

central
highlands
COUNCIL

Development & Environmental Services
19 Alexander Street
BOTHWELL TAS 7030

Phone: (03) 6259 5503

Fax: (03) 6259 5722

www.centralhighlands.tas.gov.au

OFFICE USE ONLY

Application No.: _____

Property ID No.: _____

Date Received: _____

Application for Planning Approval Use and Development

Use this form to apply for planning approval in accordance with section 57 and 58 of the *Land Use Planning and Approvals Act 1993*

Applicant / Owner Details:

Applicant Name

Hydro Tasmania (contact: Helga Grant)

Postal Address

GPO Box 355

Phone No:

6240 4623

Hobart, Tas

7001

Fax No:

Email address

helga.grant@hydro.com.au

Owner/s Name

Central Highlands Council

(if not Applicant)

Postal Address

PO Box 20

Phone No:

6286 3202

Hamilton, Tas

7140

Fax No:

6286 3334

Email address:

council@centralhighlands.tas.gov.au

Description of proposed use and/or development:

Address of new use
and development:

Waddamana Road, Tasmania

Certificate of Title
No:

Volume No

N/A

Lot No:

Description of
proposed use or
development:

Bus and oversized vehicle gravel parking bay

Asphalt apron from entrance to Waddamana heritage site

Traffic signage

ie: New Dwelling / Additions / Demolition
/ Shed / Farm Building / Carport /
Swimming Pool or detail other etc.

Current use of land
and buildings:

Public road verge

Eg. Are there any existing buildings
on this title?
If yes, what is the main building
used as?

Proposed Material

What are the proposed
external wall colours

N/A

What is the proposed roof colour

N/A

What is the proposed
new floor area m².

N/A

What is the estimated value of
all the new work proposed:

\$ 13,000

Is proposed development to be staged:

Yes ☐

No ☒

Tick ✓

Is the proposed development located on land previously used as a tip site?

Yes ☐

No ☒

Is the place on the Tasmanian Heritage Register?

Yes ☐

No ☒

Have you sought advice from Heritage Tasmania?

Yes ☐

No ☒

Has a Certificate of Exemption been sought for these works?

Yes ☐

No ☒

Signed Declaration

I/we hereby apply for a planning approval to carry out the use or development described in this application and in the accompanying plans and documents, accordingly I declare that:

1. The information given is a true and accurate representation of the proposed development. I understand that the information and materials provided with this development application may be made available to the public. I understand that the Council may make such copies of the information and materials as, in its opinion, are necessary to facilitate a thorough consideration of the Development Application. I have obtained the relevant permission of the copyright owner for the communication and reproduction of the plans accompanying the development application, for the purposes of assessment of that application. I indemnify the Central Highlands Council for any claim or action taken against it in respect of breach of copyright in respect of any of the information or material provided.
2. In relation to this application, I/we agree to allow Council employees or consultants to enter the site in order to assess the application.
3. I am the applicant for the planning permit and I have notified the owner/s of the land in writing of the intention to make this application in accordance with Section 52(1) of the *Land Use Planning Approvals Act 1993* (or the land owner has signed this form in the box below in "Land Owner(s) signature");
Applies where the applicant is not the Owner and the land is not Crown land or owned by a council, and is not land administered by the Crown or a council.

Applicant Signature

Suea Sraab

(if not the Owner)

Applicant Name (Please print)

Hydro Tasmania

Date

26/04/22

Land Owner(s) Signature

Land Owners Name (please print)

Central Highlands Council

Date

Land Owner(s) Signature

Land Owners Name (please print)

Date

✓

[illegible]

<p>Information</p> <p>If you provide an email address in this form then the Central Highlands Council (“the Council”) will treat the provision of the email address as consent to the Council, pursuant to Section 6 of the Electronic Transactions Act 2000, to using that email address for the purposes of assessing the Application under the Land Use Planning and Approvals Act 1993 (“the Act”).</p> <p>If you provide an email address, the Council will not provide hard copy documentation unless specifically requested.</p> <p>It is your responsibility to provide the Council with the correct email address and to check your email for communications from the Council.</p> <p>If you do not wish for the Council to use your email address as the method of contact and for the giving of information, please tick ✓ the box</p>	<input type="checkbox"/>
<p>Heritage Tasmania</p> <p>If the Property is listed on the Tasmanian Heritage Register then the Application will be referred to Heritage Tasmania unless an Exemption Certificate has been provided with this Application. (Phone 1300 850 332 or email enquires@heritage.tas.gov.au)</p>	
<p>TasWater</p> <p>Depending on the works proposed Council may be required to refer the Application to TasWater for assessment (Phone 136992)</p>	



Proposed overflow parking

Legend

- Boundary_model
- LIST_cadastral
- Contour_0.2m
- █ Overflow_parking_bay

Data Acknowledgments:
Base image by TASMAP. © State of Tasmania
Base data from the LIST (www.the-list.tas.gov.au)
© State of Tasmania

Coordinate System: GDA 1994 MGA Zone 55
Projection: Transverse Mercator
Datum: GDA 1994

Metres
0 4 8 12 16

1:400 @ A3

GIS File No.: GXXXX_XX
Revision: Draft 0
Date: 4/03/2022
Prepared by: Greg Jackman
Verified by: TBD
Approved by: TBD

All reasonable care has been taken in collecting and recording the information shown on this map.
Hydro Tasmania assumes no liability resulting from errors or omissions in this information or its use in any way.



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Waddamana Heritage Site







HSEF0912.1 – Heritage Impact Assessment Long Form**Approved by:** Environment & Engagement Manager**Revision:** 4**Date:** June 2018**Page** 1 of 6

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Waddamana A Power Station External Masterplan Implementation HIA

Heritage Impact Assessment prepared by:

Greg Jackman B.Sc. Grad.Dip.Hum. Grad.Dip.SIS (Hons) Adv.Dip.Bus.Mgt. M. ICOMOS
Principal Consultant
Gondwana Heritage Solutions
14 William Street Oatlands
(03) 6254 1494

Date: 12 April 2022

Revision No.: 0

Signature:


Accepted by:

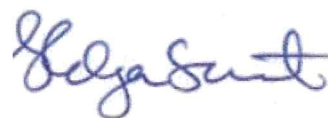
HT Project Manager

Comments:

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Helga Grant

14 April 2022



Date:

Revision No.: 0

Approved by:

HT Asset Manager

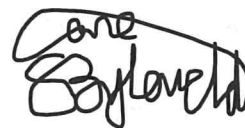
Comments:

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Samantha Vahedi

Date: 14/04/2022

Revision No.: 0


Authorised by:

HT Cultural Heritage Coordinator or delegate

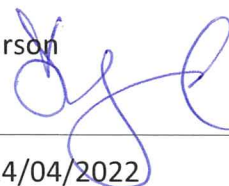
Comments:

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Greg Carson

Date: 14/04/2022

Revision No.: 0



Health, Safety and Environment			
HSEF0912.1 – Heritage Impact Assessment Long Form			
Approved by: Environment & Engagement Manager	Revision: 4	Date: June 2018	Page 2 of 6
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.			

Description of Works

The proposed works relate to the implementation of the external access Masterplan prepared as part of Stage 6 of the Waddamana Interpretation Upgrade Project. They include the following items:

1. Resurface loop road with 2 coat bitumen chip seal and rejuvenate external drainage and pits
2. Extend Steps of Power walking trail along south-western boundary of property
3. Install/relocate wire fence to west side of proposed Steps of Power path extension
4. Reconstruct 1950s Prunus row along west side of main access road
5. Undertake arboricultural work on extant Prunus specimens
6. Resurface and line mark existing parking area
7. Refurbish single lane bridge and prevent pedestrian use
8. Standardise fence types around the tailrace and bridge area
9. Develop a main car park in front of the B Station with bay markers, bollards and boom gate
10. Install 50 kW electric vehicle charging station in new car park
11. Construct paths, ramps and fencing for safe pedestrian access to main entrance
12. Install disabled parking space and level access to disabled entrance
13. Construct sealed parking bays and level access to picnic area
14. Expand picnic area slab and install inclusive furniture
15. Refurbish/replant greywater area
16. Install traffic and directional signage

Some of these Masterplan items, including 8, 9, 11 and 16 are encompassed to some degree within the substantive Stages 4-6 HIA. Other items, such as 1 and 15 may be considered routine maintenance that is covered under the standing general exemption for Waddamana and the Great Lake Scheme.

The Stage 4-6 HIA provides for Master Plan items that lacked sufficient detail for assessment at that time to be dealt with through subsequent addenda.

The purpose of the current addendum is to assess the potential impacts and offer baseline or additional mitigation advice in relation to the following items: 6, 7, 8, 9, 10, 11, 12, 13, 14 and 16. Items 2, 3, 4 and 5 will be dealt with in a subsequent addendum once concepts for those items are developed.

Background

The background history, heritage context and summary of the Improvement project are outlined in the substantive Stages 4-6 HIA (*Waddamana Improvement Project Stages 4-6 HIA HSEF0912.1*).

Heritage Impact Assessment

The following table/s set/s out the various Works covered in this Assessment with a description of the Works to be undertaken and an Assessment of the potential Impact. Recommendations are set out at the end of the Assessment.

<Note that if the scope of Works changes then a revised or new Heritage Impact Assessment will be required.>

Health, Safety and Environment		
HSEF0F0912.1 – Heritage Impact Assessment Long Form		
Approved by: WHS & HSE Systems Manager	Revision: 4	Date: June 2018
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.		Page 3 of 6

1. Waddamana Interpretation upgrade Stage 3

Proposed Works

The proposed works are outlined in the documents *Waddamana Power Station Public Access Master Plan Report* (Lange Design 2021) and accompanying *Public Access Master Plan Concept* (Lange Design 2021), although some changes have been made to the original proposals in those sources.

Table 1 lists individual works items and cross references them with the numbering in the Master Plan Concept as well as the relevant sections of Waddamana Site Management Plan documents that provide the overarching rationale for the changes. Works items are grouped according to the spaces defined in the Hydro Tasmania Cultural Heritage List and Waddamana Conservation Management Plan¹.

Table 1. Proposed works (per site space/area)

HTCHL/CMP Area	Scope of works	HIA Works Item #	Master Plan #	SMP Ref.	Rationale
Waddamana A & B external areas HTCHL 26 Waddamana A Power Station Building CMP BH61 Waddamana B Switchyard CMP BH 62 Entrance to Waddamana A	Resurface and line mark existing parking area	6	6, 7 (amended)	VSMP 2.2	Upgrade visitor parking
	Refurbish single lane bridge and prevent pedestrian use	7	8		
	Standardise fence types around the tailrace and bridge area	8	17		
	Develop a main car park in front of the B Station with bay markers, bollards and boom gate	9	10, 11, 12, 13		
	Install 50 kW electric vehicle charging station in new car park	10	14		
	Construct paths, ramps and fencing for safe pedestrian access to main entrance	11	16, 19, 20, 21	VSMP 3.4	Enhance all ability access from car park
Switchyard HTHL 32 CMP BH40 Switchyard	Construct sealed parking bays and level access to picnic area	13	27, 28	VSMP 2.42	Coordinate signage, seating, interpretation etc. at BBQ facilities
	Expand picnic area slab and install inclusive furniture	14	29	VSMP 3.2.2	
	Install disabled parking space and level access to disabled entrance	12	22, 23	VSMP 2.4, 3.4 IP 6.2.1	Provide all ability access via the A Station Switchyard

HTCHL Hydro Tasmania Cultural Heritage List 2007

IP Waddamana Interpretation Plan 2016

VSMP Visitor Services Management Plan 2016

¹ Waddamana Conservation Management Plan (GML 2006)

Health, Safety and Environment		
HSEF0F0912.1 – Heritage Impact Assessment Long Form		
Approved by: WHS & HSE Systems Manager	Revision: 4	Date: June 2018
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.		Page 4 of 6

Key Attributes Summary

Description

The following descriptions and significance rankings of fixed power station elements and spaces contained in Table 2 are reproduced from the Hydro Tasmania Cultural Heritage List, Waddamana Conservation Management Plan (GML 2006) and Tasmanian Heritage Register entry for the Great Lake Scheme (THC 2014)

Table 2. Key attributes (Hydro Tasmania Cultural Heritage List/Waddamana CMP/THR Listing)

Site Feature and Location	Significance Rating	HTCHL/CMP Description	HTCHL Significance statement/ CMP Historical summary	THR ID 11943 significance assessment
Entrance to Waddamana A CMP BH62	Very High	<p>As part of the 1922 construction works an elaborate entrance to the Power Station was constructed. As part of the construction work the previous building that housed the transformers was rebuilt as a two-storey annex. The entrance to this annex which became the main entrance to Waddamana A was up two flights of stairs.</p> <p>The façade of the annex, the south eastern face of the annex, was decorated in a pseudo-classical style using concrete to create a parapeted gable. While there are obvious classical motifs the effect is somewhat diminished by the use of galvanised iron to fill the spaces between the columns and windows.</p> <p>At ground level a series of square bollards define the road to the entrance. A recent planting of four Cypress was not part of the original design. (CMP).</p>	The construction on an elaborate entry to Waddamana fits in with the Hydro Electric Department's elaborate opening ceremonies and fitout of the annex. (CMP)	<p>b) The formal entrance to Waddamana A and the timber construction of the engineers' offices, lookout, stairs and control room are also considered to be rare in an industrial context.</p> <p>d) Both Waddamana A and Waddamana B are substantially intact examples of hydro-electric power stations in generally good condition, retaining a high degree of integrity in relation to their construction and equipment. As such, they are excellent examples of hydro-electric generating technology from 1910 to the 1950s. The principles of electricity and its generation, the development of electrical technology and the impact that electricity has had on Tasmania over time can be demonstrated through the interpretation of Waddamana A and B (including the moveable cultural heritage items).</p>
Switchyard HTCHL 32 CMP BH40	High (HTCHL) High (CMP)	<p>The switchyard remains in remnant form only with the gantries remaining within the fenced area of the yard. All other equipment has been removed. Elements that remain include tracks, cable trenches and pavements. The area retains its ability to demonstrate the location and function of the switchyard. The area now contains museum displays of items that can not be readily housed within the power station building. Constructed in 1922 to replace earlier switch yard and to cope with the expanded power station. Most of the equipment is removed. (HTCHL)</p> <p>The switch yard is located on the south eastern side of the Power Station. It contained five separate elements. These are: a bank of 2333KVA transformers on concrete plinths, a tramway for transporting transformers, 88kv Transfer bus, circuit breakers and switch gear and transmission lines via Risdon to Creek Road, Risdon via Bedlam Walls, Longford and Shannon substations. (CMP)</p>	<p>The remains of the switchyard are of high significance as they demonstrate the relationship of the switching equipment to the power station through the remaining gantries, pavements, fences and other elements. The exhibits located within the area are also of significance as part of the overall story of Hydro Tasmania power generation in the State. (HTCHL)</p> <p>Constructed in 1922 to replace earlier switch yard and to cope with the expanded Power Station. Most of the equipment is removed. (CMP)</p>	

1.4 CMP Management Policies and Strategies

The need to improve the management of heritage items and enhance accessibility and interpretation at Waddamana generally is recognised within the 2006 CMP in its framing of conservation policies for the place and its content. CMP policies that are most relevant to the proposed Master Plan implementation works are reproduced in Table 3.

