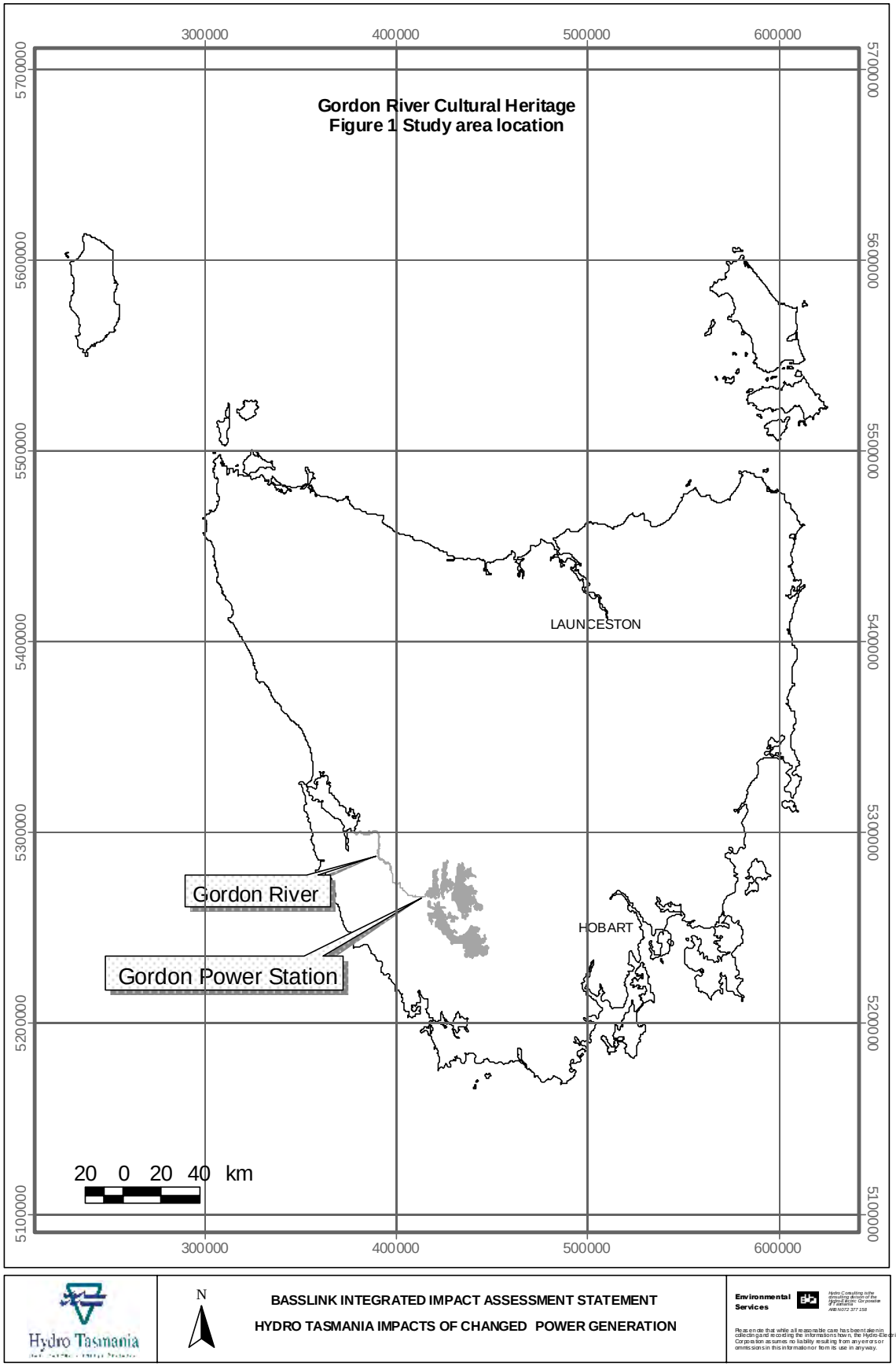


Figure 1. Study area location

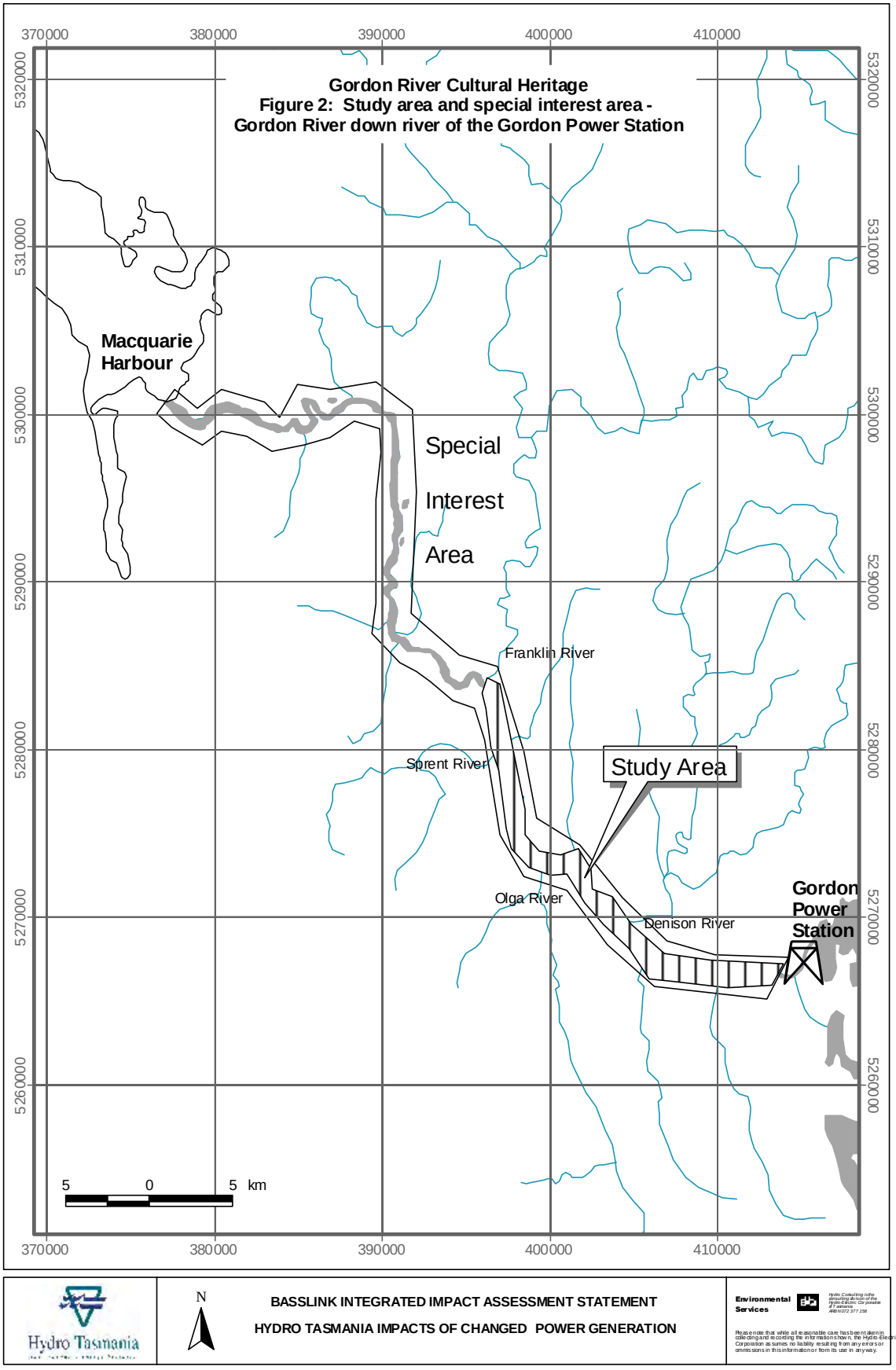


Figure 2. Gordon River below Gordon Power Station - study area and special interest area.

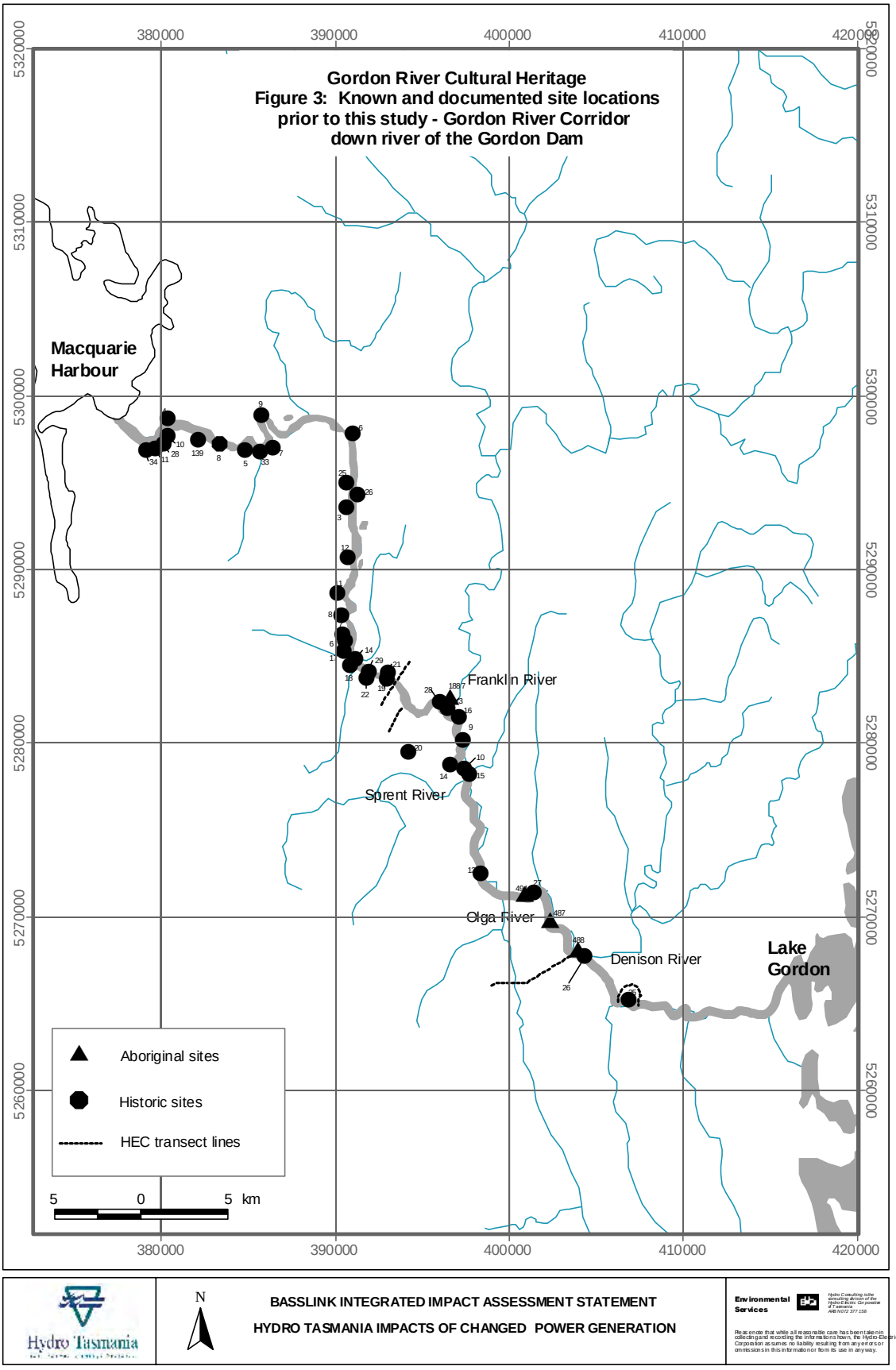


Figure 3. Site locations – Gordon River corridor downstream of the Gordon Power Station.