Table 3. CMP policies/strategies and compliance

Works item	Relevant CMP Policies	Relevant CMP Strategies/Actions	Compliance with CMP
General policies			
All items	Policy 7.4.2: The study area should be conserved and managed in accordance with the principles and processes of The Burra Charter: the Australian ICOMOS Charter for Places of Cultural Significance and relevant guidelines issued by Heritage Tasmanian and Hydro Tasmania's Cultural Heritage Management Procedure.	<p>S8.1.2.1 Ensure that policies and planning for the Waddamana study area incorporate the principles and processes of the Burra Charter, Heritage Tasmania, and Hydro Tasmania guidelines.</p> <p>S8.1.2.2 Adopt the principle of undertaking a heritage impact assessment for all non-maintenance works at Waddamana.</p> <p>S8.1.2.3 Adopt the principle of archival recording prior to works being undertaken and the principle of thorough documentation of works that change the site.</p>	<p>Works aim to implement the 2021 External Access Master Plan which is based on the 2016 Site Management Plan which in turn was developed to realise the policies of the 2007 CMP and is guided by the Burra Charter, Heritage Tasmania Works Guidelines and Hydro's Cultural Heritage Procedure and Movable Cultural Heritage Guideline.</p> <p>All works stages are subject to Hydro Tasmania's Cultural Heritage Procedure and HIA Process in addition to the standing HCHA general exemption for low-impact activities.</p> <p>Works are guided by detailed plans and designs that are preceded and informed by object inventories and relevant fabric investigations, with all changes to site condition documented.</p> <p>Complies with policies</p>
All items	Policy 7.4.5: All potentially hazardous materials in the Waddamana study area need to be identified and managed appropriately.	<p>S8.1.5.2 Undertake a risk analysis associated with known hazardous material and, if required, take appropriate action.</p>	<p>All works are undertaken in accordance with Hydro Tasmania's Permit to Work process that involves rigorous assessment of risks including hazardous materials. These are managed through Hydro's hazard management procedures and using certified and experienced contractors.</p> <p>Complies with policy</p>
Specific Precinct policies – Waddamana A			
6 Refurbish existing car park 7 Refurbish tailrace bridge 8 Standardise fence types 11 Pedestrian access from new car park	Policy 7.5.2.1: The management aim is to conserve the highly significant fabric within the precinct. The use of this precinct as a museum is endorsed, should be continued and, if possible enhanced.	S8.2.2.1 Develop a plan for the museum.	The External Access Master Plan implements key policies/strategies of the 2016 Site Management Plan (and allied Interpretation Plan and Visitor Services Master Plan) which aim to conserve and interpret the significant fabric of Waddamana and the Great Hydropower Scheme.

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 6 of 6

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12 Disabled parking space and level access 16 Install traffic and directional signage				<p>The proposed works involve installing new access infrastructure, including modular decking (i.e., FRP grating walkways) and directional signage to facilitate visitor access between the new carpark and Power Station building.</p> <p>The new parking and access arrangements will decrease vehicular clutter and improve pedestrian safety and amenity within the A Station precinct.</p> <p>Complies with policy</p>
Specific Precinct policies – Waddamana B				
8 Standardise fence types 9 Develop car park in front of B Station 10 Install EV charging station 11 Pedestrian access from new car park 16 Install traffic and directional signage	Policy 7.5.3.3: The use of other areas [at Waddamana B] may also be appropriate, subject to consideration of the impact of that use on the historic cultural heritage significance of Waddamana B.	S8.2.3.7 Other proposals to use Waddamana B that do not impact on its historic cultural heritage significance and which may provide a small income stream should be encouraged.		<p>The proposal to establish a new EV-supported car park with relevant signage on the gravelled surface below the original B Station switchyard will improve visitor amenity and reduce visual impacts and potential safety risks associated with the current shared pedestrian and parking arrangements at Waddamana A. It will allow for managed future expansion of tourism which has the potential to generate future income.</p> <p>Complies with policy</p>
8 Standardise fence types 9 Develop car park in front of B Station 10 Install EV charging station 11 Pedestrian access from new car park 16 Install traffic and directional signage	Policy 7.5.3.7: In the long term, consideration should be given to formally incorporating Waddamana B into the Waddamana Museum.	S8.2.3.8 'Behind the Scenes' or 'hidden heritage' tours are an important segment of the market and. With appropriate guidance, it should be possible to take small groups into Waddamana B on special occasions.		<p>Developing the proposed car park will allow for future expansion of tourism to include the B station which will help realise the heritage values of the Waddamana complex.</p> <p>Complies with policy</p>
Specific Precinct policies – Transmission Line Precinct (Main entry area)				
13 Construct picnic area parking bays 14 Picnic area expansion and furniture upgrade 16 Install traffic and directional signage	Policy 7.5.5: Minimal disturbance is the conservation aim for this area. Ongoing maintenance of the grounds and of the light poles and lightening arrestor [K-pole] in this area is required in order to conserve their heritage significance. A medium-term aim would be the interpretation of the transmission tower footings to enable visitors to the site to trace the route top which they belonged on the ground. Access to Waddamana B by visitors to the museum should be allowed in certain circumstances.	<p>S8.2.5.1 Incorporate the ongoing maintenance of the grounds, the light poles, and lightning arrestor [K-pole] into the overall cyclic maintenance plan for the Waddamana study area.</p> <p>S8.2.5.2 Interpret the location of the transmission towers in this area.</p>		<p>The proposed works involve upgrading current facilities by including short-stay car parking with signage and installing assessable seating within the BBQ area. This will expand outdoor visitor amenity and support future interpretation of external heritage values.</p> <p>The proposed works will be largely built on introduced fills and are designed to have minimal impact on resident heritage fabric and be reversible.</p> <p>Complies with policy</p>

Health, Safety and Environment		
HSEF0F0912.1 – Heritage Impact Assessment Long Form		
Approved by: WHS & HSE Systems Manager	Revision: 4	Date: June 2018
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.		
		Page 7 of 6

1.5 External approval requirements

Waddamana A and B power stations are listed on the Tasmanian Heritage Register as elements of the Great Lake Hydropower Scheme serial listing (THRID 11943). A standing exemption is in place covering works that are normally exempt from Hydro Tasmania’s Cultural Heritage Procedure (HSEP0912 Attachment A). This covers routine maintenance and emergency works but not capital upgrades or improvements. While some of the proposed External Access Master Plan implementation, such as resealing the loop road, qualify as covered by the standing exemption other works that involve change-of-use or capital improvements may not be and must be subject to a stand-alone assessment against statutory exemption criteria² to determine the appropriate approval pathway, and if necessary, mitigation of impacts.

Compliance statements against Certificate of Exemption criteria for proposed Master Plan items 6 through 14 are provided in Table 4.

Table 4. Heritage approval criteria and compliance

Works item	Relevant HT Works Guideline (2015)	Works Guidelines criteria	Compliance with Works Guidelines criteria
9 Develop car park in front of B Station 11 Pedestrian access from new car park 12 Disabled parking space and level access 13 Construct picnic area parking bays	1.10 Services	Replacing defective wiring or plumbing, but not involving the removal of early or original fittings or hardware that contributes to the heritage character of the place (e.g.: block-mounted light switches, electrical outlets or tap ware).	Proposed works to existing services involve cleaning out drains, upgrading undersize culvert pipes, repairing/regularising defective pits to improve road drainage, and installing conduits below roads prior to re-sealing to allow future services upgrades. Complies with exemption criteria
7 Refurbish tailrace bridge 8 Standardise fence types	2.6 Fencing	Removing existing fences that are not considered to be part of the heritage significance of the place and do not contribute to the setting of a place, including views to and from it.	Proposed works involve removing post 1970s -1980s galvanised steel wire mesh, weldmesh and vertical railing fencing in the bridge and tailrace area and standardising to create two standard styles of asset fencing and pedestrian barriers across the site to reduce proliferation of non-significant and visually conflicting styles. Works will include replacing the north loop road single access gate with a split gate of similar style to the south entry gate. Works will be supported by standard design guidelines (Refer also 12.1 and 12.6). Complies with exemption criteria
11 Pedestrian access from new car park	4.1 Interpretation signboards	Installing interpretive signage to convey information relating to the significance of the place, where the work does not cause physical harm to, or visually intrude on, the significant fabric.	Only limited new external interpretative signage is proposed. This includes a signboard affixed to the foundation of the A Station beside the location of the plinth containing the original testimonial plaque that is now located inside the A Station. The new sign will replace an existing non-standard sign and will be affixed in a way that does not impact significant fabric. Complies with exemption criteria

² Tasmanian Heritage Council *Works Guidelines for Historic Heritage Places* (November 2015)

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 8 of 6

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Works item	Relevant HT Works Guideline (2015)	Works Guidelines criteria	Compliance with Works Guidelines criteria
7 Refurbish tailrace bridge 8 Standardise fence types 11 Pedestrian access from new car park 12 Disabled parking space and level access	6.2 Partial demolition	Demolishing or removing non-significant additions to heritage structures, where the work involved will not result in damage to historic fabric or will not markedly impact on the ability to understand the historical evolution of the place. Removing non-significant building fabric, applied finishes, fixtures or fittings.	The existing barrier fencing, decayed timber running boards and pedestrian barriers on the tailrace bridge will be replaced with non-scalable fencing aligned closer to the concrete deck and signage to discourage pedestrian use. Standardising fencing and creating space for pedestrian walkways and disabled parking close to the A Station will involve demolition/removal or re-alignment of existing non-significant fencing and 1980s concrete paving. Complies with exemption criteria
12 Disabled parking space and level access	9.2 Alterations to significant structures	Alterations to structures or parts of structures that are of little significance, where the work will not result in either a physical or a visual impact on the more significant elements or spaces of the place.	Creation of a disabled carpark will involve laying a new reinforced concrete slab over an area of existing concreted switchyard surface. The slab will be separated from existing ground surfaces by a plastic liner and be fully removable. A new level concrete walkway into the workshop area will utilise the existing disturbance created for the concrete pavers. The existing defective concrete topping in the former lightning arrestor area will be replaced with new concrete topping to match original sandy finish or gravelled. Complies with exemption criteria
14 Picnic area expansion and furniture upgrade	9.5 Additions or extensions	Minor additions or extensions to structures or parts of structures that are of little significance, where the work will not result in either a physical or a visual impact on the more significant elements or spaces of the place.	Expansion of the picnic/bbq area involves extending the existing (c. 2015) concrete slab which is constructed on fills. The works will not be visually prominent from main public vantage points. Complies with exemption criteria
6 Refurbish existing car park 7 Refurbish tailrace bridge 8 Standardise fence types 9 Car park in front of B Station 11 Pedestrian access from new car park 12 Disabled parking space and level access 13 Construct picnic area parking bays 14 Picnic area expansion and furniture upgrade	10.1 Providing access—(generally)	Access solutions that clearly do not impact on the significant character, fabric, or spaces of a place.	Proposed external works involve upgrading car-parking facilities and providing level walkways, ramps and paths to enable all-ability access to the A Station building, Switchyard and picnic area/bbq. The works are designed to minimise physical and visual impacts to the significant character, fabric or spaces of the place, and be reversible. Complies with exemption criteria
11 Pedestrian access from new car park 12 Disabled parking space and level access	10.3 Ramp and walkway access	Installing ramp and walkway access where the ramp and or walkway will be: <ul style="list-style-type: none"> located in a discreet location that will have no physical impact to significant character or fabric (including areas of archaeological potential); and 	Proposed external works involve providing BCA compliant walkways, ramps and paths to enable all-ability access to the A Station building and Switchyard area. From the new carpark a curved pedestrian ramp will lead from the existing inclined B Station access ramp to the cable tunnel, avoiding existing vents. The

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Heritage Impact Assessment

Health, Safety and Environment		
HSEF0F0912.1 – Heritage Impact Assessment Long Form		
Approved by: WHS & HSE Systems Manager	Revision: 4	Date: June 2018
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.		
Page 9 of 6		

Works item	Relevant HT Works Guideline (2015)	Works Guidelines criteria	Compliance with Works Guidelines criteria
6 Refurbish existing car park 7 Refurbish tailrace bridge 9 Car park in front of B Station 12 Disabled parking space and level access 13 Construct picnic area parking bays	10.6 Parking and external circulation	<ul style="list-style-type: none"> • sympathetic to the character of the place; and • - fully removable and reversible (that is, not concrete). <p>Installing a safety rail where:</p> <ul style="list-style-type: none"> • it is required for safety purposes; and • it is constructed in an unobtrusive manner not on a prominent facade, with no impact on significance; and • the works will be removable and reversible 	<p>ramp transition to the cable tunnel will be pitched with dry-laid dolerite to match the historic detail on earth batters above the concrete-lined tailrace.</p> <p>The pedestrian way will then traverse the existing pedestrian bridge/cable tunnel with down-ramping built from FRP in a steel frame over the existing steps and uneven concrete pavers below to ensure a consistent grade. At the east end the ramp will transition to a concrete path that continues along the edge of the road in front of the main Station entry apron to connect with the disabled car parking area and lower access to the workshop. The concrete will be darkened (grey) to reduce tonal brightness with a brushed finish for additional grip. The existing weathered hotmix inclined apron between the road seal and concrete A Station steps will be replaced with grey concrete with exposed aggregate with improved drainage profile to eliminate current water ponding. All works contacting significant fabric are removable/reversible overlays. Complies with exemption criteria</p> <p>Changes of use will be indicated by directional signage that may replace existing non-significant signs, and line markings.</p> <p>Complies with exemption criteria</p>
10 Install EV charging station	11.1 New services	<p>Installing new services where the work clearly does not result in either a physical or visual impact on the significant character, fabric or spaces of a place.</p> <p>New wiring and fittings that are unobtrusive to the heritage fabric and character of the place, where the fixings will not damage significant heritage fabric.</p> <p>Trenching for pipes or cables that does not affect significant archaeological values.</p>	<p>Proposed works involve installing a new 50kw EV charging bay at the east end of the new car park. The charger will be screened by tailrace fencing from the main approach view and be located at the bottom of the B Station switchyard batter and will not materially impact on the visual character of the place.</p> <p>Trenching to the existing power turret (c. 24m) will not involve disturbance of significant archaeological fabric.</p> <p>Trenching for blank conduits beneath the main loop road prior to re-sealing will be in existing disturbed areas and will not impact archaeological deposits.</p> <p>Complies with exemption criteria</p>
7 Refurbish tailrace bridge 8 Standardise fence types 11 Pedestrian access from new car park	12.1 New fences and gates	<p>Installing a new fence and/or gate where the work:</p> <ul style="list-style-type: none"> - will replace a non-significant fence with a more sympathetic alternative; and - does not impact on heritage material; and - is on the same or similar alignment; and - is sympathetic to the character, presentation and setting of the place; and - is of similar height and length as the previous fence/gate; 	<p>Proposed new fencing will replace existing non-significant fencing on the same or similar alignment and use similar materials and finishes to existing or that otherwise complement the industrial setting of the place. Works will include replacing the north loop road single access gate with a split gate of similar style to the south entry gate. Fencing and gates will meet BCA standards and be supported by standard design (Refer also 2.6 and 12.6).</p> <p>Complies with exemption criteria</p>

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Works item	Relevant HT Works Guideline (2015)	Works Guidelines criteria	Compliance with Works Guidelines criteria
		and - is consistent with fence heights and character of the streetscape.	
7 Refurbish tailrace bridge 8 Standardise fence types 11 Pedestrian access from new car park 12 Disabled parking space and level access	12.6 Maintaining, repairing, and replacing fences and gates that are of no significance	Maintaining, repairing or replacing non-significant fences where the works do not impact on significant fabric or setting of the significant historic structures.	Proposed new fencing will replace existing non-significant fencing on the same or similar alignment and use similar materials and finishes to existing or that otherwise complement the industrial setting of the place. Works will include replacing the north loop road single access gate with a split gate of similar style to the south entry gate. Fencing and gates will meet BCA standards and be supported by standard designs (Refer also 2.6 and 12.1). Complies with exemption criteria
13 Construct picnic area parking bays	13.1 Changing significant landforms	Erosion control or stabilisation works	The proposed parking bays for 3 vehicles will formalise an informal unsurfaced parking area that is subject to erosion and degradation of the road seal. The new works will be constructed on introduced fills will drainage to protect the road seal. The raised west side of the parking area will be battered and grassed to match the existing filled picnic area platform. Complies with exemption criteria
9 Car park in front of B Station 14 Picnic area expansion and furniture upgrade	13.7 Hard landscaping	Altering non-significant landscape elements (e.g.: modern driveways, paving, decks), where these do not impact on heritage significance, including significant archaeological values.	The B Station carpark will utilise compacted gravel in an area that has been historically gravelled and used for informal parking and heavy vehicle use. Bay markers and wheel stops will be installed to direct vehicles, while folding bollards will be installed on the B station access ramp and a steel boom gate installed at the west end of the car park for site security purposes consistent with other operating Hydro Tasmania workplaces. Complies with exemption criteria
11 Pedestrian access from new car park	13.9 Retaining walls	New retaining walls that are sympathetic to the values of the place and do not impact on archaeological values.	From the new B Station car park a curved BCA compliant pedestrian ramp will lead from the existing inclined B Station access ramp to the cable tunnel, avoiding existing vents. The transition between the ramp and cable tunnel (1m maximum height) will be pitched with dry-laid dolerite to match the historic detail on earth batters above the concrete-lined tailrace. All works will be reversible. Complies with exemption criteria
9 Car park in front of B Station 10 Install EV charging station 13 Construct picnic area parking bays	13.12 Car parking	New car parking provided in a discreet location (to the rear or side of a place) that does not involve the removal of significant plantings or landscape features.	The B Station carpark will be established in an area that has been historically gravelled and used for informal parking and heavy vehicle use. It does not involve bulk excavation or removal of soil or vegetation or modification of landscape features.

Health, Safety and Environment		
HSEF0F0912.1 – Heritage Impact Assessment Long Form		
Approved by: WHS & HSE Systems Manager	Revision: 4	Date: June 2018
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.		
Page 11 of 6		

Works item	Relevant HT Works Guideline (2015)	Works Guidelines criteria	Compliance with Works Guidelines criteria
6 Refurbish existing car park 7 Refurbish tailrace bridge 10 Install EV charging station 11 Pedestrian access from new car park 12 Disabled parking space and level access 13 Construct picnic area parking bays 16 Install traffic and directional signage	14.3 New signs	Name plates and other small sympathetic signs that do not impact on heritage fabric.	The proposed picnic area parking bays will formalise an informal unsurfaced parking area that is subject to erosion and degradation of the road seal. The new works will be constructed on introduced fills do not involve bulk excavation, removal of vegetation or modification of significant landforms. Complies with exemption criteria
6 Refurbish existing car park 7 Refurbish tailrace bridge 16 Install traffic and directional signage	14.4 Old signs	Removing an existing sign where the sign has no historic heritage significance.	New directional and safety signage will replace, update and consolidate existing signage, particularly in the bridge and tailrace area, resulting in a decreased overall impact on site aesthetics. Sign fixings will not involve impacts to significant fabric and will be reversible (Refer also 14.4 Old Signs) Complies with exemption criteria
			New directional and safety signage will replace, update and consolidate existing signage, particularly in the bridge and tailrace area, resulting in a decreased overall impact on site aesthetics. Sign fixings will not involve impacts to significant fabric and will be reversible (Refer also 14.3 New signs) Complies with exemption criteria

1.7 Heritage impact assessment and controls

Potential heritage impacts and recommended management and controls/standards for proposed changes to HTCHL and CMP listed assets and spaces are given in Table 4.

Table 4: Heritage impacts assessment and mitigation

HTCHL/CMP Area	Works Item	Description of works	Potential impacts	Management recommendations	Guidance and standards
Waddamana A & B external areas HTCHL 26 Waddamana A Power Station Building CMP BH61 Waddamana B Switchyard CMP BH 62 Entrance to Waddamana A	6	Works involve stripping and re-sealing the existing defective sealed car parking area and re-painting the existing steel bollards and installing signage and line markings. To indicate change of use.	None identified	None	External Access Master Plan (Lange Purse 2021) as amended
	7	The existing barrier fencing, decayed timber running boards and pedestrian barriers will be removed and replaced with non-scalable fencing bolted to the existing steel outriggers but aligned closer to the concrete deck. Works will include standard signage to discourage pedestrian use. Deck will be stripped and re-sealed.	Potential loss or significant early period fencing details Potential visual impacts arising from introduction of new materials/finishes	R6.1. Earlier operational period fencing (i.e., concrete posts and wire along tailrace) shall be retained in situ. R6.2. New fencing shall utilise standard non-scalable design and galvanised steel finish, with selection of FRB running boards to be approved by CHP staff.	External Access Master Plan (Lange Purse 2021) as amended Waddamana external furniture design standard (in prep)
	8	Proposed works involve removing post 1970s -1980s galvanised steel wire mesh, weldmesh and vertical railing fencing in the bridge and tailrace area and standardising to create two standard styles of asset fencing and pedestrian barriers across the site. The work includes replacing the single wire mesh gate at the north loop road entry which currently obstructs the Steps of Power Walking Trail with a split gate in a matching style to the southern entry gate that does not obstruct pedestrian access.	Potential loss or significant early period fencing details The potential visual impacts arising from introduction of fresh materials/finishes will be ameliorated by reducing the range of fencing styles and heights to meet BCA standards.	R8.1. Earlier operational period fencing (i.e., concrete posts and wire along tailrace) shall be retained in situ. R8.2. New/replacement fencing shall be on the same or similar alignment and use standard materials and finishes that complement the industrial setting and do not obscure the heritage values of the place (refer to Waddamana fence design standard). R8.3 The replacement split north entry gate should be hung to avoid obstructing the SOP walking trail.	
	9	Works involve rolling new gravel over the existing levelled gravel/earth surface between the 1940s B Switchyard pitched terrace and current TasNetworks Switchyard. Bay markers and wheel stops will be installed to structure parking. High visibility folding steel bollards will be installed on the B station access ramp and a steel boom gate installed at the west end of the car park for site security purposes.	High visibility finishes will introduce a new visual element, however this is consistent with the existing high visibility TasNetworks gates and will be a safer option than galvanised steel for protecting pedestrians.	R9.1. Ramp bollards should be mounted to stand vertically (not 90° to ramp).	

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 13 of 6

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10	<p>Works will involve installing a level concrete slab with a central 50kw DC charging unit and small AC charger that meets DDA requirements. Will involve trenching c. 24m to the existing power turret on the original stone-pitched B Switchyard terrace.</p> <p>Works may involve signage for use of EV charger.</p>	<p>Potential visual impacts arising from introduction of new materials/finishes.</p> <p>Potential impacts to significant landscaping and archaeological deposits may be mitigated by confining trenching to the area between the pitched terrace and B Station inclined ramp.</p>	<p>R10.1. Use darkened concrete and finish to match pedestrian path and A Switchyard disabled parking bay.</p> <p>R10.2. Avoid introducing additional new materials (i.e., hotmix)</p> <p>R10.3. Align any bollards required for any shared zone with bollards on the inclined ramp.</p> <p>R10.4. Minimise commercially branded EV charger signage</p>	<p>External Access Master Plan (Lange Purse 2021) as amended</p>
11	<p>Works involve constructing a curved 1:20 grade (with landings) concrete pedestrian ramp from the existing inclined B Station access ramp to the cable tunnel tailrace crossing/bridge avoiding existing vents.</p> <p>The pedestrian way will then traverse the existing pedestrian bridge/cable tunnel with down-ramping built from FRP in a steel frame over the existing steps and uneven concrete pavers below to ensure a consistent grade. At the east end the ramp will transition to a concrete path incorporating an existing drainage pit and continues, with line markings, along the edge of the road in front of the main Station entry apron to connect with the disabled car parking area and lower access to the workshop. The existing weathered hotmix inclined apron between the road seal and concrete A Station steps will be replaced with grey concrete with exposed aggregate with improved drainage profile to eliminate current water ponding.</p>	<p>The curved ramp to the cable tunnel introduces a new visual element on the west side of the tailrace, both in terms of its curved shape and concrete detail.</p> <p>The steel-framed FRB ramp also introduces new materials and will be more noticeable than the current (non-BCA compliant) steps and paved path. This impact will be ameliorated by standardising and reducing the height of some fence styles to BCA standards (refer Item 8).</p> <p>Installing a new concrete path from the end of the ramp to the disabled parking bay in the A Station Switchyard and concreting and line marking the main station entry apron introduces new materials and visual elements and intersects existing drainage infrastructure.</p>	<p>R11.1. Pitch the curved concrete ramp transition to the cable tunnel on the tailrace side with dry-laid dolerite to match the historic detail on earth batters above the concrete tailrace lining.</p> <p>R11.2. Use darkened concrete and finish for all new pedestrian paths to match A Station Switchyard disabled parking bay.</p> <p>R11.3 re-orient the existing pit at the ramp/path transition and incorporate pit access neatly into concrete path.</p> <p>R11.4. Consider the use of silver/grey tactile indicator studs rather than line markings for the path section traversing the main station entry apron.</p>	
13	<p>The works involve constructing angled parking bays for 3 vehicles on the north side of the main sealed loop road, formalising an informal unsurfaced parking area that is subject to erosion and degradation of the road edge and separating it from an existing penstock access maintenance track.</p> <p>The raised west side of the parking area will be battered and grassed to match the existing filled picnic area platform.</p>	<p>While a number of buildings were located in the general area during the original station construction phase, subsequent roadworks and landscaping associated with transmission line re-configuration have removed archaeological evidence of construction period activities in the affected area. The proposed works do not involve bulk</p>	<p>R13.1. Minimise the visual impact of the parking area by avoiding use of vertical furniture such as bollards or railing.</p> <p>R13.2. Do not obstruct maintenance track access.</p>	

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Print Date: 14/04/2022

		excavation or reduction of significant landforms and will be based on introduced fills with drainage to protect the road seal. All works are reversible.		
14	Expansion of the picnic/bbq area involves extending the current (c. 2015) concrete slab by c. 1.5m on south-facing sides. Works will involve replacing the existing picnic furniture with more accessible furniture	All works are constructed on fills and are reversible. The works will not be visually prominent from main public vantage points.	R14.1. Replacement furniture design to be approved by CHP staff prior to ordering.	External Access Master Plan (Lange Purse 2021) as amended Waddamana external furniture design standard (in prep)
16	New directional and safety signage will replace, update and consolidate existing signage, particularly in the bridge and tailrace area	Consolidation and upgrading directional and safety signage will reduce visual clutter and decrease overall impacts on site aesthetics.	R16.1. Sign fixings/installs must avoid impacts to significant fabric and be reversible	External Access Master Plan (Lange Purse 2021) as amended
12	Works involve laying a new 100mm thick reinforced concrete slab over a c. 8m x 6m area of existing concreted switchyard pavement that has been used for vehicle access/standing since the mid-1960s. The slab will be separated from existing paved surfaces by a plastic liner. The later (1980s) concrete-paved disabled access path from the front entry apron into the workshop area will be replaced by a new, line-marked concrete path following the same alignment. The existing defective concrete topping in the former lightning arrestor area will be replaced with new concrete topping or gravelled to reduce tripping hazards. The works involve temporary re-location of the lightning arrestor fence.	The disabled parking bay slab is a new visual element, however tonal contrast with existing concrete paved surfaces has been ameliorated by colouring. Level changes will be addressed by angled kerbs, which will help recover accessibility but increase the footprint of the slab. The new concrete path replaces and standardises a 1980s intrusive concrete paver path and will utilise existing cuts and disturbances. The work is removeable/ reversible. The existing defective paver topping in the lightning arrestor area is a mid-20 th C. replacement and the proposed risk-reduction works represent catch-up maintenance for public safety.	R12.1. New concrete toppings in the lightning arrestor area should match the existing granular/sandy finish and tone. Existing equipment pads must be retained. R12.2 Permanent fencing and pedestrian access in and around the Switchyard area will be subject to a separate or addendum HIA.	Switchyard Interpretation/Content Plan (Tassell 2021) External Access Master Plan (Lange Purse 2021) as amended
16	The disabled parking and shared pedestrian accessway involve standard disabled parking and shared zone signage and line-marking.	Line-markings and signage are standard requirements. All works are removeable/reversible	R16.2. Sign fixings/installs should aim to be visually discrete and must avoid impacts to significant fabric and be reversible.	