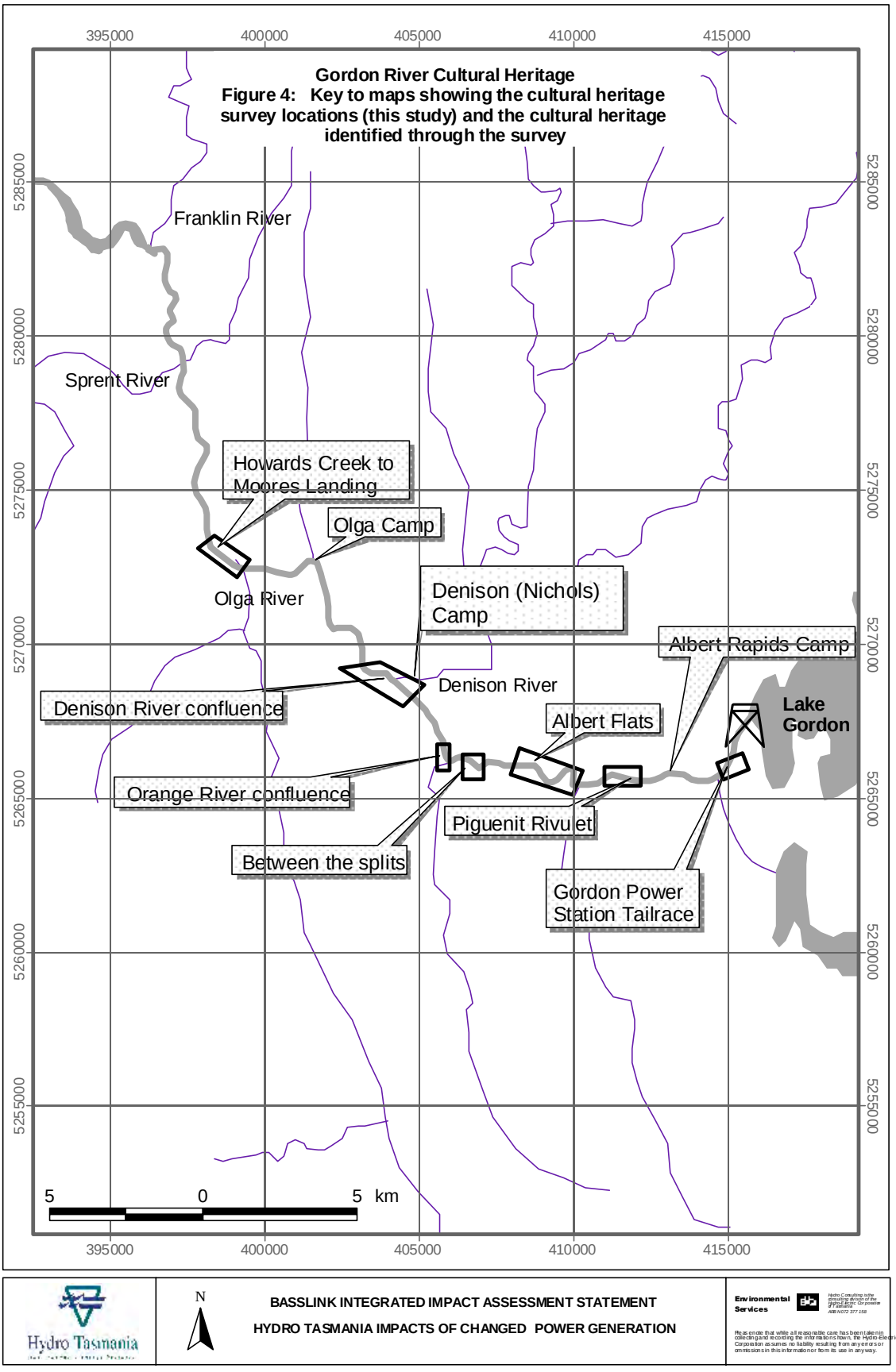
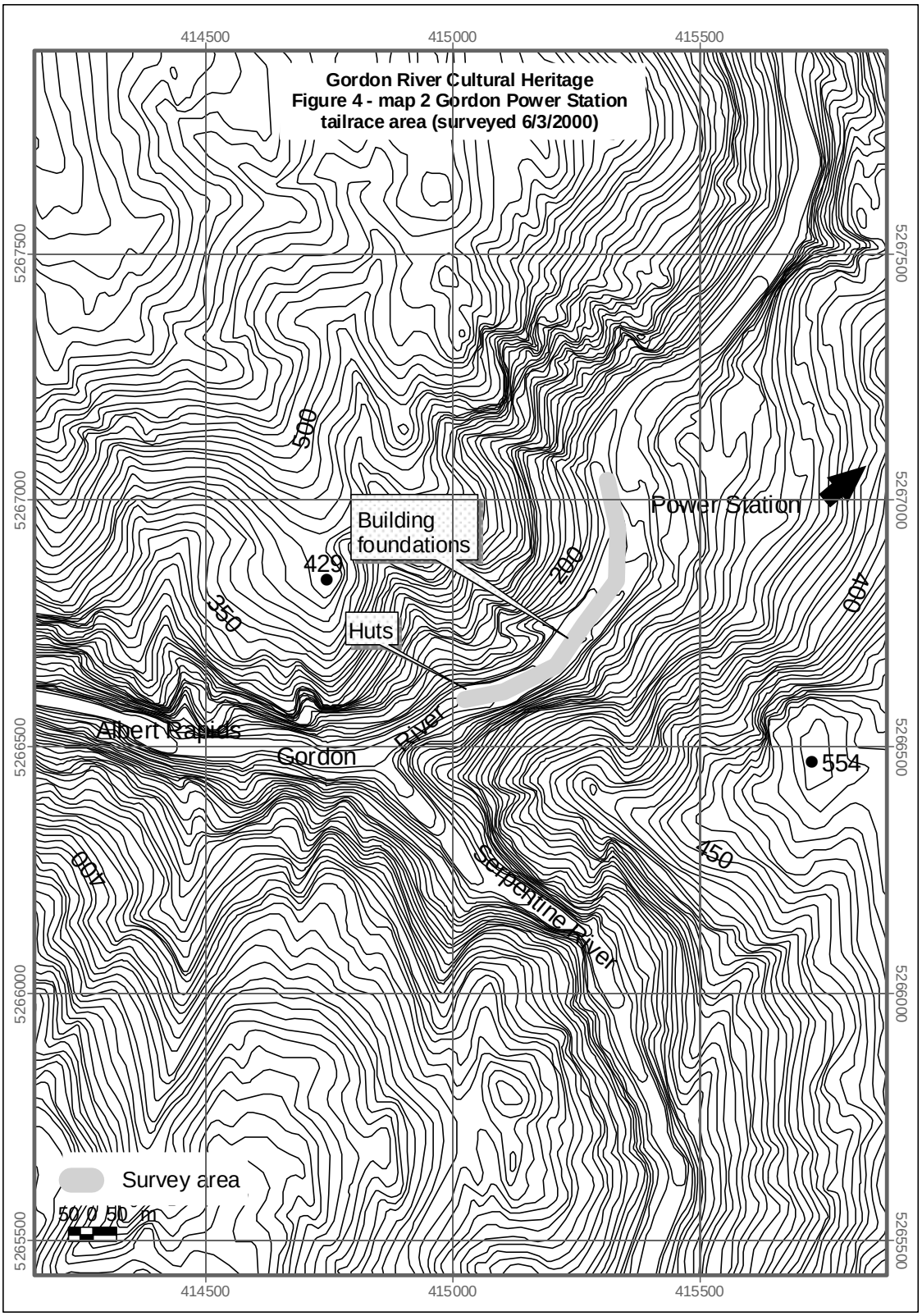
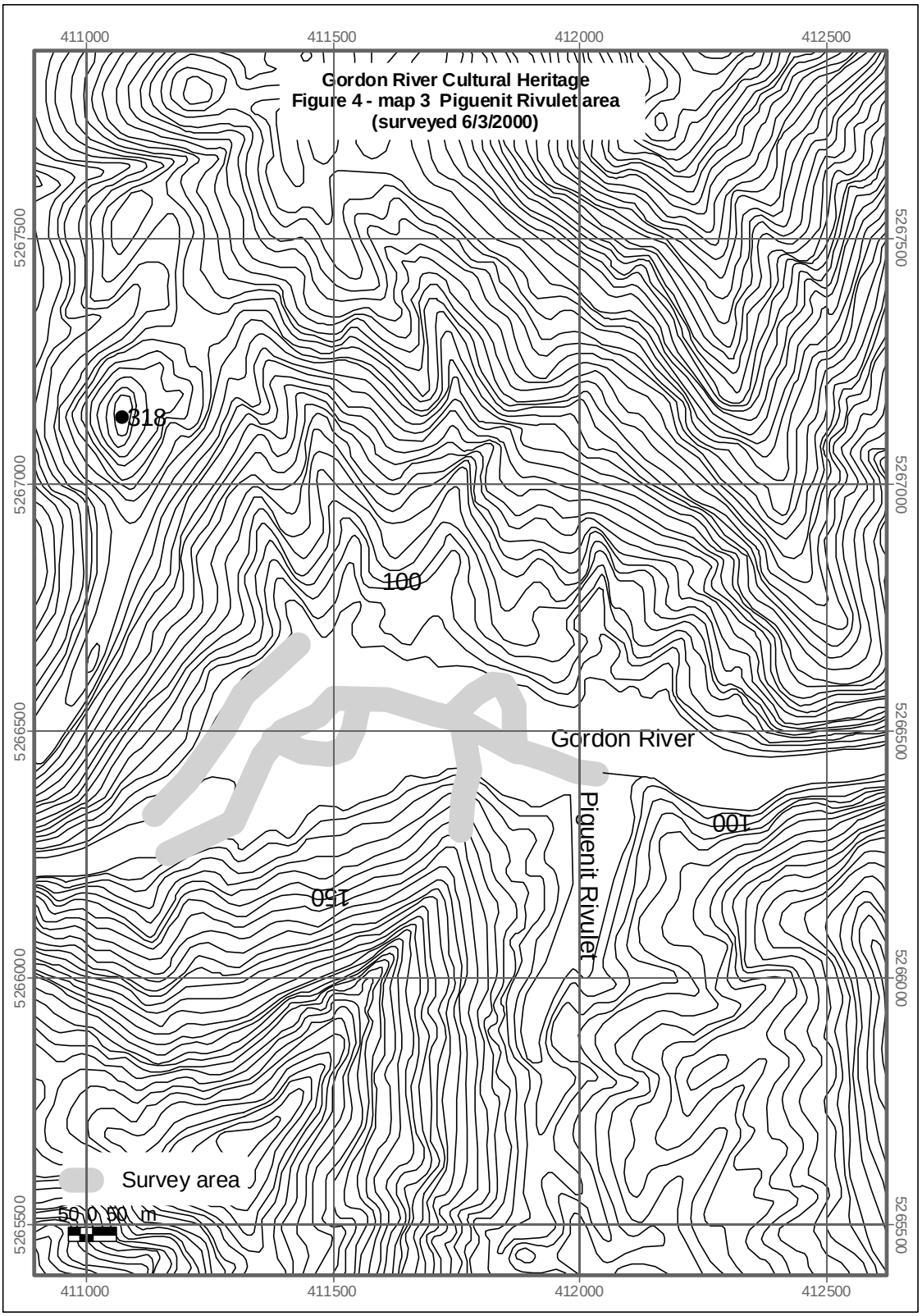
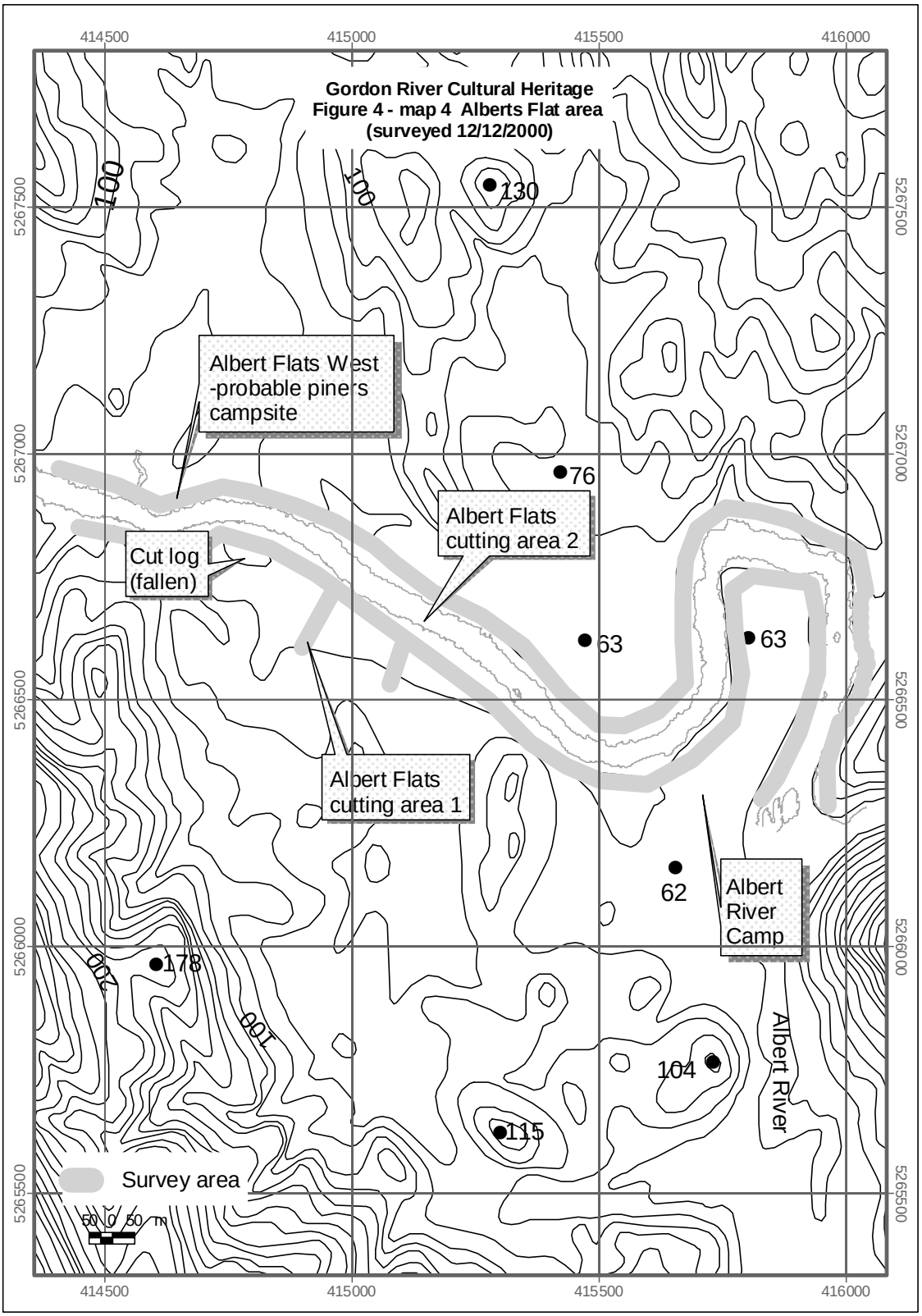
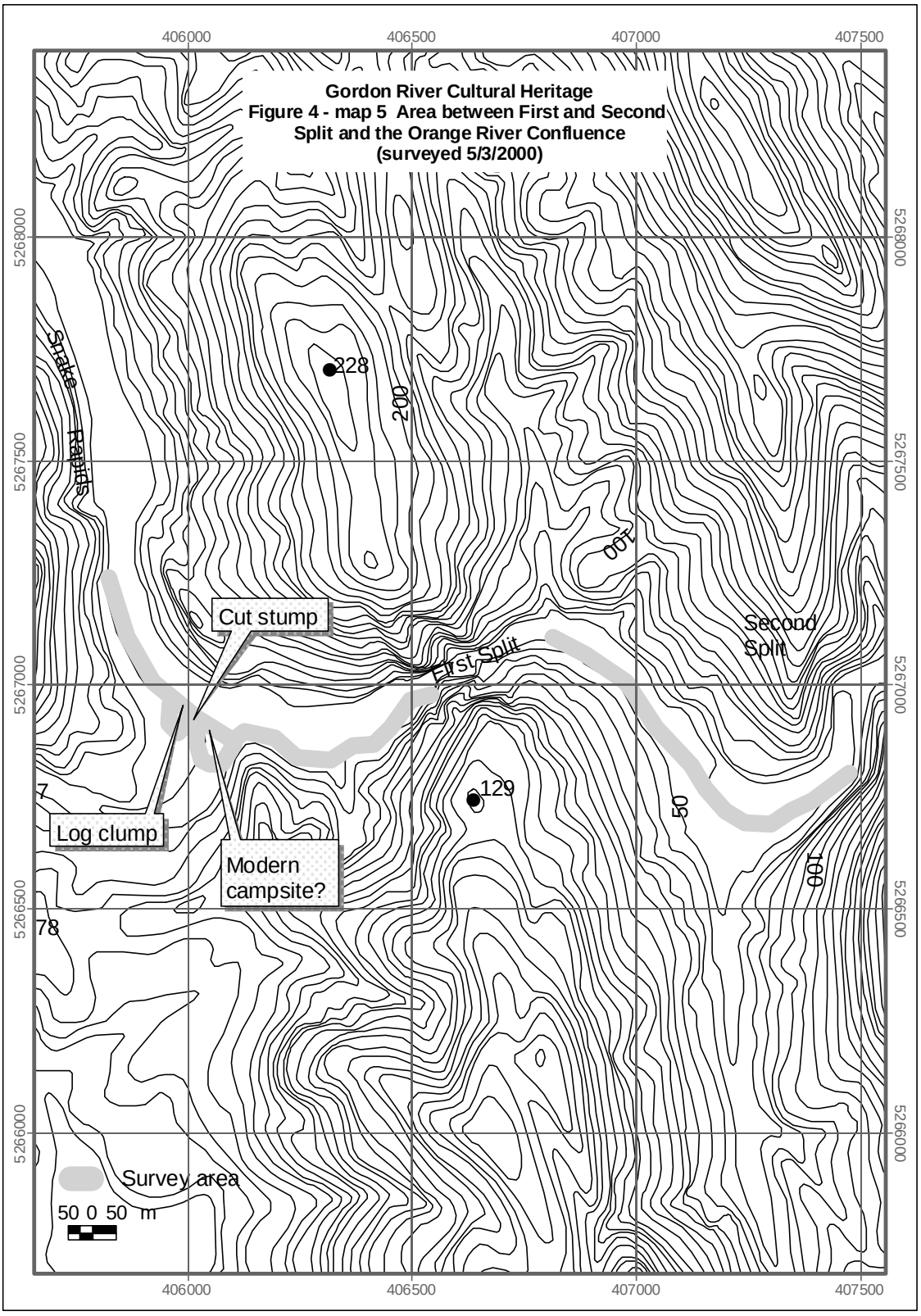