Health, Safety and Environment		
HSEF0F0912.1 – Heritage Impact Assessment Long Form		
Approved by: WHS & HSE Systems Manager	Revision: 4	Date: June 2018
Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.		Page 15 of 6

1.8 General recommendations

Specific recommendations for mitigating potential impacts of individual works items on heritage values are given in Table 4. The following general recommendations also apply (table 5).

Table 1.5






No.	General recommendation	Responsibility
1.	All works shall be carried out in accordance with the policies contained in the 2006 Waddamana CMP, Waddamana SMP 2016 (including Masterplan), and subsidiary detailed plans including the External Access Master Plan (as amended and discussed on site), Switchyard Interpretation Content Plan and Waddamana external furniture design standard (in prep).	All
2.	Unforeseen conditions or fabric issues that affect the approved works scope must be reported to the Project Manager prior to executing associated works.	WC
3.	Modifications to approved works must be discussed with CHP staff and approved by the Project Manager prior to executing associated works.	CHP/PM
4.	Works involving changes to significant heritage fabric are subject to final approval by the Hydro Tasmania HCHA S9 Delegate prior to associated works being actioned.	CHP

Responsibility
 CHP (Hydro Tasmania Cultural Heritage Program Coordinator/HCHA S9 Delegate)
 PM (Hydro Tasmania Project Manager)
 WC (Works Contractor)

HSEF0912.1 – Heritage Impact Assessment Long Form**Approved by:** Environment & Engagement Manager**Revision:** 4**Date:** June 2018**Page** 16 of 6

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1.9 Relevant drawings & photographs/attachments etc. (For information only)

#	Images	
6	 <p>Existing car par surfac is degtaded and area too narrow, blocking access to tailrace bridge</p>	 <p>Existing car park is small with no room for expansion</p>
7	 <p>Tailrace bridge with rotted running boards and pedestrian barriers</p>	
8	 <p>Proliferation of feencing styles around tailrace and pedestrian access over cable tunnel</p>	 <p>Existing north loop road gate gate occludes walking trail when open</p>

HSEF0912.1 – Heritage Impact Assessment Long Form**Approved by:** Environment & Engagement Manager**Revision:** 4**Date:** June 2018**Page** 17 of 6

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Early operational fencing beside tailrace (concrete posts and wire fence) to be retained

9



Proposed car park on levelled area below B Station
Switchyard terrace

10



Proposed EV charging station at east end of new
car park

HSEF0912.1 – Heritage Impact Assessment Long Form

Approved by: Environment & Engagement Manager

Revision: 4

Date: June 2018

Page 18 of 6

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11



New pedestrian access ramp from carpark to cable tunnel over tailrace



New ramp from cable tunnel bridge to road overlying uneven concrete paved path, to incorporate reoriented pit.



Worn hotmix apron to be replaced by grey concrete with exposed aggregate finish and improved drainage profile

12



Existing intrusive paved disabled access path



Proposed new slab for disabled parking with shared pedestrian footpath replacing existing paved path

HSEF0912.1 – Heritage Impact Assessment Long Form**Approved by:** Environment & Engagement Manager**Revision:** 4**Date:** June 2018**Page** 19 of 6

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13

Existing informal parking area beside bbq to be levelled and sealed for three angled car spaces



Existing maintenance access track beside bbq parking area

14

BBQ slab to be expanded (existing graveled area)

16

Proliferating and dated access and safety signage to be consolidated and upgraded

PUBLIC ACCESS MASTER PLAN

This master plan drawing provides an overview of the proposed safe public access into and around the Waddamana Power Station Heritage Site, and should be read in conjunction with the associated Master Plan Report.

The key components illustrated here, aim to provide a safe and enjoyable experience for the visitor as they navigate their way between Waddamana Road and the main entry into the museum. Although public access is already provided into and around the site, this master plan drawing clarifies how the existing infrastructure within the site is either refurbished, enhanced or refined to reinforce the emphasis on public safety. Proposed works include, clarifying vehicle access and parking, creating safe and controlled forms of pedestrian access, and providing inclusive access as close to the museum as possible.

All the components illustrated on this drawing correspond to Hydro Tasmania's determination to provide a safe and inclusive experience for visitors, staff and contractors.

NUMBER LEGEND

- 1

Proposed asphalt resurfacing of the entire loop road to commence from the main entry adjoining the Waddamana village and continue into the site.
- 2

Proposed extension to the "Steps of Power" interpretation walk from the power station and along the southern side of the loop road.
- 3

Proposed Plum tree avenue to be reinstated between the resurfaced loop road and the proposed pedestrian walk. Rejuvenation of the avenue will include the propagation of cuttings from existing Plum trees to conserve the genetics of the original trees.
- 4

Existing Plum trees to be rejuvenated by pruning, protection from pests/disease/decay, and fertilising by a qualified arborist.
- 5

900mm (H) Wire fence to be installed to provide a physical barrier between the proposed pedestrian path and the adjoining TasNetworks substation.
- 6

Proposed new fencing, signage and removal of existing asphalt surface within the TasNetworks property boundary to restrict current car parking practices.
- 7

Existing access road to proposed car parking area to be reduced to 5.5m (W), with the proposed resurfacing of the loop road to cease at the access bridge.
- 8

Proposed refurbishment works to existing single lane tailrace bridge to upgrade safety barriers and restrict pedestrian access.
- 9

Existing access into the adjoining TasNetworks switchstation to be retained, with 'No Parking' signage provided to maintain access.
- 10

Proposed removable bollards installed to retain allowing maintenance vehicle access around the western side of the site.
- 11

Proposed concrete bollards to delineate an 18m diameter turning circle for cars, caravans and motor homes.
- 12

Existing stone pitched terrace to be retained to ensure car parking is restricted to the designated area.
- 13

Proposed car park area to include the existing compacted road base hardstand area. The car park will allow for 14 standard car parking bays along the existing stone pitched terrace, and up to three parking bays for motor homes and/or caravans.
- 14

Proposed designated bays for a 50 - 100kW DC electric car charger. Line marking will clearly indicate Electric vehicle charging bays only.
- 15

Concrete bollards installed to control vehicle access and parking opportunities.
- 16

Proposed safe public pedestrian access connecting the proposed car park with the main entry of the power station. A graded FRP grating system with safety balustrades installed over existing surfaces will protect the heritage value of the site, whilst providing safe and controlled visitor access.
- 17

Existing barbed wire and chain link fencing and access gate to be refurbished providing safe and secure access across the existing bridge.
- 18

Existing greywater aeration bed to be refurbished and planted out to increase the function of the bed and to enhance the visual aesthetics of the bed.
- 19

Proposed FRP grating system to continue over existing concrete pathway. Only a low kick rail on both sides of the FRP grating system is required along this section.
- 20

The proposed FRP grating system access and the 1.5m (W) compacted gravel pedestrian path converge at this point. Concrete bollards along the edge of the compacted gravel path provide safety and delineation between the existing pier and panel masonry fencing and the resurfaced loop road.
- 21

Existing area fronting the main building steps to be retained as is.
- 22

Proposed disabled parking in close proximity to the existing side access door on the western side of the main building. The existing chain link fence and maintenance access gates shall be realigned, and new pavement installed over the existing hardstand to protect the heritage value and to allow for unrestricted movement for the users.
- 23

Existing unit paver access to be refurbished to provide a consistent surface material from the proposed disabled car park area to the existing side access door.
- 24

Proposed lift system incorporated within the existing building fabric to provide inclusive access to level one.
- 25

Existing loop road to be resurfaced to provide longevity in road pavement. Themed concrete bollards to match existing plantings proposed to guide vehicle movement and restrict parking.
- 26

Existing "Steps of Power" interpretation trail around the site to be retained.
- 27

Proposed resurfacing of the loop road to include a two-bay parallel car park adjoining the existing picnic shelter.
- 28

Proposed 1.5m (W) compacted gravel footpath to provide stable access between the proposed parking bays to the picnic shelter.
- 29

Existing picnic shelter to be retained, with picnic tables replaced with inclusive furniture.
- 30

Proposed resurfacing of the asphalt loop road to cease at the exit point of the site.
- 31

Proposed 1.5m (W) compacted gravel footpath connecting the proposed large vehicle parking bay on the side of Waddamana Road with the northern loop road access point.
- 32

Proposed bus and large vehicle parking bay parallel to Waddamana Road, with surfacing to match adjoining road material.



HSEF0912.1 – Heritage Impact Assessment Long Form**Approved by:** Environment & Engagement Manager**Revision:** 4**Date:** June 2018**Page** 1 of 6

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Waddamana A Power Station SMP Implementation Stages 4-6 HIA

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14/9/21

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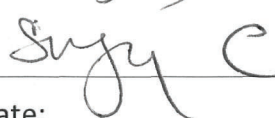
Revision No.: 0

Authorised by:

HT Cultural Heritage Coordinator or delegate

Comments:

Gregory W. Carson (7259)



Date:

Revision No.: 0

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HSEF0912.1 – Heritage Impact Assessment Long Form**Approved by:** Environment & Engagement Manager**Revision:** 4**Date:** June 2018**Page** 2 of 6

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Description of Works

The proposed works relate to the implementation of Stages 4-6 of the Waddamana Interpretation Upgrade Project. Upgrading car parking, external directional and interpretation signage in the A & B Stations curtilage, refreshing the presentation and curating new displays in the Control Room, Bus Bar area, Workshop, Store Room, Sling Room, A/B Covered Way and A Station Switchyard. The works will include upgrades of visitor access and amenities, including safety barriers, all ability access and toilets.

The proposed Stage 4-6 works are outlined in the Draft Waddamana Site Management Plan 2016 which schedules a staged 5+ year upgrade of heritage interpretation and visitor facilities at the Waddamana Power Stations heritage site. The works will be guided by detailed plans and specifications for individual stages/elements and will be subject to granular assessment of potential heritage impacts and external heritage oversight of works during the course of the project.

Background

Waddamana "A" power station was commissioned in 1916 as the centrepiece of the Great Lake Hydropower Scheme, the first state-owned hydroelectric scheme developed in Australia. A second "B" station was constructed adjacent to the A station and commissioned in 1949. The "A" station operated until 1965 when it was superseded by the Poatina development. The "B" station was retained in stand-by mode until 1994 when it too was formally decommissioned.

A museum was established in the "A" station in 1988 under a Bicentennial funding program. The museum continues to be operated by Hydro Tasmania under a service contract, is open 363 days of the year and currently receives approximately 6,000 visitors per year.

A Conservation Management Plan was prepared for the "A" and "B" stations and surrounding precincts in 2006. The CMP identified that *"A better level of interpretation will enhance visitors' experience of the site, thereby maximising opportunities for educating the community about the history and technology associated with Waddamana"* (GML 2006: 72). The CMP recommended that the interpretation should be reviewed and a collection policy be developed for the site.

The listing of Waddamana A and B stations on the Tasmanian Heritage Register in 2014 as part of the Great Lake Scheme serial listing provided the impetus for reviewing and expanding the 2006 Waddamana CMP to cover other Hydro-owned elements of the Great Lake Scheme listing. As part of the review, Quantitative Research Group was engaged in 2015 to undertake an audit of the Waddamana "A" museum against national standards for museums and heritage places. The audit concluded that the Waddamana "A" museum did not meet the majority of relevant standards and recommended that a Site Management Plan (SMP) be prepared as the basis of upgrading collections management, interpretation and visitor services, and for establishing the policy basis for future income generation, community partnerships and site maintenance. In late 2015 Hydro Tasmania secured Commonwealth grant funding, in part for the preparation of a Waddamana Site Management Plan to drive the interpretation/visitor facilities improvement process. The SMP was completed in late 2016 and is scheduled to be implemented over a five year time-frame.

SMP implementation staging takes account of available budgets and enables planning of individual upgrade elements. This HIA relates to elements of Stages 4-6 of the interpretation upgrade project scheduled for April 2021-June 2023. Other elements of Waddamana SMP implementation will be the subject of addenda to this HIAs as project specifics are developed.

Heritage Impact Assessment

The following table/s set/s out the various Works covered in this Assessment with a description of the Works to be undertaken and an Assessment of the potential Impact. Recommendations are set out at the end of the Assessment.

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 3 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

1. Waddamana Interpretation upgrade Stages 4-6

Proposed Works

The proposed works are outlined in the documents *Waddamana Site Management Plan 2016 (Draft)*, *Waddamana Heritage Site Collection Management Plan 2016 (Draft)*, *Waddamana Heritage Site Interpretation Plan 2016 (Draft)* and *Waddamana Visitor Services Masterplan 2016 (Draft)* prepared by Quantitative Research Group and subsidiary or detailed plans as indicated in Table 1.

The works involve affect fabric and contents within the following spaces within the Station and environs:

Table 1. Proposed works (per site space/area)

Area	SMP Ref.	Item	Works
Site approach and grounds	VSMP 2.1	1	Provide comprehensive and integrated directional, road, village and site signage
	VSMP 2.2	2	Upgrade visitor parking
	VSMP 2.4, 3.2.3	3	Coordinate signage, seating, interpretation etc. at BBQ facilities
	VSMP 3.4	4	Provide all ability access
Control Room	IP 5.20.1	5	Refresh the presentation of the Control Room
	IP 5.20.1	6	Develop new interpretative signage for the Control Room
	IP 5.20.1	7	Animate space using light and sound
	IP 5.20.1	8	Replace existing glazed wood barrier
Bus Bar area	IP 5.13.1	9	Refresh the presentation of the Bus Bar area
	IP 5.13.1	10	Modify existing concrete mountings for collection storage display.
	IP 5.13.1	11	Refresh specialist technical displays for installation in modified concrete mountings.
	IP 5.13.1	12	Rehouse collection material that is to be stored in this area.
Workshop	IP 5.16	13	Develop new interpretation for the Great Lake Scheme
	VSMP 3.4	14	Provide all ability access
		15	Upgrade turntable barrier to comply with BCA
Store Room	IP 5.17.1	16	Refresh the presentation of the Store Room
	IP 5.17.1	17	Remove existing intrusive steel mesh barrier and replace with more unobtrusive barrier that provides a comparable level of security for the abundance of

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 4 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

			material housed in this space
	IP 5.17.1	18	Remove collection material inappropriately stored in this space
	IP 5.17.1	19	Develop interpretation for Store Room including explanation of selected significant or interesting items housed in the space.
	IP 5.17.1	20	Activate space using light and sound
	IP 5.17.1	21	Make plumbing services for toilets much less apparent
Sling Room	IP 5.18.1	22	Refresh the presentation of the Sling Room
	IP 5.18.1	23	Remove existing intrusive steel mesh barrier and replace with less obtrusive barrier, or remove barrier altogether.
	IP 5.18.1	24	Remove or relocate collection and site operation material
	IP 5.18.1	25	Develop interpretation for Sling Room including interesting or significant items.
	IP 5.18.1	26	Make service plumbing for toilets much less apparent
A/B Covered Way	IP 5.15.1	27	Refresh the presentation of the Covered Way
	IP 5.15.1	28	Remove existing material from space
	IP 5.15.1	29	Develop interpretation for penstocks and valves
	IP 5.15.1	30	Develop simple interpretation of view to south from the Covered Way
Switchyard	IP 6.2.1	31	Refresh the presentation of the Waddamana A Switchyard
	IP 6.2.1 VSMP 3.4	32	Assess requirements to enable safe visitor access to the Switchyard Provide all ability access
	IP 6.2.1	33	Assess conservation needs of heritage items displayed in Switchyard and treat accordingly
	IP 6.2.1	34	Identify displayed and stored heritage items for potential inclusion in the interpretation of the Great Lake Scheme, Workshop and Construction of the Waddamana Power Stations
	IP 6.2.1	35	Conserve steel framework in Switchyard
	IP 6.2.1	36	Assess whether appropriate or possible to reinstall insulators on a small part of the steel framework to better suggest original use
Toilets	VSMP 3.2.4	37	Reconfigure the existing toilets to allow for all ability access and relocation of intrusive wastewater and sewage pipes.

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 5 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Key Attributes Summary**Description**

Constructed in 1916 and extended in the early 1920s, the main turbine hall is a steel-framed building clad and roofed with corrugated galvanised iron. The floor of the hall is concrete, ruled and painted to imitate a tiled surface, and the walls are partly clad in Masonite. The turbine hall contains nine sets of Pelton turbines and AC generators, the DC exciters for the generators. An electric overhead crane runs the length of the turbine hall. Under the hall are three spaces running along the long axis of the building comprising the tailrace from the Pelton wheels, and the hot and cold air ducts.

The elevated control room in the hall, accessed by a central stairway plus stairways at each end, is enclosed by a polished timber wall with glass panels allowing the operators a view of the hall. Situated beside the control room is the switch gallery containing the switches and circuit breakers connecting the generators with the external switchyard. Two of the former three banks of circuit breakers have been removed and replaced by museum exhibits. Spaces formerly containing the main and auxiliary bus bars are situated beneath the control room and switch gallery, and are currently used for storage.

An annex was constructed in around 1922 in the area previously occupied by the interior switch yard. The annex is a steel-framed building clad in corrugated galvanised iron. The entrance to the annex and the main building is up an elaborate flight of stairs. The entrance facade of the annex is decorated in a concrete pseudo- classic form with galvanised iron infill. The upper story of the annex, to which the main entrance steps lead, contains a series of timber- panelled offices and a set of stairs leading to the turbine hall floor. Over the stairs is the engineer's lookout; a timber and glass panelled enclosure supported by decorative timber columns.

The lower storey of the annex was the workshop area, containing a small tramway leading to the switch yard which allowed transformers to be moved into the workshop for maintenance. A turntable in the floor allowed the transformers to be moved on a tramway into the turbine hall. A store and sling room are adjacent to the workshop.

The switch yard is located along the southeast side of the building. This contains the remains of the switching equipment and transformers, and a small display of moveable cultural heritage items related to the scheme.

The museum fit-out prior to the current refurbishment incorporated a range of exhibits arranged around the interior walls of the turbine hall and in the switch gallery, a mezzanine gallery with photograph displays and a disabled toilet. The offices in the upstairs annex were presented as period room displays complete with mannequins. Display items and hardware, including some barriers, have been added since the 1988 bicentennial fitout.

Overall the Waddamana A Power Station is in good condition, retaining a high degree of integrity relative to its 1922 completed form with the exception being the large amount of introduced display material. Much of this display material has been rationalised and re-presented in Stages 1-3 of the Waddamana Improvement Project. The heritage attributes, in terms of fixed fabric and movable heritage that will be affected by Stages 4-6 of the improvement project are summarised below.

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 6 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Fixed cultural heritage

The following descriptions and significance rankings of fixed power station elements and spaces contained in Table 2 are reproduced from the Hydro Tasmania Cultural Heritage List, Waddamana Conservation Management Plan (GML 2006) and Tasmanian Heritage Register entry for the Great Lake Scheme (THC 2014)

Table 2. Key attributes (Hydro Tasmania Cultural Heritage List/Waddamana CMP/THR Listing)

Site Feature and Location	Significance Rating	HTCHL/CMP Description	HTCHL Significance statement/ CMP Historical summary	THR ID 11943 significance assessment
Entrance to Waddamana A CMP BH62	Very High	<p>As part of the 1922 construction works an elaborate entrance to the Power Station was constructed. As part of the construction work the previous building that housed the transformers was rebuilt as a two storey annex. The entrance to this annex which became the main entrance to Waddamana A was up two flights of stairs.</p> <p>The façade of the annex, the south eastern face of the annex, was decorated in a pseudo-classical style using concrete to create a parapeted gable. While there are obvious classical motifs the effect is somewhat diminished by the use of galvanised iron to fill the spaces between the columns and windows.</p> <p>At ground level a series of square bollards define the road to the entrance. A recent planting of four Cypresses was not part of the original design. (CMP).</p>	The construction on an elaborate entry to Waddamana fits in with the Hydro Electric Department's elaborate opening ceremonies and fitout of the annex. (CMP)	<p>b) The formal entrance to Waddamana A and the timber construction of the engineers' offices, lookout, stairs and control room are also considered to be rare in an industrial context.</p> <p>d) Both Waddamana A and Waddamana B are substantially intact examples of hydro -electric power stations in generally good condition, retaining a high degree of integrity in relation to their construction and equipment. As such, they are excellent examples of hydro-electric generating technology from 1910 to the 1950s. The principles of electricity and its generation, the development of electrical technology and the impact that electricity has had on Tasmania over time can be demonstrated through the interpretation of Waddamana A and B (including the moveable cultural heritage items).</p>
Waddamana A Power Station Building HTCHL 26	Very High	Waddamana was built as the flagship station for Hydro Tasmania. Its bold facade to the offices reflects a confidence in the generation of power applied over a robust industrial structure. The grand entry, at a remote location, further demonstrates that confidence. The building is otherwise of typical and standard construction for the time using steel framing, light-weight cladding and extensive use of concrete for floors and encasement of the turbines. The building uses steel framed windows for natural light and includes some well detailed joinery to office and public areas. The building is well-designed and laid out. (HTCHL)	Waddamana A is one of the most significant buildings in the Hydro Tasmania ownership. It is the first major station to be constructed with public funding and marked the beginning of widespread power generation in the state. It is a well-designed and confident building marking the importance attached to power generation in the State. The place survives almost intact and is able to demonstrate much of the history of Hydro Tasmania power generation in the State. Its use as a museum and the number of visitors indicate the value placed on the site and buildings by the public. Station A has been given a National Engineering Heritage Marker from the Australian Institute of Engineers in 1995. (HTCHL).	

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 7 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Power Station A Building Interior HTCHL 27 (refer below for CMP rankings for individual spaces)	Very High	The interior comprises the main turbine hall with its complete fitout plus additional elements added to enhance the museum function of the place. The remaining original fitout is largely intact and mostly in its early form. During the museum fitout a number of additions were made to the interior in the form of additional rooms and control areas and viewing platforms. These were in the style of the original building and are well built but do provide some confusion with the original layout of the building. The office area retains both its form and detailed fitout elements which are of high interpretive value. Workshop and tool areas retain most of their fitout at the time of closure providing a graphic demonstration of these functions. (HTCHL)	The interior fitout of this building is perhaps the most significant such interior in the State. It retains almost all of its fitout (with some recent additions as part of the museum) and demonstrates the design, layout, operation and social structure of a power station complex and its staffing. As the first major station in the State and the first government built station the place is of outstanding significance. The fitout, particularly that provenanced from the station are of very high value in understanding the history and development of Hydro Tasmania. (HTCHL)	
Control Room HTCHL 28 CMP BH20	Very High (HTCHL) High (CMP)	The early part of the control room dates from the initial construction of the station, it retains its control panels and equipment largely intact. Later equipment has been added to the station in conjunction with station B and upgrade work seen in the various post war control panels in the room. After closure the area was altered with the addition of screen walls (in matching design to earlier screens) to prevent public access to parts of the area. The control room enclosure was extended at this time. (HTCHL)	The various layers of controls are of high significance in interpreting and understanding the role of the manned power station. Later additions such as walls and enclosure are of low significance. (HTCHL) Constructed in 1922 and then enlarged to take Waddamana B. Various items have been modernised and replaced. Still partly active. Altered to allow visitors to look in. (CMP)	
Bus Bar area (No HTCHL datasheet) CMP BH21	High (CMP)	Located in the concrete structure supporting the Switch Gallery and Control Room. (CMP)	This space would have had the Auxiliary and Main bus bars, the power from the turbines flowing through this area through the circuit breakers in the switch gallery and then down to the main bus bars and out to the transformers. All electrical equipment has been removed from this space leaving some of the mountings. (CMP)	
Workshop and Equipment HTCHL 36 CMP BH30	High (HTCHL) Very High (CMP)	Little equipment remains at the station, most being moved to operational sites at the time of closure. The metal lathe is an unusual and large lathe. (HTCHL) Located in the bottom level of the 1922 annex, this area is off the Turbine Hall and contains a tramway in from the switchyard, a turntable and a tramway out to the Turbine Hall. This allows transformers and any other heavy items to be brought into the workshop area for repair or transfer to the Turbine room where the overhead crane could lift them onto a truck for transport elsewhere for repair. A bench and lathe were located in the workshop. Access to the Sling room and the Store room are off this room. (CMP)	Constructed in 1922 it seems that the toilet upstairs has been enlarged to intrude into this area. (CMP)	
Tool Room /	High	The original tool-room fitted out at the time of closure as a static exhibit	The collection and the room and fitout that houses it	

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Print Date: 13/10/2021

Heritage Impact Assessment

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 8 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Store Room HTCHL 31 CMP BH38	(HTCHL) High (CMP)	<p>of tools and equipment used in the maintenance and operation of the station. The room comprises timber shelving with a broad range of tools and fittings used at the site. Of particular interest are the spanner shadow boards that are demonstrated across the Hydro Tasmania system, but here in an early form. Not all of the equipment is early but it typifies the range of materials and tools used in a manually operated station. (HTCHL)</p> <p>Lower level of 1922 building with access to Turbine Hall and Workshop. Standard tool room with shelves containing tools and spares for the Power Station. Contains a concrete structure called “the vault” which contains paper records from the Power Station. (CMP)</p>	<p>are excellent examples of the equipment, tools and technology used in operating and maintaining a power station from the early period of power generation in the State. (HTCHL).</p> <p>The vault is probably not fireproof. (CMP)</p>	
Sling Room (No HTCHL datasheet) CMP BH39	High (CMP)	<p>Lower level of 1922 building with access to Workshop. Standard store room with bench shelves. (CMP).</p> <p>Note that this description appears to refer to the Tool Store. The Sling Room contains no fitted shelves and is an open space fitted with racks on one wall for hanging slings. Various movable heritage items are stored on the floor. A doorway in the south-east corner accesses a small concrete-lined space under the exterior access stairs, currently used for storing maintenance equipment.</p>	<p>From its name it presumably contained slings for lifting items in the Power Station. (CMP)</p>	
Covered Way to Waddamana A (No HTCHL datasheet) CMP BH56	High (CMP)	<p>Steel framed with asbestos cement sheeting cladding running between Waddamana A and B over Waddamana A penstocks. (CMP) Note that the asbestos sheet cladding was replaced with steel cladding in 2017.</p>	<p>Now has some large windows which seem to be of recent origin. (CMP)</p>	
Switchyard HTCHL 32 CMP BH40	High (HTCHL) High (CMP)	<p>The switchyard remains in remnant form only with the gantries remaining within the fenced area of the yard. All other equipment has been removed. Elements that remain include tracks, cable trenches and pavements. The area retains its ability to demonstrate the location and function of the switchyard. The area now contains museum displays of items that can not be readily housed within the power station building. Constructed in 1922 to replace earlier switch yard and to cope with the expanded power station. Most of the equipment is removed. (HTCHL)</p> <p>The switch yard is located on the south eastern side of the Power Station. It contained five separate elements. These are: a bank of 2333KVA transformers on concrete plinths, a tramway for transporting transformers, 88kv Transfer bus, circuit breakers and switch gear and transmission lines via Risdon to Creek Road, Risdon via Bedlam Walls, Longford and Shannon substations. (CMP)</p>	<p>The remains of the switchyard are of high significance as they demonstrate the relationship of the switching equipment to the power station through the remaining gantries, pavements, fences and other elements. The exhibits located within the area are also of significance as part of the overall story of Hydro Tasmania power generation in the State. (HTCHL)</p> <p>Constructed in 1922 to replace earlier switch yard and to cope with the expanded Power Station. Most of the equipment is removed. (CMP)</p>	