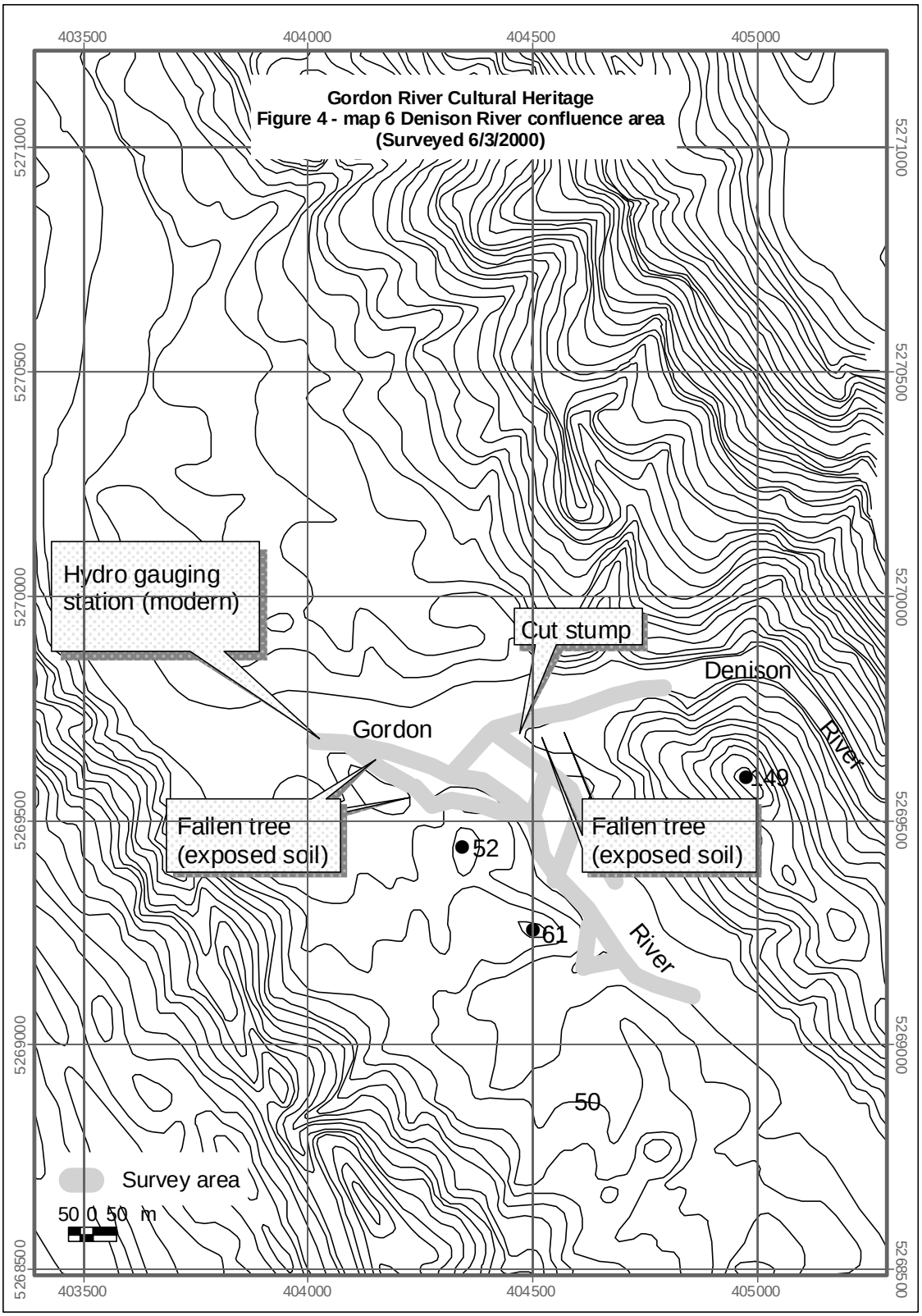
Figure 4. Key to maps showing cultural heritage survey locations (this study) and cultural heritage identified through the survey.


Gordon River Cultural Heritage
Figure 4 - map 2 Gordon Power Station
tailrace area (surveyed 6/3/2000)
414500
415000
415500
5267500
5267000
5266500
5266000
5265500
500
Building
foundations
429
Power Station
200
400
350
Huts
Albert Rapids
Gordon
River
554
450
400
Serpentine River
Survey area
50 0 50 m
N
BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT
HYDRO TASMANIA IMPACTS OF CHANGED POWER GENERATION
Hydro Tasmania
Environmental Services
Please note that while all reasonable care has been taken in collecting and recording the information shown, the Hydro Electric Corporation assumes no liability resulting from any errors or omissions in this information or from its use in any way.


Gordon River Cultural Heritage
Figure 4 - map 3 Piguenit Rivulet area
(surveyed 6/3/2000)
411000
411500
412000
412500
5267500
5267000
5266500
5266000
5265500
318
100
Gordon River
Piguenit Rivulet
001
150
Survey area
500 0 500 m
N
BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT
HYDRO TASMANIA IMPACTS OF CHANGED POWER GENERATION
Hydro Tasmania
Environmental Services


Gordon River Cultural Heritage
Figure 4 - map 4 Alberts Flat area
(surveyed 12/12/2000)
414500
415000
415500
416000
5267500
5267000
5266500
5266000
5265500
100
130
Albert Flats West
-probable piners
campsite
76
Albert Flats
cutting area 2
Cut log
(fallen)
63
63
Albert Flats
cutting area 1
62
Albert
River
Camp
178
104
Albert River
115
Survey area
50 0 50 m
N
BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT
HYDRO TASMANIA IMPACTS OF CHANGED POWER GENERATION
Hydro Tasmania
Environmental Services


Gordon River Cultural Heritage
Figure 4 - map 5 Area between First and Second Split and the Orange River Confluence
(surveyed 5/3/2000)
406000
406500
407000
407500
5268000
5267500
5267000
5266500
5266000
Snake Rapids
228
200
100
Cut stump
First Split
Second Split
129
50
100
7
Log clump
Modern campsite?
78
Survey area
50 0 50 m
N
BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT
HYDRO TASMANIA IMPACTS OF CHANGED POWER GENERATION
Hydro Tasmania
Environmental Services


Gordon River Cultural Heritage
Figure 4 - map 6 Denison River confluence area
(Surveyed 6/3/2000)
403500
404000
404500
405000
5271000
5270500
5270000
5269500
5269000
5268500
Hydro gauging station (modern)
Cut stump
Denison
River
Gordon
Fallen tree (exposed soil)
Fallen tree (exposed soil)
49
52
61
River
50
Survey area
50 0 50 m
N
BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT
HYDRO TASMANIA IMPACTS OF CHANGED POWER GENERATION
Hydro Tasmania
Environmental Services

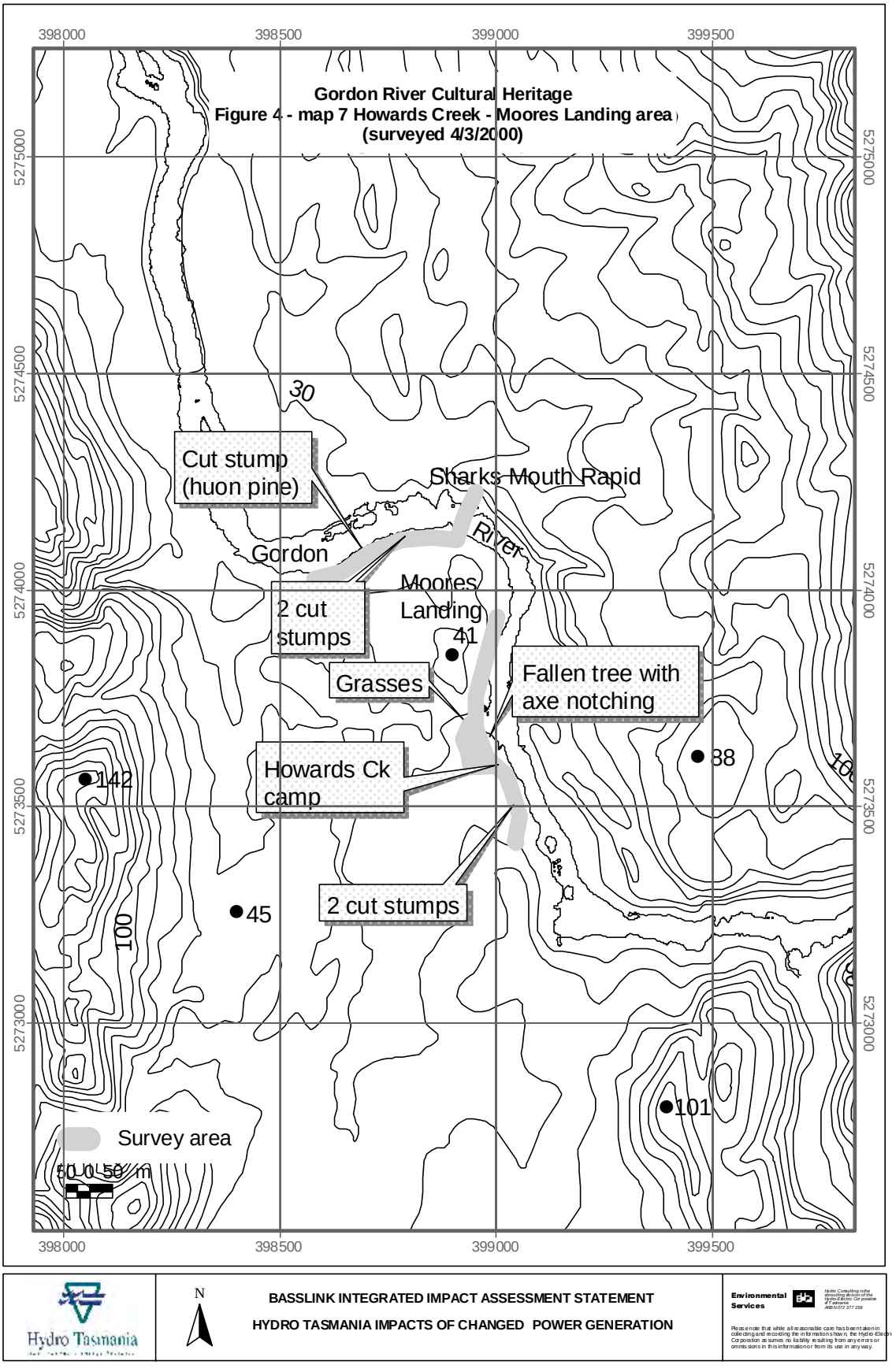

Gordon River Cultural Heritage
Figure 4 - map 7 Howards Creek - Moores Landing area
(surveyed 4/3/2000)
398000
398500
399000
399500
5275000
5274500
5274000
5273500
5273000
30
Cut stump
(huon pine)
Sharks Mouth Rapid
River
Gordon
2 cut
stumps
Moores
Landing
41
Grasses
Fallen tree with
axe notching
Howards Ck
camp
142
88
45
2 cut stumps
100
101
Survey area
50 0 50 m
N
BASSLINK INTEGRATED IMPACT ASSESSMENT STATEMENT
HYDRO TASMANIA IMPACTS OF CHANGED POWER GENERATION
Hydro Tasmania
Environmental Services

Table 1. List of Identified Aboriginal cultural heritage sites in the Gordon River corridor below the Gordon Power Station (listed in downstream order)

Site/feature name & number	General geographic location	Distance from bank of Gordon River	Brief description/history	Cultural significance	References/listings
TASI 488	Denison River bank (north) upstream from confluence with the Gordon River	c.150m	Small stone artefact scatter in roots of a large fallen tree. Artefacts consist of a core and several flakes. These artefacts were collected by the party which recorded the site (Harris *et al* 1981b)	High Aboriginal significance	• Site record • Harris *et al* 1981 a & b • McGowan *et al* (1993)..
TASI 487	Gordon River - north (east) bank, c.1/2 way between the Denison & Smith Rivers	>200m	Potential cave (although a wet site and in a doline). Some flaked stone located in a 1981 excavation (test pit), 1m below the surface, but is considered unlikely to be Aboriginal artefacts (Ranson, pers comm).	Aboriginal significance	• Site record • Harris *et al* 1981 a&b • Jones *et al* (1982) • Ranson, D. (DPIWE), pers comm.
TASI 494	Gordon River (south bank) at downstream end of Ewart Gorge, above the Olga River	<100m (high level)	Potential rockshelter - no evidence of occupation	Aboriginal significance	• Site record
TASI 1837	Franklin River (on shingle bank in river) upstream from confluence with the Gordon River	c.900m	Isolated artefact	High Aboriginal significance	• Site record • Blain *et al* 1983

Table 2. List of identified historic cultural heritage sites in the Gordon River corridor below the Gordon Power Station (listed in downstream order).

Site/feature name & number	General geographic location	Distance from bank of Gordon River	Brief description/history	Cultural significance	References/listings
HEC Knob Campsite [THPI 8012:30]	Gordon River - south bank at Gordon Dam site	river and general area	HEC Gordon River Stage I Power Scheme camp established in 1963/4, and used to the completion of the dam, to operate as a base for investigation and construction associated with the Gordon Dam & power station. Facilities included quarries, crushing plant, a trans-Gordon aerial cableway, twin haulage ways, and 4 tower cranes. Buildings and equipment were later moved to other Stage II camps, mainly the Olga Camp.	not assessed	• Site record • Waghorn (1994)
Gordon River Road [THPI 8012:24]	Gordon River - south bank - by river c.200m up river of Serpentine confluence.	edge - inland	Haulage ways and access for adits constructed to carry out geological assessment for the Gordon River Stage I Power Development, c.1965-67. The same level tunnel entrance to the Gordon Power Station, also a Stage 1 Power Development feature, is located about half way down the road.	not assessed	• Site record • Waghorn (1994) • this study (McConnell, Stanton & Scripps 2000)
Gordon Power Station Tailrace and associated features	Gordon River - south bank - c.250m upriver from the Serpentine River confluence GR: ^{4}151/^{52}666	0m +	The tailrace is a tunnel which opens to a broad, deep, vertical sided cutting c.50m long opening onto the Gordon River. The tunnel entrance is coated with sprayed cement to prevent rock fall. Two modern (aluminium clad) huts have been constructed on the east side of the cutting, a flying fox runs from the huts to the opposite bank, and there is a scatter of iron posts and wire on the banks. Approximately 100m upstream of the tailrace on the same bank and c.2-4m above the river bed are a line of concrete and bitumen surfaced rubble building foundations in an cutting between the road and the slopes. These occur over a length of c.100m along the bank, but set back c.50m from the bank. Three building foundations were noted, some with entrance steps, and some with bitumen or concrete aprons. A tunnel is cut into the hill, presumably to connect to the tailrace tunnel, and this has a reinforced concrete entrance.	Some scientific, technical, historical and social significance at the State level as part of the HEC historic infrastructure.	• this study (McConnell, Stanton & Scripps 2000)
HEC Albert Rapids Camp [THPI 8012:31]	Gordon River - north bank (high level) - in Albert Rapids section (exact locn not established) GR: between ^{4}130-140/^{52}667	>50m	Two rectangular timber framed, corrugated iron clad buildings conjoined and one above the other on the steep slopes in this section of river - c.25m above the river. The buildings have red painted, corrugated iron, skillion roofs and timber framed windows (small) on the south (river) side. There is no well defined cleared area around this camp.	Some scientific, historical and social significance at the State level as part of the HEC historic infrastructure & for its integrity.	• Peter Davies (pers comm) • this study (McConnell, Stanton & Scripps 2000)
Albert River Camp ? [THPI 8012:32]	Gordon River - just below the Albert River confluence on the southwest bank GR: ^{4}102/^{52}662	>20m	A small cleared area was located on the first levee bank (which is low in this area) with 2 cut Huon pine stumps and one section of downer and a sawn plank associated, and another downer section slightly further downstream. This is interpreted as a piners campsite. Possibly early 1900s if associated with Doherty's track and cutting. Likely to be the farthest upriver pining camp.	Some historical & possibly social significance at a regional level in relation to the history of pining on the west coast.	• this study (McConnell, Stanton & Scripps 2000)
Albert River Flats Cutting Area 1 [THPI 8012:33]	Gordon River - south bank downriver of big bend below the Albert confluence GR: ^{4}093/^{52}667	10m +	Five cut Huon pine stumps and associated downer sections in an area c.30m x 30m on the river bank levee. The levee in this area is low with a low river bank and with a cobble bar in front of the bank.	Some (low) historical significance at a regional level in relation to the history of pining on the west coast.	• this study (McConnell, Stanton & Scripps 2000)
Albert River Flats Cutting Area 2 [THPI 8012:34]	Gordon River - south bank downriver of big bend below the Albert confluence GR: ^{4}092/^{52}667	>c.80m	Two cut Huon pine stumps and 3 downer sections in an area c.20m x 30m. Located on the second levee back from the river, in an area where the levees are low and the river bank is also low and has a cobble bar in front.	Some (low) historical significance at a regional level in relation to the history of pining on the west coast.	• this study (McConnell, Stanton & Scripps 2000)

Albert Flats West Camp ? [THPI 8012:35]	Gordon River - south bank - immediately upriver of the westernmost tributary creek on the flats. GR: ^{4}090/^{52}668	>10m	Probable piners tent camp. An area of relatively open understorey c.10m back from the river bank and 50m upriver of the tributary mouth. There is no clear evidence of human use, but the vegetation is suggestive of relatively recent human modification and there is at least one cut fallen tree trunk (c.100m inland) along the tributary. The river bank in this area is low with a river fronting cobble bar and there is no levee bank.	Some historical and social significance at a regional level in relation to the history of pining on the west coast.	• this study (McConnell, Stanton & Scripps 2000)
HEC Splits Campsite [THPI 8012:25]	Gordon River - south bank upriver of First Split GR: ^{4}068/^{52}671	>50m	Camp for HEC crews carrying out investigations for the Gordon River Stage II power scheme. The camp consisted of at least 4 structures and 2 cylindrical water tanks. Established c.1968. At present the camp consists of 3 rectangular timber framed, corrugated iron clad buildings set close together. Two are in situ but 1 has collapsed off its piers and sits at an angle slightly downslope of its original location. The camp is situated on a relatively steep slope c.20m above the river. The buildings have red painted (or rusted), corrugated iron, skillion roofs and timber framed windows (small). The immediate area around the buildings has been cleared but is now dense tree ferns and other shrubs.	Some scientific, historical and social significance at a State level as part of the HEC historic infrastructure & for its integrity.	• Site record • Waghorn (1994) • Peter Davies (pers comm) • this study (McConnell, Stanton & Scripps 2000)
Orange River Campsite (modern)	Gordon River - south bank - c.50-75m downriver of the Orange River confluence GR: ^{4}061/^{52}669	c.4m - 6m	A small area (c.2m x 3m) which appeared to have been cleared located on the terrace-like feature c.50-75m downriver of the Orange River confluence. Possibly a mid-late 1900s campsite - possibly a HEC or bushwalkers campsite.	not assessed - insufficient information, however the significance is likely to be low.	• this study (McConnell, Stanton & Scripps 2000)
Orange River West Log Dump [THPI 8012:36]	Gordon River - south bank - c.150m downriver of the Orange River confluence (just past the 2nd outflow creek) GR: ^{4}060/^{52}670	c.15m	A Huon pine log dump interpreted as an early-mid 1900s piners log dump. The dump comprises an irregular pile of Huon pine logs, mostly horizontal, balanced on the crest of the first levee. The logs are not large, with most being c.30-50cm diameter, and they are moss covered. Some have pointed cut ends. Some 70-80m upriver a cut stump with a pointed end was also located.	Some historical & possibly social significance at a regional level in relation to the history of pining on the west coast.	• this study (McConnell, Stanton & Scripps 2000)
HEC Nicholls Range (Denison) Camp [THPI 8012:26]	Denison River (north bank) in first bend, c.1km upstream from the Gordon River confluence GR: ^{4}053/^{52}696	>75m	Camp for HEC crews carrying out investigations for the Gordon River Stage II power scheme. There is little documented information for this site, but it is known to have had sewerage and drainage. Established late 1960s? At present the camp consists of 2 rectangular timber framed, corrugated iron clad buildings set close together. The buildings have red painted (or rusted), corrugated iron, skillion roofs, narrow open corrugated iron roofed entrance porches, and timber framed windows (small). The camp is situated on a moderately sloping bench c.25m above the river. A c.30m x 40m area around the buildings (approx area of bench) has been cleared but is now dense tree ferns and other shrubs, with some trees now established beside the buildings.	Some scientific, historical and social significance at a State level as part of the HEC historic infrastructure & for its integrity.	• Site record • Waghorn (1994) • this study (McConnell, Stanton & Scripps 2000)
HEC Olga Camp [THPI 8012:27]	Gordon River - south bank - on ridge in bend approx opposite the Smith River confluence GR: ^{4}018/^{52}733	>150m	Camp for HEC crews investigating the limestone terrain and Gordon above Olga damsite as part of the Gordon River Stage II power scheme. Comprised a cableway from the camp to damsite (est 1966); a suspension bridge (est 1971 & extant in 1978); initially a tent camp (1965); and a main camp 100m along the ridge which comprised 2 huts and 2 helipads (1965 - c.1974) and related infrastructure, including water tanks and a rubbish pit. It was regarded as a 'high standard' camp, with capacity for 22 people. At present the camp consists of 6 rectangular timber framed, corrugated iron clad buildings set close together, with the 3 largest buildings (mess & sleeping quarters?) being conjoined. The buildings have red painted (or rusted), corrugated iron, skillion roofs, narrow open corrugated iron roofed joining/entrance porches, and timber framed windows (small) and timber doors. The buildings appear to be at ground level. The camp is situated on a 50-100m wide ridge c.50m above the river. A c.50m x 60m roughly square area around the buildings (approx area of ridge) has been cleared but is now dense tree ferns and other shrubs. A corrugated iron water tank is visible in the cleared area and one end of the aerial cableway is still visible at the west end of the clearing. The cableway (which runs west), including attachment points (metal framed tripod type towers bolted to rock) appears to be intact. Buildings are intact except for 1 smaller building (gear store?) which has one panel of roofing iron missing. The suspension bridge was not evident from the aerial inspection.	Some scientific, historical and social significance at a State level as part of the HEC historic infrastructure & for its integrity. Considered to have highest significance of the HEC camps on the Gordon as the largest and most complex, and given its high integrity.	• Site record • Waghorn (1994) • Peter Davies (pers comm) • this study (McConnell, Stanton & Scripps 2000)

Site/feature name & number	General geographic location	Distance from bank of Gordon River	Brief description/history	Cultural significance	References/listings
Howards Creek (Foucha Creek) Camp [THPI 8012:37]	Gordon River - south bank - at the confluence with Howards Creek (both sides?) GR: ^{3}989/^{52}737	edge +	This is a c.1933 or earlier piners camp which is known to have had a hut (a hut is shown in this location on a 1933 map (Kerr & McDermott 1999, 60)). Possibly also the camp visited by Innes in 1896. At the mouth of Howards Creek is a low lying, well drained relatively open area with small trees - appears to have been cleared in the past. There are 3 cut stumps and downer sections inland c.70-80m, and at the junction of Howards Creek (east) and the Gordon River there is a fallen marked tree. There is also an area of grasses, possibly introduced, on the west side on the north edge of the swampy area, possibly indicative that horses and even a stable were in this area, although horses are believed to have been only used upriver as far as Lawn Creek	Some historical & possibly social significance at a regional level in relation to the history of pining on the west coast.	• Kerr & McDermott (1999) • this study (McConnell, Stanton & Scripps 2000)
Moores Landing Cutting Area [THPI 8012:38]	Gordon River - south bank c.half way between Howards Ck & Limestone Ck GR: ^{3}986/^{52}741	>20m	Two cut Huon pine stumps and one downer with a pointed cut end on the first and second levees, and c.50-100m west (downriver) in the swale between the two levees is a third Huon pine cut stump with a downer, out of which is growing a Huon pine seedling c.1m high.	Some (low) historical significance at a regional level in relation to the history of pining on the west coast.	• this study (McConnell, Stanton & Scripps 2000)
Lawn Creek Hut [THPI 8012:13]	On the north bank of the Sprent River (Gordon River - south (west) bank)	50m	Pining camp - Possibly used by Jim Finn and sons in the late 1920s, and used by Charles Doherty and then RJ Howards gangs in the 1930s. Comprised a camp and stables. Collapsed timber hut with corrugated iron roof, a floor & a corrugated iron chimney with log shoe back plate. Artefacts include a food safe, bottles & cans. There is also a snig track.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
South Sprent Camp (Morrisons Dartmoor Camp) [THPI 8012:15]	Gordon River - south (west) bank - c.30m up river of the Sprent confluence.	30m	Pining camp - c.1930s. Comprised a camp and stables used by Morrison in the 1930s. Comprises two hut sites 60m apart and connected by a pack track. The huts were of timber construction but only a few timbers and corrugated iron sheet remains. Also a boot, a billy can and possible hearth remains were recorded.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
North Sprent Camp (Morrisons Depot) [THPI 8012:10]	Sprent River (north bank) on bank on highest land	25-100m	Pining camp used around 1900, and used by Morrison in the 1930s. Comprises a timber hut with a corrugated iron framed fireplace & with dressed sandstone & brick foundation. Numerous tree stumps in the surrounding area. Connected to the South Sprent camp by a pack track.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
Sandstone Camp [THPI 8012:14]	Gordon River - south (west) bank - c.0.5km down river from Sandstone Creek.	25-100m	Pining camp - camp and stable built by Jim Morrison in 1934. Comprises the remains of a hut and stables (both of timber construction) c.30m apart and connected by a foot track, with several tracks inland. The remains include stable posts, joist, Huon pine planks & corrugated iron; and posts, a hearth (log shoe & corrugated iron), 4 horseshoes, boots and other artefacts at the hut site.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
Grinings Landing [THPI 8012:9]	Gordon River - north (east) bank - overlooking shingle bar	edge	Pining camp used around 1900. Comprises a track from the foot of the river bank to bank top 30m north, where there is a cleared area with blackberries and a hut site with corrugated iron, and a pebble & brick hearth and scattered artefacts.	some significance	• Site record • Townrow (1990).
Regs Depot [THPI 8012:16]	Gordon River - north bank - c.1km upstream from the Franklin River confluence	edge	Pining camp - c.1930s onwards. Used by Reg Morrison, and possibly the site of Abel & Whites camp and stable of 1950. Comprises a clearer area (20 x 8m) with corrugated iron sheet, a cooking pot, & a possible drain.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
HEC Compressor Stands [THPI 8012:3]	Gordon River - north bank? - c. 1km down river of the Franklin confluence	25-100m	Part of the Gordon River Stage II power scheme construction - associated with the construction of the Gordon below Franklin dam. Comprises compressor stands, piping and adits. C. early 1980s.	some significance	• Site record • Townrow (1990). • Waghorn (1994)
Franklin Rock/Lower Gordon Damsite [THPI 8012:28]	Gordon River - c. 1km down river of the Franklin confluence	river & edges	Damsite for the Gordon below Franklin dam, part of the Gordon River Stage II power scheme. The dam was not constructed.	not assessed	• Site record • Waghorn (1994)