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Print Date: 13/10/2021

Heritage Impact Assessment

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 9 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Museum Fit-out HTCHL 34	Very High (HTCHL)	The museum fitout, apart from the items pertaining to the station itself, comprises a range of elements from across the Hydro Tasmania system including plaques, pieces of equipment, memorabilia, samples of materials, etc. Although a random collection of items it forms an excellent basis for interpreting the development of Hydro Tasmania technology and power generation in the State. Many of the elements are creatively displayed although some are out of context and the interior of the station is over cluttered with items. It appears that all of the items have significance, many of high significance individually and as part of the collection. There is potential for future items to be added to the collection from other sites. (HTCHL)	The items individually and collectively have a high heritage value as they represent the collective value of the Hydro Tasmania development in the State. (HTCHL)	
Toilets (No HTCHL datasheet) CMP BH36	Medium (CMP)	Located in the top level of the 1922 annex, this area like all the top level is fitted out in Blackwood panelling. (CMP)	The toilets seem to have been extended into the roof space of the workshop. The date of this extension is not known – possibly 1940s. (CMP) (The toilet extension is most likely 1980s)	

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 10 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Movable cultural heritage

In addition to fixed assets and spaces, the Waddamana A power station contains a wide range of movable cultural heritage in the form of objects and documents provenanced to the A and B stations' combined operational period as well as items that have been introduced since, including for museum display purposes. The 2006 Waddamana CMP assessed the significance of cumulative movable cultural heritage items within the context of three themes:

- History of hydro-electricity
- The Great Lakes Scheme
- Waddamana Power Stations

A total of 10 movable heritage items were assessed within the 2006 CMP as having intrinsic significance to at least one of these three themes. A further 66 CMP movable cultural heritage items were assessed as having contributory significance. A total of 36 CMP movable heritage items that will potentially be affected by the Stage 4-6 works are listed in Table 3.

Table 3. Key attributes of movable cultural heritage items Waddamana CMP/THR Listing)

Inv. No.	Description	Location 2006	CMP 2006 Theme	CMP 2006 Significance	SMP 2016 Theme	Relevance	Significance	Provenance	Current Status/Integrity	Interp. potential
Items of significance to CMP themes										
MH28	Unsigned sculpture (by James Vaughan)	East corner Turbine Hall	History of hydro electricity	Significant	N/A	Low	Low (Waddamana)	Acquisition 1996	Dismantled in B Station pending deacquisition	Low
MH31	Survey display of surveying instruments and diorama	North corner Turbine Hall	History of hydro electricity	Significant	Technical sub-theme	Medium-High	Medium - High	Hydro Tasmania and acquisition 1988	Diorama dismantled with Selected items relocated to Bus Bar display	High
Objects of contributory significance										
MH02	Electric Office Machines	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH06	Electrical testing meters etc.	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium - High	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH07	Electrical testing meters etc.	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium - High	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH08	Electric meters	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 11 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Inv. No.	Description	Location 2006	CMP 2006 Theme	CMP 2006 Significance	SMP 2016 Theme	Relevance	Significance	Provenance	Current Status/Integrity	Interp. potential
MH06	Electric relays	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH11	Electric relays	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH12	Electric meters and light globes	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988+	Selected items relocated to Bus Bar display	High
MH13	Electric meters and light globes	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988+	Selected items relocated to Bus Bar display	High
MH14	Electric meters	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH15	Galvanometers	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium - High	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH17	Electric calculators, fuse	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH18	Volt meters	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH19	Volt meters	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH20	Recording meters	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium - High	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH21	Time switches	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH32	Metal impeller	Switch Gallery	History of hydro electricity	Contributory	Great Lake Scheme	High	High	Hydro Tasmania	Relocated and mounted in Switchyard	High
MH33	Display of transmission wire	Turbine Hall west wall	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH35	Recording meters	Switch Gallery	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium - High	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH35	Sign	Turbine Hall west wall	History of hydro electricity	Contributory	Technical sub-theme	Medium	Low	Hydro Tasmania	Stored in B Station pending deacquisition	Low

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Print Date: 13/10/2021

Heritage Impact Assessment

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 12 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Inv. No.	Description	Location 2006	CMP 2006 Theme	CMP 2006 Significance	SMP 2016 Theme	Relevance	Significance	Provenance	Current Status/Integrity	Interp. potential
MH36	Table with AC meter display	Turbine Hall west wall	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH37	Battery display	Turbine Hall west wall	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania and acquisition 1988	Selected items relocated to Bus Bar display	High
MH49	Oil testing display	Turbine Hall west wall	History of hydro electricity	Contributory	Technical sub-theme	Medium	Medium	Hydro Tasmania	Selected items relocated to Bus Bar display	High
MH52	Nozzle, spear, bucket from Pelton wheel	Turbine Hall west wall	Waddamana Power Stations	Contributory	Waddamana Power Stations	High	High	Hydro Tasmania	Selected items relocated to Bus Bar display	High
MH61	Transformer display	Turbine Hall south-east wall	History of hydro electricity	Contributory	Waddamana Power Stations	High	High	Hydro Tasmania	Selected items relocated to Bus Bar display	High
MH65	Jackhammer display	Waddamana A workshop north wall	History of hydro electricity	Contributory	Waddamana Power Stations Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within workshop	High
MH66	Earthing sticks	Waddamana A workshop northwest wall	History of hydro electricity	Contributory	Waddamana Power Stations	High	High	Hydro Tasmania	Reconfigured within workshop/switchyard display	High
MH66	Earthing trolley	Waddamana A workshop northwest wall	Great Lakes Scheme	Contributory	Waddamana Power Stations	High	High	Hydro Tasmania	Reconfigured within workshop/switchyard display	High
MH68	Horse drawn excavator	Waddamana A Switchyard entry	Great Lakes Scheme	Contributory	Waddamana Power Stations Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within exterior display	High
MH71	Jinker wooden hobs and wheels	Waddamana A Switchyard entry	Great Lakes Scheme	Contributory	Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within exterior display	High
MH72	Winch	Waddamana A Switchyard entry	Great Lakes Scheme	Contributory	Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within exterior display	High

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Print Date: 13/10/2021

Heritage Impact Assessment

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 13 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Inv. No.	Description	Location 2006	CMP 2006 Theme	CMP 2006 Significance	SMP 2016 Theme	Relevance	Significance	Provenance	Current Status/Integrity	Interp. potential
MH73	Jinker metal wheels no springs	Waddamana A Switchyard entry	Great Lakes Scheme	Contributory	Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within exterior display	High
MH74	Radial gate installed below Shannon	Waddamana A Switchyard entry	Great Lakes Scheme	Contributory	Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within exterior display	High
MH75	Air pump	Turbine Hall southwest wall	Great Lakes Scheme	Contributory	Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within Sling Room display	High
MH76	Air compressor	Waddamana A workshop north wall	History of hydro electricity	Contributory	Waddamana Power Stations Great Lake Scheme	High	High	Hydro Tasmania	Reconfigured within workshop	High

The 2006 movable cultural heritage assessment was limited by a lack of clear understanding of item provenance and the absence of a formal collection policy for the site. Such a policy is developed within the 2016 Waddamana Site Management Plan Collections Policy which proposes the collection of items that demonstrably relate to:

- The history and operation of the Waddamana Power Stations
- The Great Lake Hydro-electric scheme including Waddamana village
- The Central Highlands Community

In addition to establishing the three main collection areas, the 2016 SMP Collections Policy defines a range of practical selection criteria for collection objects including:

- Relevance - to the theme
- Significance - to Waddamana
- Provenance and Documentation – are known and supported
- Condition, Intactness and Integrity – will be taken into account
- Interpretive Potential – must contribute substantively to the interpretation of the place

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 14 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Assessments for the ten 2006 CMP movable heritage items under the themes and selection criteria established in the 2016 SMP Collections Policy are given in Table 3. Note that the 2006 CMP theme 'History of hydro-electricity' is not supported by the 2016 SMP Collections Policy. A 2020 review of movable items held at Waddamana has recommended expanding the collection purpose to encompass a range of general and technical topics relating to the use of electricity in and beyond Tasmania, however these recommendations have not yet been formally endorsed as policy for the Waddamana heritage site so are not considered within this HIA.

Only two items/assemblages of movable cultural heritage assessed as significant within the 2006 CMP are affected by the proposed Stages 4-6 interpretation refurbishment works. A further 34 CMP-listed moveable heritage objects/assemblages that the CMP considers have contributory significance will be affected in some way. The majority of smaller technical items will be re-configured within new displays in the Bus Bar technical collection space. The remaining objects will be reconfigured into other displays within Waddamana A or placed into deep storage (Table 3).

The significance of individual movable heritage items will not be impacted by their proposed relocation/re-interpretation. Most items not used for future display will be curated in storage. Two items, MH28 and MH35, are proposed for deacquisition and disposal.

Museum fit-out

Previous assessments contained within the Hydro Tasmania Cultural Heritage List, CMP and THR listing emphasise the contribution made by the fixed plant and operation-related objects to the significance of the Waddamana A and B power stations complex. The fabric of the building itself; i.e. framing, cladding, services etc. contribute to but are generally considered secondary to the engineering elements of the scheme. The principal exceptions to this are the architectural details of the upstairs 1922 annex and Control Room, which are referenced under criterion b) (Uncommon/rare aspects).

The Hydro Tasmania Cultural Heritage List also ranks the (1988 and subsequent) museum fit-out as having Very High heritage significance based on the cumulative significance its individual components. The 2014 THR assessment took a less sanguine view however, describing the fit-out in the following terms:

The refit of Waddamana A as a museum has involved the display of exhibits around the interior walls of the turbine hall and in the switch gallery and former offices, and the installation of a disabled toilet and display gallery. Overall the whole Power Station is in good condition, with little evidence of alteration since its finalisation in 1922. Waddamana A is virtually complete and close to its original fit out, apart from a large amount of introduced display material.

The 2016 SMP similarly views the museum fit-out as a temporary construction of low intrinsic significance per-se apart from the significance of individual items, and able to be modified to meet the changing requirements of site management and interpretation.

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 15 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

1.4 CMP Management Policies and Strategies

The need to improve the management of fixed and movable heritage items and enhance accessibility and interpretation at Waddamana generally is recognised within the 2006 CMP in its framing of conservation policies for the place and its content. CMP policies that are most relevant to the proposed Stage 4-6 works are reproduced in Table 3.

Table 3. CMP policies/strategies and compliance

Works item	Relevant CMP Policies	Relevant CMP Strategies/Actions	Compliance with CMP
General policies			
All items	Policy 7.4.2: The study area should be conserved and managed in accordance with the principles and processes of The Burra Charter: the Australian ICOMOS Charter for Places of Cultural Significance and relevant guidelines issued by Heritage Tasmanian and Hydro Tasmania's Cultural Heritage Management Procedure.	<p>S8.1.2.1 Ensure that policies and planning for the Waddamana study area incorporate the principles and processes of the Burra Charter, Heritage Tasmania, and Hydro Tasmania guidelines.</p> <p>S8.1.2.2 Adopt the principle of undertaking a heritage impact assessment for all non-maintenance works at Waddamana.</p> <p>S8.1.2.3 Adopt the principle of archival recording prior to works being undertaken and the principle of thorough documentation of works that change the site.</p>	<p>Works aim to implement the 2016 Site Management Plan which was developed to realise the policies of the 2007 CMP, and is guided by the Burra Charter, Heritage Tasmania Works Guidelines and Hydro's Cultural Heritage Procedure and Movable Cultural Heritage Guideline.</p> <p>All works stages are subject to Hydro Tasmania's Cultural Heritage Procedure and HIA Process in addition to the standing HCHA general exemption for low-impact activities.</p> <p>Works are guided by detailed plans and designs that are preceded and informed by object inventories and relevant fabric investigations, with all changes to site condition documented.</p> <p>Complies with policies</p>
Site approach items 1-4 Control Room items 5-8 Bus Bar area items 9-12 Store Room items 16-21 Sling Room items 22-26 Switchyard items 31-36 Toilets 37	Policy 7.4.5: All potentially hazardous materials in the Waddamana study area need to be identified and managed appropriately.	S8.1.5.2 Undertake a risk analysis associated with known hazardous material and, if required, take appropriate action.	<p>All works are undertaken in accordance with Hydro Tasmania's Permit to Work process that involves rigorous assessment of risks including hazardous materials. Hazardous materials are managed through Hydro's relevant hazard management procedures and using certified and experienced contractors.</p> <p>Complies with policy</p>

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 16 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant CMP Policies	Relevant CMP Strategies/Actions	Compliance with CMP
General policies			
Site approach items 1-4 Control Room items 5-8 Bus Bar area items 9-12 Workshop items 13 Store Room items 16-20 Sling Room items 22-25 Covered Way items 27-30 Switchyard items 31-36	Policy 7.4.7: The current on site interpretation, while adequate, should be developed to make the best use of the Waddamana study area.	S8.1.7.1 Review the existing interpretation of the study area in conjunction with policies for the museum with the aim of producing a strategy that encourages increased visitation to the site. S8.1.7.3 Consider linking the Waddamana study area with other sites relating to the Great Lakes Scheme.	Works are guided by the 2016 SMP Interpretation Plan, Visitor Management Plan and subordinate detailed content plans for each area. The Interpretation Plan considers and presents Waddamana within the context of the Great Lake Scheme and Central Highlands Community, as well as relevant technical themes relating to electricity production, distribution and consumption that of significance to Tasmania. Complies with policy
Specific Precinct policies – Waddamana A			
Site approach items 1-4 Control Room items 5-8 Bus Bar area items 9-12 Workshop items 13 Store Room items 16-20 Sling Room items 22-25 Covered Way items 27-30 Switchyard items 31-36	Policy 7.5.2.1: The management aim is to conserve the highly significant fabric within the precinct. The use of this precinct as a museum is endorsed, should be continued and, if possible enhanced.	S8.2.2.1 Develop a plan for the museum.	Works aim to implement the 2016 Site Management Plan which aims to conserve and interpret the significant fabric of Waddamana, the Great Scheme and allied themes. Complies with policy
Site approach items 1-4 Control Room items 5-8 Bus Bar area items 9-12 Workshop items 13 Store Room items 16-20 Sling Room items 22-25 Covered Way items 27-30 Switchyard items 31-36 Toilets 37	Policy 7.5.2.2: An overall plan for the development and operation for the Waddamana museum is required. The plan should include such items as the aim or vision for the museum, its collection policy, interpretation, education and marketing (2016 SMP).	S8.2.2.1 Develop a plan for the museum.	Works aim to implement the 2016 Site Management Plan and will be guided by subordinate plans, including Waddamana Collections Plan, Marketing Plan, specific interpretation content plans, Hydro's Education Program and detailed plans developed in response to audits and other investigations. Complies with policy