Site/feature name & number	General geographic location	Distance from bank of Gordon River	Brief description/history	Cultural significance	References/listings
Forestry Commission Rangers House [THPI 8012:21]	Gordon River - south bank (at Goulds Landing), at the Cataract Ck confluence	25-100m	Site of Forestry Commission Ranger house from c.1930s to 1940s. The house was bought to the location from Macquarie Heads, then after service moved to Strahan. The house had been a substantial weatherboard structure. The Ranger mainly checked logs at the Boom Camp. Remains include stone foundations, 2 chimneys, hut remains & exotic flora (hawthorn, hydrangea, violets).	some significance	• Site record • Waghorn (1994) • Kerr & McDermott (1999).
Goulds Landing/ Jones Landing [THPI 8012:19]	Gordon River - south bank - at the Cataract Ck confluence	edge	Major depot for Gould and Jones when track cutting in 1863 and 1881 respectively; a pining camp in early 1900s; & site of Forestry Commission Rangers house in the 1930s. As a piners camp it was the starting point for horse roads and pack tracks to the Rocky Sprent and further upriver. A piners hut and 2 tracks were already established in 1881, and the area was logged again by Jim Morrison in the 1920s and again by Laurie Reynolds in the 1940s. Site is disturbed and covers c.30m of river edge. Comprises a cleared grassy area with a brick scatter, planks, & a kettle at one end and rail iron at the other; a track connecting the two areas; and a former haulage way up the hill. Also 2 shed or stable remains, a Tangye winch & trolley chassis, and a snig track leading to the Sprent River near 8012:19 - likely to be associated with pining.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
Sir John Falls Hut Complex [THPI 8012:22]	Gordon River (south bank) immediately downriver of the Cataract Ck confluence.	edge	Used in the investigations for the Gordon River Stage II Power Scheme, but previously a campsite, probably pining related (see Goulds Landing above). A tourist hut was built here by Harry Grining in the late 1930s. The present building was constructed and used by the HEC from c.1976 to 1983. Refurbished as singlemens quarters in 1982 for damsite construction. From 1983 to 1985 the camp was used as a DPIWE Ranger Station, and since then has been used as accommodation by rafters, and only occasionally as a Ranger hut.	Low cultural significance	• site record • Noble (1993) • Waghorn (1994) • Kerr & McDermott (1999)
Hut Site opposite Butler Creek [THPI 8012:4]	Gordon River - south bank - opposite Butler Creek & c.100m up river of Butler Island.	25-100m	Pining Camp with other later uses, including possible HEC (Gordon River Stage II scheme) use. Comprises a cleared area (c.13 x 8m) with the remains of a timber hut (posts and scattered planks) and later artefacts (a concrete structure with pipes, other pipes & a 44 gallon drum camp oven).	some significance	• Site record • Townrow (1990) •
Warners Landing [THPI 8012:29]	Gordon River north bank - approx opposite Butler Island	25-100m	Originally known as William Finns Landing, this was a pining camp and log landing. Fred and Steve Warner had a camp and stables in the 1920s with a tramway leading into the hinterland. Later it was the site of preliminary construction for the Gordon Power Scheme Stage II lower Gordon dam, including the HEC Workers Camp, and the focus of the conservationist 'Blockade' action. Comprises a bulldozed area with c.3.5 km of the start of the Warners Landing Road, which runs inland. A singlemens camp was built inland of the landing.	not assessed	• Site record • Waghorn (1994) • Kerr & McDermott (1999)
Abels Creek Hut [THPI 8012:18]	Gordon River - south bank at Abels Creek confluence.	10m	Pining camp - worked by Jinks Tonks in the 1920s. K. Morrison of Strahan had a timber lease on 100 acres near the Creek from 1935 - 1939. Comprises the remains of two huts (c.20m apart) of timber construction; the remains of a bridge of timber construction; & some corduroy connecting track .	some significance	• Site record • Townrow (1990). • Waghorn (1994) • Kerr & McDermott (1999)
Regs (Morrisons) Camp/ Blockade Camp [THPI 8012:5]	Gordon River - south (west) bank, c. 250m down river of the Abels Ck confluence.	25-100m	Pining Camp where Jim Morrison and sons had their depot in the late 1920s and 1930s. There were many tracks leading from this depot. Also used in the early 1980s by protesters involved in the 'Blockade' as the main campsite in the Gordon River. The remains of a wooden slab piner's hut c.150m down river of the Blockade Camp are extant- the hut was dismantled and moved to another part of the river but the foundations & Huon pine timbers are still observable. The Blockade campsite is an area of cleared understorey with many tracks leading inland, 1 with a log bridge	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).

Site/feature name & number	General geographic location	Distance from bank of Gordon River	Brief description/history	Cultural significance	References/listings
Ghost Creek Hut [THPI 8012:17]	Gordon River (south bank) - c.50m upriver of Ghost Creek	edge	Pining Camp - a substantial piners camp built by Bill Finn in the early 1920s using sawn timber and comprising a hut and stables for 6 Clydesdales. The area was pined by the Finns between 1924-1934 who used a punt up the Creek or walked. Used into the 1950s, including by Abel & White. In the early 1950s Shirley White, wife of Frank White, lived here for a few months. Comprises the remains of a timber hut (a bed, timber window framing & a corrugated iron scatter); and a poorly defined track extending north. Ghost Creek was originally known as Scorpion Ck.	some significance	• Site record • Townrow (1990). • Waghorn (1994) • Kerr & McDermott (1999)
North Ghost Creek Hut [THPI 8012:6]	Gordon River - south (west) bank - c.100m down river of Ghost Creek Hut (8013:17)	edge	Pining Camp - probably 1920s/30s and last used by Abel & White in the 1950s. Comprises a scatter of corrugated iron, a can and a bottle, with no evidence for structures. The site has been partly eroded by the river.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999)
Log Shoe [THPI 8012:7]	Gordon River - north (east) bank - in Limekiln Reach opposite Marble Cliffs.	edge	Remains of a steel log shoe. Removed due to threat of loss.	low significance	• Site record • Townrow (1990).
Eroding Campsite [THPI 8012:8]	Gordon River - south (west) bank - in Limekiln Reach on Camerons Flat.	edge	Scatter of 5 pieces of corrugated iron, a log shoe, sapling floor joists & a piece of split paling floor joist. Artefacts are falling down the river bank.	some significance	• Site record • Townrow (1990).
Bottle Dump 1 [THPI 8012:11]	Gordon River - south (west) bank - just N of most south limestone outcrop in Limekiln Reach .	25-100m	Pining Camp. Possibly the camp lived in by Jim & Nita Morrison and George Stevenson and his wife in the 1930s (they camped downstream of the Marble Cliffs). Comprises fragmented china (plates), bottles, & a shoe in a clearing which extends for c.50m.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
Bottle Dump 2 [THPI 8012:12]	Gordon River - south (west) bank (c.1.3km N of Bottle Dump 1) on bank behind beach.	edge	Pining Camp. Comprises c.18 bottles over 17m x 8m area, plus a camp oven, file, and can - all in an area c.100m along the river bank.	some significance	• Site record • Townrow (1990).
Limekilns [THPI 8013:3]	Gordon River - south (west) bank - in Limekiln Reach c.1km upriver of Eagle Creek.	25-100m	Convict period (1822-1833) limeburning kilns - used to produce lime for mortar and fertiliser for the Sarah Island Settlement. Lies behind a limestone outcrop which is on the river edge. Comprises a beehive limekiln of limestone lined with firebricks; and 2 brick scatters.	significant as a convict period site with a recognisable structure and as a rare site type associated with the convict history of the area	• Site record • Townrow (1990) • Waghorn (1994).
Limekilns Guards Camp [THPI 8013:26]	Gordon River - north (east) bank - on north side of mouth of Little Eagle Creek	edge (eroding out of bank)	A brick scatter. Probably convict period (1822-1833). Interpreted as the guards quarters which were known to be opposite the Limekilns.	some significance	• Site record • Townrow (1990) • Waghorn (1994)
Bottle Scatter [THPI 8013:25]	This site is recorded only in the THPI inventory and there is no site record. From analysis of the Grid Reference it appears that this site is a duplicate for 8012:11 but designated as a new site due to incorrect entry of the Grid Reference.				
Tourist Hut [THPI 8013:6]	Gordon River - north bank - at the north end of Limekiln Reach. At end of Eagle Creek track	25-100m	Built as a tourist hut in the 1910s (constructed of corrugated iron with a corrugated iron chimney), but also used as a pining depot (with camp and stables), and by HEC exploration staff in 1916. Partly removed and burned by DPIWE in c.1985. Lived in by Charlie Abel and Joyce Mackay, probably in the 1940s, while pining. Comprises hut remains - hut foundations, artefacts scatter, and a fireplace (possibly more recent); and jetty remains - posts. Was the only tourist infrastructure on the Gordon River until recently.	significant as the only location of historic tourist facilities on the Gordon River	• Site record • Townrow (1990) • Kerr & McDermott (1999)

Site/feature name & number	General geographic location	Distance from bank of Gordon River	Brief description/history	Cultural significance	References/listings
Regs Horseshoe Bend Hut [THPI 8013:9]	Gordon River - north bank - at top of Horseshoe Bend	4m	Pining Camp - Used in the late 1930s by Hutchins, Ware & Stevenson who were cutting celery-top pine. Later used by Reg Morrison and by RJ Howard. Comprises a cleared area c.60m wide with tracks leading inland; a hut (4m from River) (posts, joists, and remains of a corrugated iron fire place; corrugated iron & a grindstone; and remains of a boat ramp and mooring post.	some significance	• Site record • Townrow (1990) • Waghorn (1994) • Kerr & McDermott (1999)
Guy Fawkes Site [THPI 8013:7]	Gordon River - south bank - 50m up Guy Fawkes Ck (Spring Creek) on west bank	50m	Pining Camp - 1930s onwards. William McDonald built a tramway (known as the zig zag tram) from the creek mouth inland, & about half a mile inland there was a camp and stables. In 1940-41 Jack Crane was working the area and there was only a tent camp and split timber stables at the time. One small hut site (posts, joists, corrugated iron & beer bottles) and the footings for a winch (timber structure) remain. Set in a cleared area (from Gordon bank 10m inland).	some significance	• Site record • Townrow (1990) • Waghorn (1994) • Kerr & McDermott (1999)
Boom Camp [THPI 8013:133]	Gordon River - south bank - between Pine Landing and Guy Fawkes Creek	edge	Considered part of Pine Landing. Used from the 1930s to 1973 to collect logs floated down river using a log boom (logs chained together across the river). Logs were also sorted by owners for rafting downriver.	some significance	• Site record • Townrow (1990) • Waghorn (1994) • Kerr & McDermott (1999)
Pine Landing [THPI 8013:5]	Gordon River - south (west) bank - Pine Landing (above the First Gorge).	25-100m	Pining Camp with other later uses, and still used by local fishermen who have built a large hut. Charlie Abel and Joyce Mackay lived here while pining, probably in the 1940s. The landing has a winch base, lengths of wire rope & tram trolley wheels. In the early 1900s there was a tramway extending up the ridge behind the landing.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
Gorge Campsite [THPI 8013:8]	Gordon River - north bank - on the downriver end of the First Gorge	<50m	Pining Camp - 1930s. Used at one time by a piner named Burge. May have been the location of the camp and stables for Manigan's tramway. Comprises bottles, corrugated iron, and a log shoe which was used as the back plate for the fireplace. Set in a clearing which extends inland c.50m, to the foot of a steep bank.	some significance	• Site record • Townrow (1990) • Kerr & McDermott (1999).
Lower Gordon River Pining Site [THPI 8013:139]	Gordon River - south bank - c.300m downriver from Manigans Inlet	edge	Pining Camp. Comprises 2 rock piles in shallow water (possibly jetty); axe cut cording on the edge of the bank; stumps; blazed trees; and a bottle & other glass.	not assessed	• Site record (J. Bradbury)
Duncomb's Camp [THPI 8013:4]	Gordon River - north bank - c.3/4km above Timms Eddy	edge to 30m inland	Pining Camp from c.1880s, with other later uses. Current hut was built in the 1950s by Duncomb and Mousley using salvaged materials. Comprises a hut & a jetty and is the only identified standing piner's camp. The hut is of timber construction with a corrugated iron chimney with a brick lined hearth, with some more recent fibro-cement panels. Set in a clearing c. 22m x 10m. Also has rubbish (mainly beer cans) and tree stumps.	significant as the only extant, still standing piner's hut on the Gordon River.	• Site record • Townrow (1990) • Noble 1994) • Kerr & McDermott (1999)
Finns Camp [THPI 8013:10]	Gordon River - south bank, at Timms Eddy	2m	Pining Camp - used by the Finn family in the 1930s at the same time they were running the sawmill refer (8013:11), and used by succeeding generations of piners. A hut remains but is collapsed. The site comprises a corrugated iron chimney with log shoe back plate; a beer bottle accumulation 3m away; and a boat ramp 2m in from the beach. After it was abandoned it was used by fishermen until the 1960s.	some significance	• Site record • Townrow (1990) • Waghorn (1994) • Kerr & McDermott (1999)
Timms Eddy Hut [THPI 8013:28]	Location of a pining camp given by D. Zeigler. Information in Kerr & McDermott (1999, 239) indicates that it is the same site as Finns Camp (8013:10) .				
Bellows Site/ Bushmill [THPI 8013:11]	Gordon River - south bank - on down river end of Timms Eddy (near Barnes Rivulet)	5m	Huon Pine sawmill run by the Finn family in the 1950s. The mill operated under the company name 'Fine & Rare Timbers Co.' This was the only Huon pine sawmill on the Gordon River. Comprises rectangular bolted structure; 2 bedlogs separated by a gully 19.5m wide; equipment foundations (of manfern trunk) inland of this; and scattered objects (rail iron, dog spikes, iron pipe, a bellows, can & corrugated iron).	significant as the site of the only sawmill on the Gordon River	• Site record • Townrow (1990) • Waghorn (1994)
One Mile Camp [THPI 8013:34]	Gordon River (south bank) - 1 mile upriver from the mouth, & just downriver of Timms Eddy	no data	Pining Camp. Location is based on oral information and not field checked.	not assessed	• Site Record (by Scripps)

Plate 1. The HEC Albert Rapids Camp (THPI 8012:31), north bank of the Gordon River in Abel Gorge, with the Gordon River in the foreground.

Note the camp is well above the river. (Photo: A. McConnell).

Plate 2. The HEC Splits Camp (THPI 8012:25), west bank of the Gordon River in Abel Gorge, with the Gordon River in foreground.

Note the camp is well above the river. (Photo: A. McConnell)

Plate 3. The HEC Denison (Nicholls Range) Camp (THPI 8012:26), situated on the north bank of Denison River, approximately 1km upstream from the Gordon River.

As in the case of the other camps, it is located well above the river (Photo: A. McConnell)

Plate 4. The HEC Olga Camp (THPI 8012:27), situated on a north-south trending ridge above the Gordon River between the Denison and Olga River confluences.

It is on the south bank and well above the river. The Olga camp was the largest of the Gordon River HEC investigation camps. (Photo: A. McConnell; view WSW)

Plate 5. View west from above Abel Gorge to the confluence of the Gordon River and Albert River (LHS, in area of pool).

This was the upriver limit of historical pining carried out from Macquarie Harbour. A small camp and cut Huon pines (THPI 8012:32) were located in this area, and a tramway for carrying pine was understood to have been constructed by Doherty and others in the early 1900s from this point up the Albert River valley. (Photo: A. McConnell)

Plate 6. View upriver of the Gordon River in the area of the Serpentine River confluence showing the deep narrow valley and steep-sided quartzite cliffs.

Because of the terrain, this part of the Gordon River is considered unlikely to have been much used in the past by Aboriginal people. (Photo: A. McConnell).

Plate 7. View of the Gordon River valley between the Olga River confluence and the Franklin River confluence.

The valley here is wide and relatively flat floored, and connects to the broad, relatively open Olga River valley. These broader valley floors, and particularly areas which have more open vegetation and forest and heath mosaics, made relatively easy travel routes, good camping locations and contain a range of Aboriginal plant and animal resources. Areas such as these are highly likely to have been regularly used in the past by Aboriginal people, and are of significance today to Tasmanian Aboriginal people (Photo: S. Stanton)

Plate 8. View of limestone cliffs along the Gordon River valley between the Olga River confluence and the Franklin River confluence.

Where caves and shelters form in cliffs such as these, they are likely to have been utilised in the past by Aboriginal people. Important Aboriginal sites of this type are known to occur in the region, for example along the Franklin and Nelson Rivers. (Photo: S. Stanton).

Plate 9. View of the Gordon River in the vicinity of Piguenit Rivulet showing the general nature of the field survey locations.

Sedimentary banks are typical in areas of flatter terrain and there is some visibility along the bank sections, but visibility is very poor for cultural heritage above the banks due to the densely vegetated nature of the area. (Photo: S. Stanton)

ATTACHMENT 1

COPY – PROJECT BRIEF

Basslink Development

Consultancy Brief - Aboriginal and European Cultural Heritage

1. Background

The Basslink project proposes to connect the Tasmanian and the Victorian electricity grids via a submerged cable across Bass Strait. This will change electricity demand patterns for the Hydro and therefore the way in which the Hydro generates electricity. Computer modelling has predicted that the Gordon and Poatina power development schemes will be the most likely to be affected (that is, downstream waters of the associated power stations). As such, the development is expected to impact on the middle Gordon River and downstream of Poatina. It is considered likely that the Gordon and Macquarie Rivers contain sites of cultural heritage value.

The aim of this consultancy is to identify sites of Aboriginal and European cultural heritage significance, particularly the middle Gordon River and a section of the Macquarie River, to identify the cultural landscape values associated with the development area.

2. Study Area

A cultural heritage assessment will be undertaken along various sections of the middle Gordon River and the Macquarie River which has an area covered by Holocene sandsheets extending for approximately 2 km. As part of the environmental investigations being undertaken by the Hydro, a range of field studies considering potential environmental impacts are currently being undertaken on the middle Gordon River. Results from studies assessing the extent of eroded areas in the Middle Gordon will form a major input into the heritage survey to identify areas where heritage sites may be impacted on.

Field work will be undertaken for both rivers using an appropriate survey method. In addition, the assessment will include documentation of all existing information pertaining to cultural heritage to determine environmental issues in relation to the Basslink development.

3. Methodology

The survey should be designed to incorporate two stages of investigation:

- Stage 1 involves a review of relevant literature, including sites previously located and registered on the Tasmanian Aboriginal Site Index and the Tasmanian Historic Places Inventory. This process should be undertaken in consultation with the Cultural Heritage Branch (Parks and Wildlife Service) and the Tasmanian Aboriginal Land Council (TALC).

- Stage 2 involves the main field work. The survey transects/routes and methodology will most likely involve two to three weeks field research. Field work for the middle Gordon study will coincide with other field studies being undertaken by the Hydro in collaboration with various consultants. It is anticipated that a field trip will take place in early December (the heritage consultant will be required to undertake Recipient Authorisation Training (1 day – 6 to 7 hours) prior to commencing field work. It is anticipated that training will occur in November 1999. This course is conducted by the Hydro's Operating Standards Department).

4. Objectives and Tasks

(a) To locate, document and assess sites of Aboriginal and European cultural significance within the study areas. External consultants will be commissioned to undertake the work. The

methodology will be designed in conjunction with the Cultural Heritage Branch, Parks and Wildlife Service. Input from an Aboriginal Heritage Officer acceptable to the TALC must be obtained for the Aboriginal heritage component of the work.

(b) Access and review the Tasmanian Aboriginal Site Index (TASI) and Tasmanian Historic Places Inventory (THPI) for sites within and adjacent to the study areas.

(c) To liaise, as necessary, with relevant government and non-government bodies on matters relating to sites of Aboriginal and European cultural heritage significance.

(d) To identify and document the cultural landscape values associated with the study areas and immediate surrounds.

(e) To provide specific recommendations for managing the significant sites and cultural landscape values identified.

5. Documentation

The consultant will submit the following documentation:

- TASI forms and THPI forms for all cultural places located, and updated site record forms for all previously recorded sites revisited.
- a photographic record of the sites located and/or inspected and their settings, in accordance with Guidance for the Production of Cultural Heritage Survey Reports prepared by the Cultural Heritage Branch, Parks and Wildlife Service, Department of Primary Industries, Water and Environment; and
- detailed maps showing survey transects or routes carried out.

6. Final Report

The final report should conform to the Guidance for the Production of Cultural Heritage Survey Reports, prepared by the Cultural Heritage Branch of the Parks and Wildlife Service.

7. Restrictions and Requirements

- It is a requirement for all cultural resource consultants working on Aboriginal sites in Tasmania to liaise with the Tasmanian Aboriginal Land Council, 4 Lefroy Street, North Hobart (‘ph 03 6231 0288) to discuss Aboriginal involvement in the project.
- The consultant must not damage or interfere with cultural places. No excavations are to be carried out during the project.
- The consultant will supervise any field assistants assigned to the project.
- The HEC may produce further copies of the final report under the authorship of the consultant. The consultant may publish data obtained during the project, but may not publish the final report without the permission of the HEC.
- All costs associated with the project will be met by the HEC. The consultant must not incur costs without the prior approval of the HEC.

8. Timing and Reporting

A draft final report is to be provided to the HEC for comment one month before the project finishing date. At this stage, it is anticipated that the final report will be submitted to the HEC by Monday 7 February 2000.

ATTACHMENT 2

ABORIGINAL HERITAGE OFFICER REPORT

AN ABORIGINAL CULTURAL HERITAGE ASSESSMENT IN RELATION TO THE PROPSED BASSLINK PROJECT:-

GORDON RIVER – WATERS DOWNSTREAM OF THE GORDON POWER STATION TO THE DENISON RIVER

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March 2000

A report for Anne D. McConnell (Consultant) and the Tasmanian Aboriginal Land Council.

ABORIGINAL SITE LOCATION INFORMATION CONTAINED IN THIS REPORT IS CONFIDENTIAL AND NOT FOR PUBLIC DISSEMINATION

Introduction:

This report describes both the methods used, and the results, of an assessment of Aboriginal cultural heritage values in relation to the Basslink project which proposes to connect the Tasmanian and Victorian electricity grids. This will changes electricity demands for the Hydro-Electric Corporation (HEC) and, therefore, the way in which the HEC generates electricity. This is likely to result in variations to waters downstream of the Gordon and Poatina power stations due to possible changes in the release patterns from these power stations and subsequent fluctuations in water speed and levels, which may affect landscapes downstream, such as by accelerated erosion.

The main focus of this report is the assessment of Aboriginal cultural heritage values in areas downstream of the Gordon power station – that is, the section of the Gordon River situated between the power station outlet and the confluence with the Denison River. Aboriginal values in the Macquarie River area are considered in a separate report by Stanton (Jan. 2000). The field survey of the Gordon River was confined to six sections of the river which were considered to be locations with the greatest potential for Aboriginal sites. The survey concentrated on the upper reaches of the river between the Gordon Dam and the Denison confluence as these areas are considered to be the most susceptible to landscape changes resulting from variations in water flow due to Basslink, although most changes are likely to occur above the Second Splits due to the dampening effect of the Splits.

This Aboriginal heritage assessment was endorsed by the Tasmanian Aboriginal Land Council (TALC). The study was undertaken by Aboriginal Heritage Consultant, Steve Stanton for Anne D. McConnell (Consultant – Cultural Heritage Management, Archaeology and Quaternary Geoscience) and the TALC, in order to ensure that:

- any Aboriginal sites, or other cultural heritage values or places, which may be present within the study area are identified in order to develop culturally appropriate management strategies to provide for their future protection and maintenance,

- the Aboriginal community's heritage interests are protected, and that any Aboriginal values identified in the study area are maintained and afforded culturally appropriate future management according to community aspirations,

- the views, and any concerns which might be held by the Aboriginal community in relation to this project, are covered in consultations with the TALC as community representatives.

No Aboriginal cultural heritage resources (sites) were identified in areas which may potentially be affected by the project. Aboriginal landscape values such as traditional plant and animal resources were identified in the study area, however, they are well represented throughout the south west and in many other parts of Tasmania.

As a landscape, the area is relatively intact and in the event that substantial landscape changes result from the Basslink project, eg, through large section of the banks of the Gordon River subsiding due to accelerated erosion, then it is the view of the Aboriginal community that

these areas should be assessed further in order to identify any sites or cultural landscape values which might be affected.

Study area:

The study area consists of the margins of the Gordon River, downstream of the Gordon Dam and extending to the Denison River confluence. As any potential landscape changes are likely to occur along the river banks, the study area was confined mostly within 20 metres of the river although several areas situated upstream of tributaries, within 200 metres of the river were assessed. The aboriginal landscape of the study area remains relatively intact apart from some minor changes which are evident. These changes result from early European activities in the valley, associated mainly with huon pine extraction.

The river environment of the study area varies considerably from steep, confined ravines in the upper sections to broader, more level valleys located along the lower reaches, downstream towards the Denison confluence. Vegetation is typical south west rainforest which is very dense and difficult to assess in most areas, particularly along the margins of the river. Types noted include pandani, myrtles, huon pines, eucalypts, tea tree, native currants, sassafras, native laurel, cutting grass, ferns, shrubs and fungi (including numerous bracket fungi).

There are often level benches above the high water mark of the river. Soils consist mainly of alluvial sands and gravels, with abundant quartz and quartzite present in the river gravels. While an assessment of documentation regarding previously recorded Aboriginal sites was competed for the entire study area, field survey associated with this assessment was confined to six separate areas along the margins of the river between the Gordon Dam and the Denison confluence. It was felt that these six areas of land had potential to be the locations for Aboriginal sites, and that those areas between the Gordon Dam and the Splits may be susceptible to any future bank erosion which results from the Basslink project.

Ground surface visibility was generally very poor (less than 10%) due to the dense vegetation and leaf litter cover present throughout most of the areas surveyed. Opportunities to inspect both surface and subsurface soils resulted from upturned tree roots, cuttings in the sides of river banks, animal tracks, some exposures in the forest, areas where slumping of the river bank had occurred, and areas of exposed silts and sands, although these often appeared to be recently deposited. Refer to map at Figure 4 (main report) for details of the location of the study area and the six areas assessed during the field survey.

Assessment methods:

The Tasmanian Aboriginal Site Index (TASI) at the Parks and Wildlife Service was inspected prior to filed work, in order to determine if any Aboriginal sites had previously been recorded within, or adjacent to, the study area. This research assists in developing an understanding of the nature of any sites which might be encountered in the general area. Research of the TASI also provided an opportunity to review previous studies of the broader region surrounding the study area.