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 17 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant CMP Policies	Relevant CMP Strategies/Actions	Compliance with CMP
Control Room item 5 Bus Bar area items 9-12 Workshop item 13 Store Room items 16, 18, 19 Sling Room items 22, 24, 24 Covered Way item 27 Switchyard items 31, 33, 34, 36	Policy 7.5.2.3: A collection policy is required as an interim measure (2016 SMP); Policy 7.5.2.4: All movable heritage items in the museum and Waddamana B should be registered and tagged.	S8.2.2.2 Develop a collection policy in consultation with appropriate professionals and the site operator. S8.2.2.3 Develop a register of movable cultural heritage and tag or otherwise identify such items held by the museum.	Collection items will be managed in accordance with the SMP 2016 Collections Policy and Hydro Tasmania Movable Cultural Heritage Guidelines. All objects used in the new interpretation will be inventoried, assessed and prepared for display in accordance with appropriate curatorial standards and guided by a detailed content plan. Complies with policy
Specific Precinct policies – Waddamana B			
Site approach items 1-2	Policy 7.5.3.3: The use of other areas within the building may also be appropriate, subject to consideration of the impact of that use on the historic cultural heritage significance of Waddamana B.	S8.2.3.4 Other proposals to use Waddamana B that do not impact on its historic cultural heritage significance and which may provide a small income stream should be encouraged.	The proposal to establish a car park on the gravelled surface below the original B Station switchyard will improve visitor amenity and reduce visual impacts and potential safety risks associated with the current shared pedestrian and parking arrangements and safety. It will allow for managed future expansion of tourism which has the potential to generate income for the heritage site. The works will be undertaken in accordance with a detailed access plan and guided by heritage advice. Complies with policy
Covered Way items 26-29	Policy 7.5.3.7: In the long term, consideration should be given to formally incorporating Waddamana B into the Waddamana Museum	S8.2.3.9 Allow visitors to look into Waddamana B from the end of the walkway linking Waddamana A and B.	The steel mesh barrier is being replaced with frameless glass as part of a site-wise safety review. This will enhance the visual connection between the A and B stations. Movable cultural heritage objects within the B station viewfield will be inventoried and curated in accordance with the SMP Collections Policy. Complies with policy

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 18 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant CMP Policies	Relevant CMP Strategies/Actions	Compliance with CMP
Specific Precinct policies – Transmission Line Precinct (Main entry area)			
Site approach items 1, 3, 4	Policy 7.5.5: Minimal disturbance is the conservation aim for this area. Ongoing maintenance of the grounds and of the light poles and lightening arrestor [K-pole] in this area is required in order to conserve their heritage significance. A medium term aim would be the interpretation of the transmission tower footings to enable visitors to the site to trace the route top which they belonged on the ground. Access to Waddamana B by visitors to the museum should be allowed in certain circumstances.	S8.2.5.1 Incorporate the ongoing maintenance of the grounds, the light poles, and lightning arrestor [K-pole] into the overall cyclic maintenance plan for the Waddamana study area. S8.2.5.2 Interpret the location of the transmission towers in this area.	The proposed works will involve installing new access infrastructure, including modular decking (i.e. FRP grating walkways) and signage to facilitate visitor access between the car-park and Power Station building. The works will also involve upgrading the facilities, including seating and short-stay car parking, within the BBQ area. The works will be undertaken in accordance with a detailed access plan and guided by heritage advice. The works will be designed to have minimal impact on heritage fabric and values and will be reversible. Complies with policy

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 19 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

1.5 External approval requirements

Waddamana A and B power stations are listed on the Tasmanian Heritage Register as elements of the Great Lake Scheme serial listing (THRID 11943). A standing exemption is in place covering works that are normally exempt from Hydro Tasmania's Cultural Heritage Procedure (HSEP0912 Attachment A). This covers routine maintenance and emergency works but not capital improvements and upgrades. While some of the proposed Stage 4-6 works may arguably qualify as being covered by the standing exemption, others are not and for the sake of simplicity the package of works is being considered in its entirety due to the cumulative impact on heritage values potentially being greater than the sum of individual changes. The Stage 4-6 works package therefore requires standalone heritage approvals either in the form of a Certificate of Exemption or a discretionary Permit. The Tasmanian Heritage Council's *Works Guidelines for Historic Heritage Places* (November 2015) outlines relevant eligibility criteria for heritage approval pathways at heritage listed places. Compliance statements against Certificate of Exemption criteria for the proposed Stage 4-6 works are provided in Table 4. Items that are exceed stated exemption thresholds within the *Works Guidelines* are shaded.

1.6 Primary Reference/s:

Hydro Tasmania Cultural Heritage List

Waddamana Conservation Management Plan (GML 2006)

Tasmanian Heritage Council *Works Guidelines for Historic Heritage Places* (November 2015)

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 20 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Table 4. Heritage approval criteria and compliance

Works item	Relevant HT Works Guideline (2015)	HT Works Guidelines requirements	Compliance with HT Works Guidelines
10, 21, 26, 37	1.8 Furnishings and fittings	<p>Removing and/or replacing modern and non-significant internal furnishings and fittings, where there will be no damage to significant elements including walls, floors and skirtings.</p> <p>Removing modern and non-significant kitchen and bathroom cabinets, tiling, floor coverings, plumbing fittings and electrical hardware; and the installation of new furnishings and fittings to the same space, where there will be no damage to significant elements including walls, floors and skirtings.</p>	<p>Proposed works involve removing demountable insulators from bus bar shelves to allow installation of display cabinets. Insulators will be retained for future reinstatement if required.</p> <p>Proposed works involve re-modelling 1980s sewage and wastewater pipes to reduce visual impacts.</p> <p>Complies with exemption criteria</p>
5, 9, 27, 31, 35	1.9 Painting and applied finishes	<p>Painting of non-significant elements in colour/s that do not intrude on the place's historic character.</p> <p>Painting of previously painted surfaces where:</p> <ul style="list-style-type: none"> the colour scheme/s are compatible with the character of the place; and surfaces are repainted using the original materials and methods (e.g.: lime wash, lime based render, paint system); and the work does not involve applying new texture coatings. <p>Finishes to surfaces with previously applied finishes, where surfaces are coated with the same treatments as previously applied (e.g.: limewash, oil-solvent paint, polish, wax, oil).</p> <p>Removing non-significant renders, texture coatings and paint, including removal to expose heritage fabric where:</p> <ul style="list-style-type: none"> the removal technique does not involve a process that could damage the heritage fabric, such as the use of harsh abrasive; and suitably qualified and experienced contractors will be employed 	<p>Proposed works in bus bar area involve painting shelves to match pre-existing (c. 1988) white scheme.</p> <p>Works in Control room involve repainting ceiling to match existing pre-1988 scheme, and painting floor to match c. 1988 scheme.</p> <p>Works in Covered Way involve re-painting floor and lower wall columns to match c. 1988 scheme.</p> <p>Works in the Switchyard involve repainting gantries to visually match the 1950s cold galvanised scheme. This will require preparing of surfaces to bare metal or stable base. Paint scrapes will be carried out to document historic finishes prior to works.</p> <p>Complies with exemption criteria</p>
3, 7, 20, 22, 37	1.10 Services	<p>Replacing defective wiring or plumbing, but not involving the removal of early or original fittings or hardware that contributes to the heritage character of the place (e.g.: block-mounted light switches, electrical outlets or tap ware).</p>	<p>Proposed works involve upgrading electrical and water services to the BBQ facility and toilets using existing disturbance corridors.</p> <p>Proposed service upgrades in the Control Room, Store and Sling room include LED lighting to reduce fire risk and low voltage illumination (i.e. track lights and reactivated control panel) for interpretation purposes. Works do not impact significant fabric and are reversible. Electrical services, lighting and heating upgrades in Bus Bar area are covered under the Stage 3 Waddamana Improvements HIA.</p> <p>Complies with exemption criteria</p>

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 21 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant HT Works Guideline (2015)	HT Works Guidelines requirements	Compliance with HT Works Guidelines
1	2.6 Fencing	Removing existing fences that are not considered to be part of the heritage significance of the place and do not contribute to the setting of a place, including views to and from it.	Proposed works involve removing non-BCA compliant post 1970s fencing and standardising external fencing and barriers to reduce proliferation of non-significant and visually conflicting styles. Works will be guided by an external access masterplan and design guidelines. Complies with exemption criteria
31, 35	3.2 Restoration	(i.e.: reinstating original fabric, possibly involving the removal of accretions) Restoration in which: <ul style="list-style-type: none"> suitably qualified and experienced tradespeople are employed to carry out the work; - the fabric is still in existence and is able to be re-used; reconstruction is minimal, involving the substitution of missing or defective components with replica elements in a way that does not diminish the integrity of the whole; accretions needing to be removed are clearly not historic fabric. 	Proposed works in the Switchyard involve removing deleterious and hazardous compounds from gantries and repainting to visually match the 1950s cold galvanised scheme. This will require preparing of surfaces to bare metal or stable base prior to applying a protective paint system. Paint scrapes will be carried out to document historic finishes prior to works. Complies with exemption criteria
31, 36	3.3 Reconstruction	(i.e.: new material introduced to replicate an element that is missing) Reconstruction in which: <ul style="list-style-type: none"> suitably qualified and experienced tradespeople are employed to carry out the work; clear documentation exists to enable an earlier state to be reproduced; the reconstructed fabric is visually and physically compatible with the existing fabric; the new work will be identifiable on close inspection or through interpretation. 	Proposed works in the Switchyard may involve dismantling gantries to facilitate off-site treatment and re-erection on-site. Works may involve re-installation of resident dismantled elements, such as insulators onto gantries, and reconstruction of pathways to interpret historic function and facilitate visitor access. The works will be based on historic and archaeological evidence and be reversible. Generally complies with exemption criteria, subject to approval of gantry treatment methodology
32,35	3.4 Invasive investigation	Removing non-significant fabric to expose underlying significant fabric (without disturbance of the significant fabric). Removing small amounts of significant material as samples for analytical purposes, where the resultant damage is discreet and repairable.	Proposed works in the switchyard involve paint scrapes and targeted investigation of ground levels and surface treatments to determine suitable interpretative colour schemes and path layouts for presenting historic appearance and function. The investigations will be undertaken under archaeological supervision and documented. Complies with exemption criteria
1, 5, 6, 9, 13, 16, 19, 22, 25, 27, 29, 30, 31	4.1 Interpretation signboards	Installing interpretive signage to convey information relating to the significance of the place, where the work does not cause physical harm to, or visually intrude on, the significant fabric.	New static signage will replace, update and consolidate existing signage, resulting in a decreased overall impact of site aesthetics. Sign fixings will not involve impacts to significant fabric and will be reversible. Complies with exemption criteria

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 22 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant HT Works Guideline (2015)	HT Works Guidelines requirements	Compliance with HT Works Guidelines
7, 9, 16, 20, 22	4.3 Audio-visual and lighting installations	<p>Use of discreet audio-visual installations to project sound or images that convey information relating to the place's significance, or use of lighting to illuminate features at night, where:</p> <ul style="list-style-type: none"> the work does not involve ground disturbance in areas of archaeological sensitivity; and any illumination accentuates the building's heritage character; and the infrastructure is not visually distracting and does not intrude on the heritage character of the place; and the infrastructure does not involve fixings into historic fabric. 	<p>Proposed work in the Control Room, Store, Sling Room and Bus Bar space include LED lighting to reduce fire risk and low voltage illumination (i.e. track lights and reactivated control panel) for interpretation purposes. Works do not impact significant fabric and are reversible.</p> <p>Complies with exemption criteria</p>
8, 17, 23, 28, 37	6.2 Partial demolition	<p>Demolishing or removing non-significant additions to heritage structures, where the work involved will not result in damage to historic fabric or will not markedly impact on the ability to understand the historical evolution of the place.</p> <p>Removing non-significant building fabric, applied finishes, fixtures or fittings.</p>	<p>Demolition within heritage spaces is limited to removal of intrusive steel mesh barriers installed as part of the 1988 museum fitout.</p> <p>Reconfiguring the existing toilets to allow all-ability access will involve demolition of 1980s fabric of low significance.</p> <p>Complies with exemption criteria</p>
11, 12, 16, 18, 24, 27, 33, 34	6.4 Moveable heritage	<p>Temporary relocation of movable heritage items to assist with conservation of the place; this may include repair or maintenance, display or documentation.</p>	<p>Movable heritage will be managed in accordance with the Waddamana SMP Collection Policy/Procedures Manual, Hydro Tasmania's Information Management Policy and Hydro Tasmania Movable Cultural Heritage Guideline. Objects proposed for relocation were placed in their current location, or acquired for, the 1988 museum fit-out or subsequently.</p> <p>Complies with exemption criteria</p>
8, 15, 17, 23, 28	9.1 internal partitions	<p>Installing light weight partition walls (e.g.: office cubicles, shop fit outs) that:</p> <ul style="list-style-type: none"> do not involve the removal of original fabric; do not alter a significant design or layout of an interior space, including historic patterns of access and movement; do not impact on significant fabric (e.g.: ceiling heights, plaster detail such as cornices, timber panelling, skirting, architraves, historic/original wallpaper); and are fully reversible. 	<p>Upgrading existing partitions involves replacing existing intrusive steel mesh barriers with frameless glass barriers for BCA compliance and to reduce visual impacts. All works are reversible.</p> <p>Complies with exemption criteria</p>
21, 26, 37	9.2 Alterations to significant structures	<p>Alterations to structures or parts of structures that are of little significance, where the work will not result in either a physical or a visual impact on the more significant elements or spaces of the place.</p>	<p>Internal alterations involve re-modelling 1980s toilets and associated services of low significance.</p> <p>Complies with exemption criteria</p>