Inspection of the TASI revealed that there were **no** previously recorded sites along those margins of the Gordon River which may be affected as a result of the Basslink project. In

terms of understanding site distribution patterns for the region, there are a number of Aboriginal sites in the Gordon River area, the closest of which include the following:-

- 2 rockshelter/caves (TASI 487 & 494) recorded in 1981 and located in limestone karst country downstream of the Denison confluence. Both these sites are located well above the Gordon River and are, therefore, well beyond the zone of potential disturbance arising from the Basslink project.

- a small artefact scatter (TASI 488) which was also recorded in 1981. The artefacts were identified in a small clear area, exposed by the roots of an upturned tree on the northern bank of the Denison River, some 50 metres upstream from its confluence with the Gordon River.

A review of reports in the TASI revealed that other studies in the Franklin, Denison and Maxwell River valleys have revealed the presence of numerous highly significant Aboriginal sites consisting of art sites, occupied caves, rockshelters and artefacts. Distribution patterns indicate that sites are concentrated in tributaries of the Gordon River rather than in the Gordon River corridor itself. The closest of these sites to the Gordon River consists of an isolated artefact (TASI 1837) located on a shingle bank, midstream in the Franklin River near its confluence with the Gordon River but well beyond the potential effects of the Basslink project.

Access to the six areas which were the focus of the field survey was by helicopter. The areas, as outlined on the map attached at Figure 4 (main report), were then assessed on foot by Stanton and McConnell over a period of three days. While the assessment is concerned with possible landscape changes in the immediate vicinity of the Gordon River, areas away from the River margins, with improved ground surface visibility were also assessed. Several rivers and streams which flow into the Gordon River were also assessed upstream to a distance of up to 200 metres from the Gordon River. Transects were also taken up to 100 metres inland in several areas during the survey, where open areas facilitated access or where level country had increased potential to be the location for Aboriginal sites.

During the survey any areas of limestone were inspected in terms of possible karst development and any potential rockshelters or caves. No limestone outcrops were observed away from the margins of the Gordon River. Areas with improved ground surface visibility were carefully assessed given the very poor visibility throughout most of the study area.

A reconnaissance of that section of the Gordon River between the Denison and the Franklin confluences was undertaken by helicopter. This was carried out in order to look at broad landscapes and to assess potential thoroughfares or corridors, as indicated by terrain or vegetation patterns, which may have been used in the past by Aboriginal people to access the Gordon River valley. The flight was also useful in terms of observing outcrops of limestone karst downstream from the Denison confluence.

Aboriginal community consultation:

There is a need to inform and consult with the Tasmanian Aboriginal community on all matters concerning Aboriginal cultural heritage. The TALC, as representatives of the Aboriginal community, has established various protocols and policies with state government agencies, local governments, private developers and other parties. These mechanisms are aimed at ensuring that the Aboriginal community's cultural heritage interests are maintained and protected, and they also assist in ensuring that matters pertaining to Aboriginal heritage are dealt with in an expedient manner.

TALC staff authorised access to the TASI, in order to allow S. Stanton to undertake the background research associated with this project. At the completion of the field survey and prior to writing of this report, a meeting was held with the TALC in order to provide a mechanism for the inclusion of any Aboriginal community concerns regarding the project, or management recommendations for Aboriginal values.

Copies of this report have been delivered to the TALC and to the Manager of the Aboriginal Heritage Section at the Parks and Wildlife Service in Hobart.

Results:

There were no Aboriginal sites identified during the field survey within those sections of the Gordon River which were regarded as having potential to be the locations for sites, and which may be affected by landscape changes arising from the Basslink project. Research indicated that there are no previously recorded Aboriginal sites in those parts of the study area which might be susceptible to landscape changes resulting from the basslink project.

In terms of landscape values and associations there are a number of plant types in the study area which have been used traditionally by Aboriginal people. These include native currants (*Coprosma quadrifida),* bracket fungi, cutting grass (*Gahnia spp.),* and tea tree (*Leptospermum spp.)* which were utilised for foods and a variety of other purposes. While these plants are culturally significant, as both a past and ongoing resource, they are widely available throughout the south west and many other areas of Tasmania.

Legislative constraints:

Aboriginal sites are afforded legal protection under various statutes. The main legislation relating to Aboriginal cultural heritage values is the Aboriginal Relics Act 1975. This Act is the primary Act which governs the treatment of Aboriginal cultural heritage (any place, site or object made or created by, or bearing the signs of the activities of, the original inhabitants of Australia or descendants of such inhabitants in or before 1876) in Tasmania. It is administered by the Tasmanian parks and Wildlife Service. The main provisions are:

- all relics are protected under the Act and it is illegal to 'destroy, damage, deface, conceal, or otherwise interfere with a relic' without a permit,

- it is illegal to 'cause an excavation to be made or any other work to be carried out on Crown land for the purpose of searching for a relic' without a permit.

- It is illegal to 'sell or offer for sale a relic', or 'to cause or permit a relic to be taken out of Tasmania without a permit',

- Persons who own or have knowledge of a relic shall inform the Parks and Wildlife Service of this, and provide information about the location of the relic(s), and

- The ability to declare sites and objects as 'protected' sites or objects which are required to be managed by the Parks and Wildlife Service.

The development of appropriate management structures and guidelines for Aboriginal cultural heritage resources is highly dependent upon assessments being undertaken. Assessments such as this, undertaken at the planning phase, prior to any activities which may prove detrimental to Aboriginal values, facilitate the process of addressing any Aboriginal cultural heritage resource management issues which may arise. This process may in turn also assist the project proponent in avoiding future delays.

Discussion:

There is widespread recognition of the extremely high significance of Aboriginal cultural resources in the tributary valleys of the Gordon River. These places have been well documented by numerous expeditions to the area and are especially important and significant to the Aboriginal community. They are located primarily in limestone karst country and many of these special places have been identified in caves or rockshelters by previous studies. There are very limited amounts of limestone in the area between the Gordon Dam and the Denison confluence, and no known karst development along the margins of the Gordon River. While there a re limestone outcrops along the Gordon River downstream of the Denison confluence, it appears that any cave or shelter formation is confined to areas well away from the River which are unlikely to be affected by the Basslink project.

In terms of the Basslink project there is no potential for any known Aboriginal sites to be affected as a result of changes to the flow regime of the Gordon River – there are no known sites along the margins of the River. There are, however, Aboriginal landscape values in the form of various plants which are regarded as traditional resources, in addition to native animals in the area. While these resources are abundant throughout the south west and other parts of Tasmania, it is worth noting that they exist along the margins of the River and that they are of significance to Aboriginal people. They form an integral part of the Aboriginal landscape of the area which also includes other aspects such as the general aesthetics, the remoteness, and the relatively intact environment of the Gordon River.

Accordingly, in the unlikely event that substantial sections of the Gordon River margins are affected by erosion resulting from the Basslink project then it is the view of the Aboriginal community that these areas should be assessed , with a view to documenting any Aboriginal values which may be present. This process would also provide additional opportunities to investigate areas affected by erosion which may contain Aboriginal sites either on the surface

or in the substrate. While no Aboriginal sites were identified during this assessment, the extremely high significance of Aboriginal cultural resources in the region of the study area meant that the study was regarded as important by the Aboriginal community, in terms of ensuring that any Aboriginal values were maintained and protected.

Recommendations:

There is **no** objection, from and Aboriginal cultural heritage perspective, to the proposed development of the Basslink project in relation to changes to waters downstream of the Gordon power station. Accordingly, the project should proceed as planned, provided there is adherence to the following recommendations:

1. In the event that substantial sections of the river banks and adjacent areas along the Gordon River are affected by increased erosion resulting from the Basslink project, it is important that they be inspected to ensure that any Aboriginal sites or cultural landscape values are identified. The TALC should be contacted for advice in relation to the need, and process to be adopted for further assessment, should such erosion become apparent in the future.

2. <u>As contained under Section 14 (1) of the *Aboriginal Relics Act 1975:*</u>

Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director –

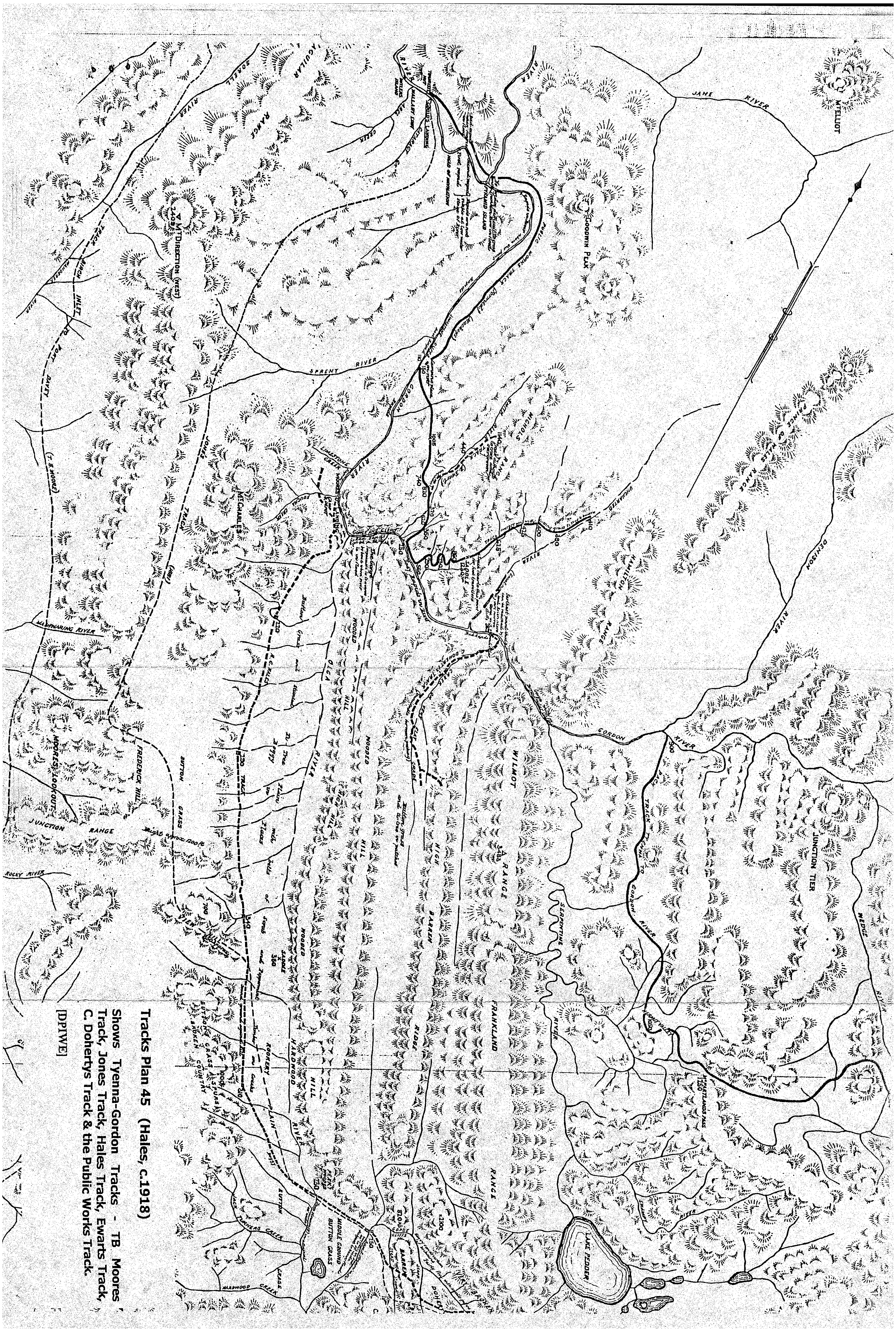
(a) destroy, damage, deface, conceal, or otherwise interfere with a relic.

Accordingly, in the unlikely event that any Aboriginal sites are located during any surface, sub surface or general landscape disturbances arising from changes in the Gordon River area due to the Basslink project, then the Tasmanian Aboriginal Land Council and the Parks and Wildlife Service should be informed, in order to enable further assessment of the situation.

ATTACHMENT 3

HISTORICAL MAPS AND PLANS

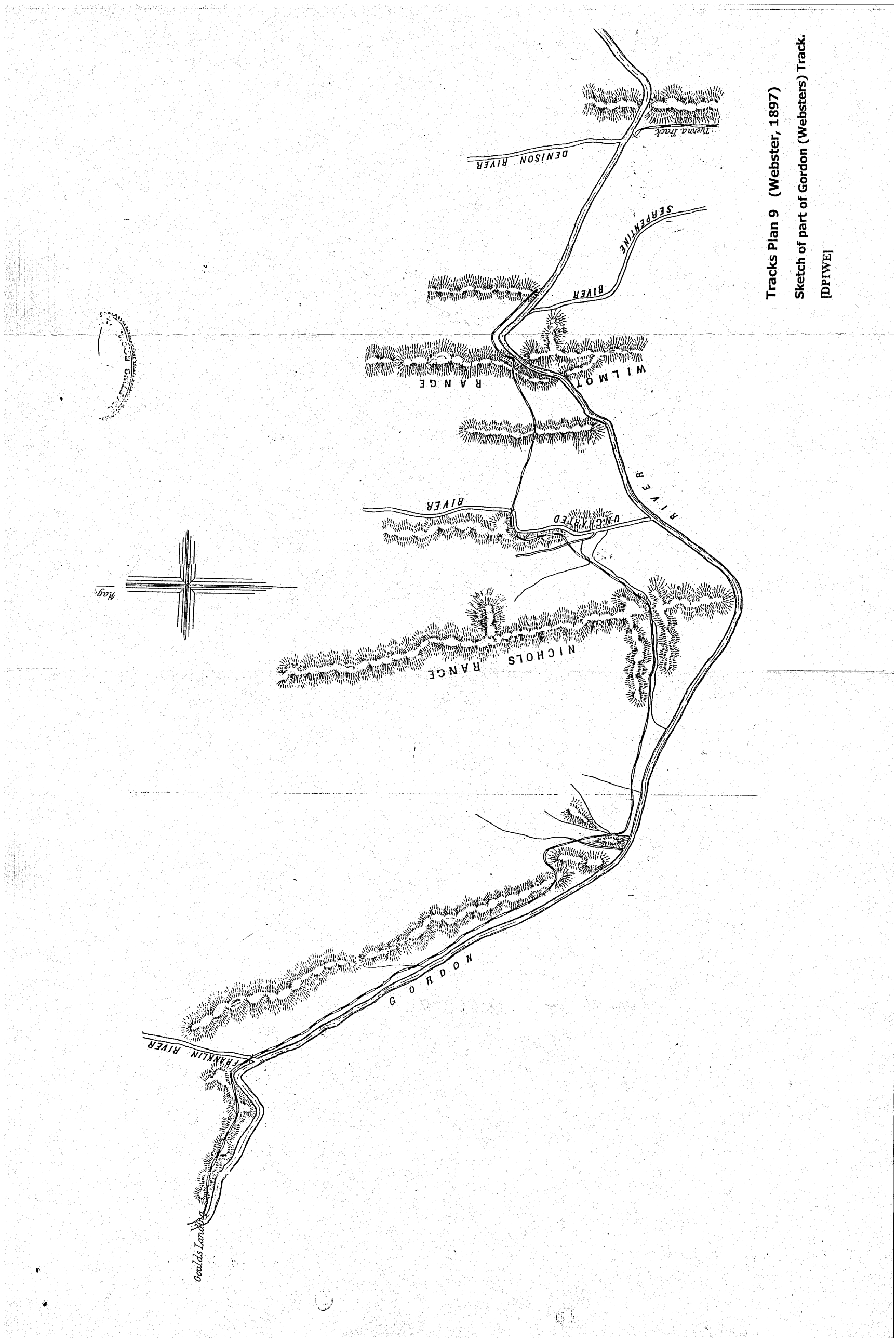
(COPIES)

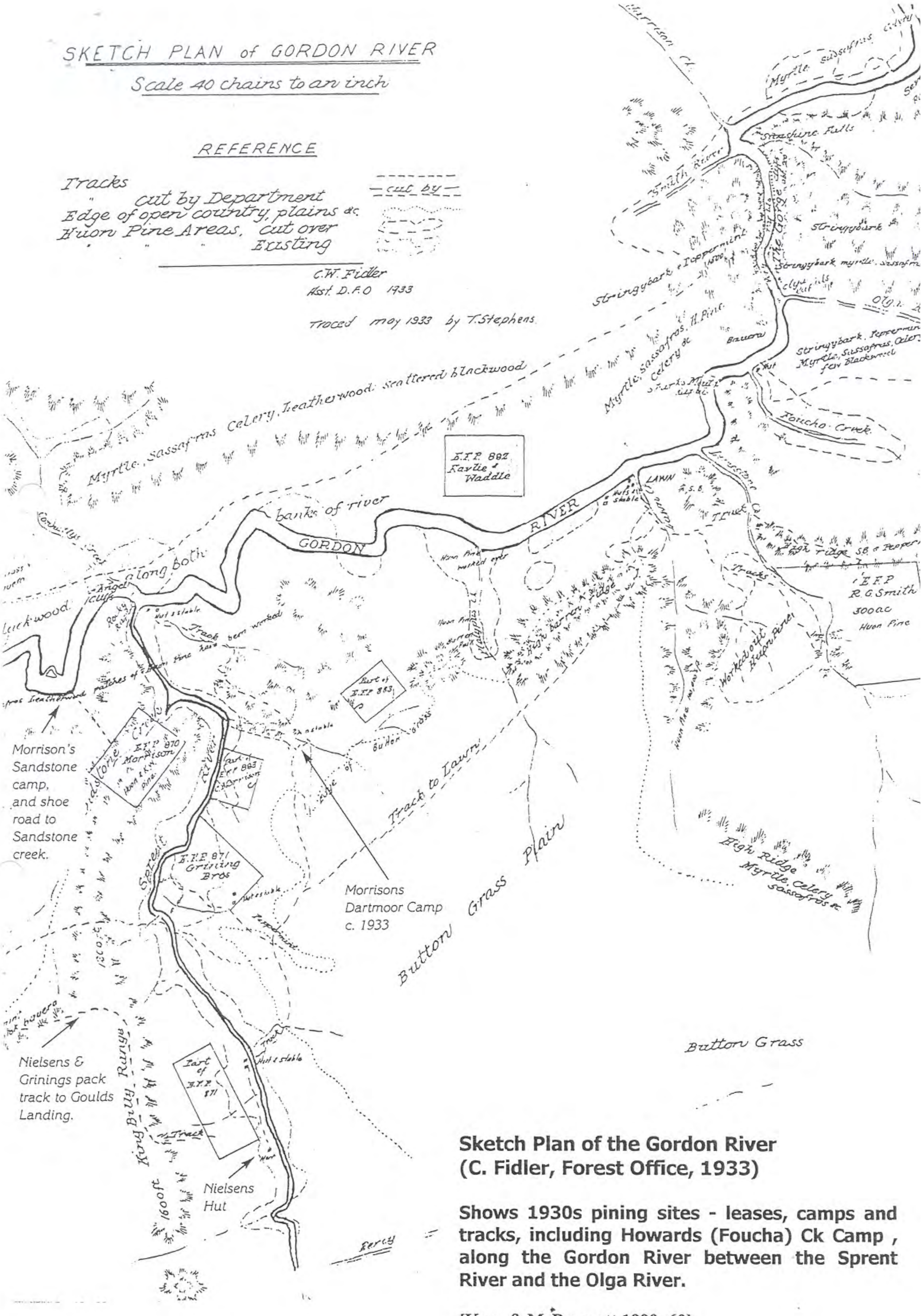


Tracks Plan 45 (Hales, c.1918)

Shows Tyenna-Gordon Tracks - TB Moores Track, Jones Track, Hales Track, Ewarts Track, C. Dohertys Track & the Public Works Track.

[DPIWE]

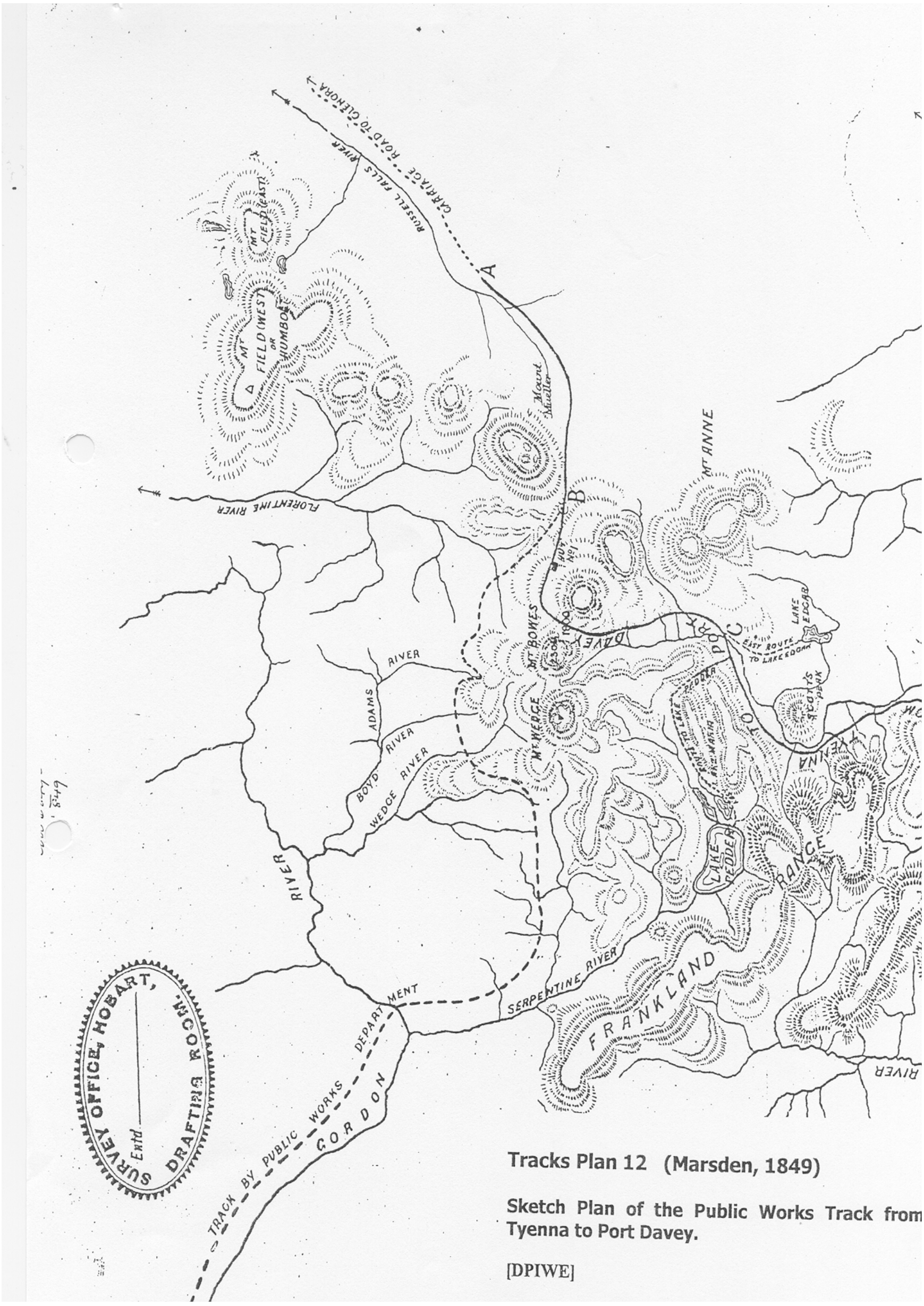

Tracks Plan 9 (Webster, 1897)
Sketch of part of Gordon (Websters) Track.
[DPIWE]
Ibera Track
DENISON RIVER
SERPENTINE
RIVER
WILMOT
RANGE
RIVER
UNCHARTED
NICHOLS RANGE
GORDON
FRANKLIN RIVER
Gould's Landing



Sketch Plan of the Gordon River
(C. Fidler, Forest Office, 1933)

Shows 1930s pining sites - leases, camps and tracks, including Howards (Foucha) Ck Camp , along the Gordon River between the Sprent River and the Olga River.

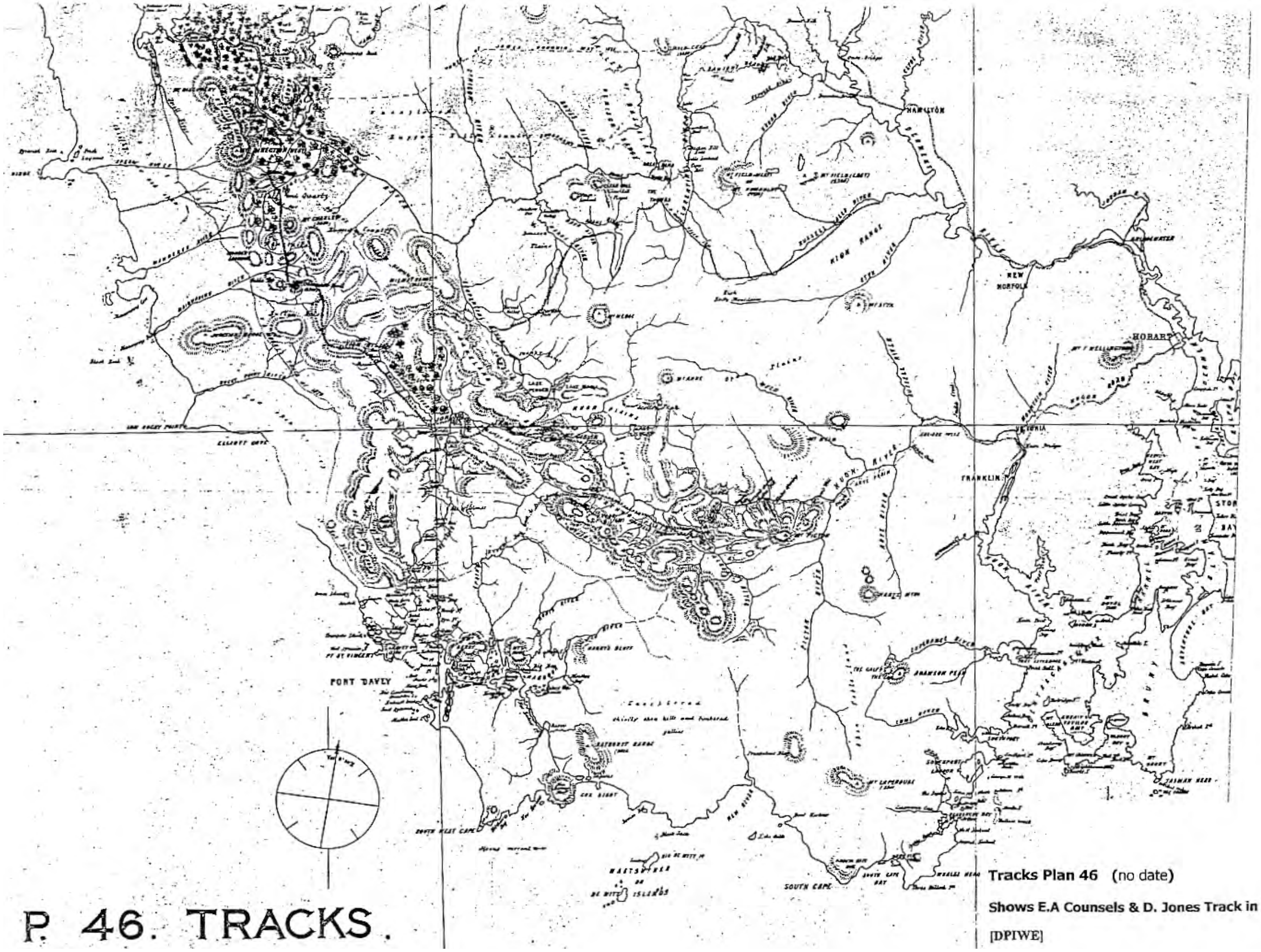
[Kerr & McDermott 1999, 60]



Tracks Plan 12 (Marsden, 1849)

Sketch Plan of the Public Works Track from Tyenna to Port Davey.

[DPIWE]



Tracks Plan 46 (no date)

Shows E.A Counsels & D. Jones Track in 1881.

[DPIWE]