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 23 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant HT Works Guideline (2015)	HT Works Guidelines requirements	Compliance with HT Works Guidelines
21, 26, 37	9.4 Internal alterations (generally)	New openings into walls that are of little or no significance. Upgrading bathroom, kitchen or laundry fit-outs where there will be no alterations to significant door and/or window openings and no impacts to significant joinery, walls, ceilings or floors, or significant archaeological values below floor level.	Internal alterations involve re-modelling 1980s toilets and associated services of low significance. Complies with exemption criteria
33, 34	9.5 Additions or extensions	Minor additions or extensions to structures or parts of structures that are of little significance, where the work will not result in either a physical or a visual impact on the more significant elements or spaces of the place.	External additions may involve installing discrete low-impact canopies/weathershields over large heritage items stored in outdoor settings, including the Switchyard. Complies with exemption criteria
2, 3, 9, 32	10.1 Providing access– (generally)	Access solutions that clearly do not impact on the significant character, fabric, or spaces of a place.	Proposed external works involve upgrading car-parking facilities and providing level walkways, ramps and paths to enable all-ability access to the A Station building, Switchyard and public facilities. All works are guided by an external access masterplan and will be designed to minimise physical and visual impacts, and be reversible. Proposed internal works involve installing carpet in the Bus Bar space and Control Room viewing gallery to reduce potential for slips and falls, and wear and tear on heritage fabric. Complies with exemption criteria
21, 26, 37	10.2 Equal access toilet facilities	Installing new equal access toilet fit-outs in areas with an existing modern fit-out, and where there is no impact on heritage fabric, areas of archaeological potential or other aspects of significance.	Reconfiguring the existing toilets to allow all-ability access and reduce visual intrusion of associated services will involve demolition of 1980s fabric of low significance. Complies with exemption criteria
4, 8, 32	10.3 Ramp and walkway access	Installing ramp and walkway access where the ramp and or walkway will be: <ul style="list-style-type: none"> located in a discreet location that will have no physical impact to significant character or fabric (including areas of archaeological potential); and sympathetic to the character of the place; and - fully removable and reversible (that is, not concrete). Installing a safety rail where: <ul style="list-style-type: none"> it is required for safety purposes; and it is constructed in an unobtrusive manner not on a prominent facade, with no impact on significance; and the works will be removable and reversible 	Proposed external works involve upgrading car-parking facilities and providing level walkways, ramps and paths to enable all-ability access to the A Station building, Switchyard and public facilities. All works are guided by an external access masterplan and will be designed to minimise physical and visual impacts, and be reversible. Complies with exemption criteria

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 24 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant HT Works Guideline (2015)	HT Works Guidelines requirements	Compliance with HT Works Guidelines
1, 3, 4, 8, 4, 9, 15, 17, 23, 32	10.4 Internal circulation and use	<p>Installing signage (including visibility markers and tactile ground surface indicators) that clearly does not result in a physical or visual impact on the significant fabric or spaces of the place.</p> <p>Installing temporary or portable ramps.</p> <p>Altering doorways and circulation spaces involving non-significant building fabric</p>	<p>Proposed external works involve upgrading car-parking facilities and providing level walkways, ramps and paths to enable all-ability access to the A Station building, Switchyard and public facilities. All works are guided by an external access masterplan and will be designed to minimise physical and visual impacts, and be reversible.</p> <p>Proposed internal circulation management involve installing carpet in the Bus Bar space and Control Room viewing gallery to reduce potential for slips and falls, and wear and tear on heritage fabric.</p> <p>Upgrading existing security barriers involves replacing existing intrusive steel mesh screens with frameless glass barriers for BCA compliance and to reduce visual impacts. All works are reversible.</p> <p>Complies with exemption criteria</p>
14	10.5 Lifts	Upgrading mechanical components for an existing lift or an early or original lift car, where the original fabric of the lift car remains unchanged and unaffected by the works.	<p>The proposed works will involve installing a new lift, which is outside the exemption criteria and will require a Permit.</p> <p>Appropriate outcomes include:</p> <ul style="list-style-type: none"> Where possible lifts should be installed in existing voids or externally in discreet locations. Removal of significant fabric should be minimised as far as possible. Consideration should be given to the amount of change required to other parts of the building in order to access the proposed lift. <p>Does not comply with exemption criteria</p>
2, 4	10.6 Parking and external circulation	Changes to line marking or existing signage in an existing carpark.	<p>The proposed works involve formalising visitor use in areas that have been used for service vehicle parking for many years. The works will involve minimal modifications to existing ground levels or surfaces.</p> <p>Complies with exemption criteria</p>

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 25 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Works item	Relevant HT Works Guideline (2015)	HT Works Guidelines requirements	Compliance with HT Works Guidelines
3, 7, 20, 22, 37	11.1 New services	<p>Replacing electrical cabling, fuses and meters where original or early switches, power points and light fittings are retained.</p> <p>New wiring and fittings that are unobtrusive to the heritage fabric and character of the place, where the fixings will not damage significant heritage fabric.</p> <p>Installing pipes or cabling within existing floor/wall penetrations and cavities.</p>	<p>Proposed works involve upgrading electrical and water services to the BBQ facility and toilets using existing disturbance corridors.</p> <p>Proposed service upgrades in the Control Room, Store and Sling room include LED lighting to reduce fire risk and low voltage illumination (i.e. track lights and reactivated control panel) for interpretation purposes. Works do not impact significant fabric and are reversible. Electrical services, lighting and heating upgrades in Bus Bar area are covered under the Stage 3 Waddamana Improvements HIA.</p> <p>Complies with exemption criteria</p>

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 26 of 6

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1.7 Impact assessment and control

Potential heritage impacts and recommended management and controls/standards for proposed changes to HTCHL and THR listed heritage assets are given in Table 4.

Table 4: Heritage impacts assessment and management

Area	Item	Works	Potential impact	Specific management recommendations	Resources and requirements
Site approach and grounds	1	Provide comprehensive and integrated directional, road, village and site signage	Visual cutter, damage to heritage fabric	<ul style="list-style-type: none"> Visual standards to comply with Waddamana style guide, locations and design as per access masterplan 	Parking and access masterplan (Lange Purse 2021).l
	2	Upgrade visitor parking			
	3	Coordinate signage, seating, interpretation etc. at BBQ facilities			
	4	Provide all ability access			
Control Room	5	Refresh the presentation of the Control Room	Conjectural reconstruction Loss of/obscuring surviving evidence	<ul style="list-style-type: none"> Refresh to be based on evidence (i.e. photographic and fabric) 	Control Room Interpretation/Content plan (Tassell 2021).
	6	Develop new interpretative signage for the Control Room	Visual cutter, fabric impacts	<ul style="list-style-type: none"> Visual standards to comply with Waddamana style guide. Installation to avoid impacting significant fabric 	
	7	Animate space using light and sound	Damage to heritage fabric	<ul style="list-style-type: none"> Installation to avoid impacting significant fabric 	
	8	Replace existing glazed wood barrier	Damage to historic fabric during removal. Visual impacts of new barrier	<ul style="list-style-type: none"> Undertake demolition and installation under archaeological supervision 	BCA/Australian Standards AS1657 or relevant standard
Bus Bar area	9	Refresh the presentation of the Bus Bar area	Damage to heritage fabric during conversion, loss of heritage fabric	<ul style="list-style-type: none"> Undertake demolition and installation under archaeological supervision All works to be reversible 	Bus Bar Interpretation/Content plan (Tassell 2019).
	10	Modify existing concrete mountings for collection storage display.			
	11	Refresh specialist technical displays for installation in modified concrete mountings.			
	12	Rehouse collection material that is to be stored in this area.	Damage to objects during installation or public access. Loss of provenance	<ul style="list-style-type: none"> Ensure all objects are catalogued. Displays to be installed under curatorial supervision Area to have video surveillance 	Requires development of Waddamana storage strategy

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 27 of 6

Form variations to suit user, system / software constraints, legal requirements or corporate requirements are permissible, as long as the intent of the form is not compromised.

Area	Item	Works	Potential impact	Specific management recommendations	Resources and compliance requirements
Workshop	13	Develop new interpretation for the Great Lake Scheme	Visual clutter, damage to heritage fabric or objects during display reconfiguration	<ul style="list-style-type: none"> Objects to be moved by professional installers under Hydro supervision Displays to be suitably engineered 	Workshop Interpretation/Content plan (Tassell 2019)
	14	Provide all ability access	Damage to heritage fabric for lift installation	<ul style="list-style-type: none"> Access solutions to be fully designed and heritage approved Undertake separate assessment of detailed proposal as an addendum to this HIA 	Parking and access masterplan and successor design studies. HIA addendum of detailed concept Will require Discretionary Permit.
	15	Upgrade turntable barrier to comply with BCA	Visual clutter, damage to heritage fabric	<ul style="list-style-type: none"> New barriers to be designed/installed under Hydro supervision, avoiding impacts to heritage fabric All installs to be reversible 	BCA/Australian Standards AS1657 or relevant standard
Store Room	16	Refresh the presentation of the Store Room	Conjectural reconstruction. Loss of/obscuring surviving evidence	<ul style="list-style-type: none"> Refresh to be based on evidence (i.e. photographic and fabric) 	Store Room Interpretation/Content plan (Tassell 2021).
	17	Remove existing intrusive steel mesh barrier and replace with more unobtrusive barrier that provides a comparable level of security for the abundance of material housed in this space	Visual impacts, damage to heritage fabric Loss of collection objects due to public access	<ul style="list-style-type: none"> New barriers to be designed/installed under Hydro supervision, avoiding impacts to heritage fabric All installs to be reversible Ensure all retained objects are catalogued. Displays to be installed under curatorial supervision. Area to have video surveillance 	BCA/Australian Standards AS1657 or relevant standard
	18	Remove collection material inappropriately stored in this space	Damage to collection objects, loss of provenance	<ul style="list-style-type: none"> Ensure all removed objects are documented and catalogued as required Objects to be removed and managed under curatorial supervision 	Tool/Store Room Interpretation/Content plan (Tassell 2021). Requires development of Waddamana storage strategy
	19	Develop interpretation for Store Room including explanation of selected significant or interesting items housed in the space.	Visual clutter, fabric impacts, damage to or loss of objects	<ul style="list-style-type: none"> Visual standards to comply with Waddamana style guide. Installation to avoid impacting significant fabric Objects to be removed and managed under curatorial supervision 	
	20	Activate space using light and sound	Damage to heritage fabric	<ul style="list-style-type: none"> Installation to avoid impacting significant fabric 	
	21	Make plumbing services for toilets much less apparent	Visual impacts, damage to heritage fabric	<ul style="list-style-type: none"> New services to be designed to reduce visual and physical impacts as part of broader toilet facilities upgrade 	Requires development of toilets and internal access reconfiguration plan

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 28 of 6

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Area	Item	Works	Potential impact	Specific management recommendations	Resources and compliance requirements
Sling Room	22	Refresh the presentation of the Sling Room	Conjectural reconstruction. Loss of/obscuring surviving evidence.	<ul style="list-style-type: none"> Refresh to be based on evidence (i.e. photographic and fabric) 	Sling Room Interpretation/Content plan (Tassell 2021)
	23	Remove existing intrusive steel mesh barrier and replace with less obtrusive barrier, or remove barrier altogether.	Visual impacts, damage to heritage fabric Loss of collection objects due to public access	<ul style="list-style-type: none"> New barriers to be designed/installed under Hydro supervision, avoiding impacts to heritage fabric All installs to be reversible Ensure all objects are catalogued. Displays to be installed under curatorial supervision Area to have video surveillance 	BCA/Australian Standards AS1657 or relevant standard
	24	Remove or relocate collection and site operation material	Damage to collection objects, loss of provenance	<ul style="list-style-type: none"> Ensure all removed objects are documented and catalogued as required Objects to be removed and managed under curatorial supervision 	Sling Room Interpretation/Content plan (Tassell 2021)
	25	Develop interpretation for Sling Room including interesting or significant items.	Visual cutter, fabric impacts, damage to or loss of objects	<ul style="list-style-type: none"> Visual standards to comply with Waddamana style guide Installation to avoid impacting significant fabric Objects to be removed and managed under curatorial supervision 	
	26	Make service plumbing for toilets much less apparent	Visual impacts, damage to heritage fabric	<ul style="list-style-type: none"> New services to be designed to reduce visual and physical impacts as part of broader toilet facilities upgrade 	Requires development of toilets and internal access reconfiguration plan
A/B Covered Way	27	Refresh the presentation of the Covered Way	Visual impacts, damage to heritage fabric.	<ul style="list-style-type: none"> New barriers to be designed/installed under Hydro supervision, avoiding impacts to heritage fabric All installs to be reversible 	A/B Covered Way Interpretation/Content Plan (Tassell 2019)
	28	Remove existing material from space			BCA/Australian Standards AS1657 or relevant standard
	29	Develop interpretation for penstocks and valves			A/B Covered Way Interpretation/Content Plan (Tassell 2019)
	30	Develop simple interpretation of view to south from the Covered Way			

HSEF0F0912.1 – Heritage Impact Assessment Long Form

Approved by: WHS & HSE Systems Manager

Revision: 4

Date: June 2018

Page 29 of 6

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Area	Item	Works	Potential impact	Specific management recommendations	Resources and compliance requirements
Switchyard	31	Refresh the presentation of the Waddamana A Switchyard	Visual impacts, damage to heritage fabric including archaeological values	<ul style="list-style-type: none"> Visual standards to comply with Waddamana style guide Installations/works to be informed by engineering/maintenance assessment 	Switchyard Interpretation/Content Plan (Tassell 2021)
	32	Assess requirements to enable safe visitor access to the Switchyard Provide all ability access		<ul style="list-style-type: none"> Undertake separate assessment of final access and interpretation concept as addendum to this HIA Installations/works to avoid impacting significant fabric 	Reassess risks under Hydro's Public Risk Assessment framework HIA addendum of detailed concept
	33	Assess conservation needs of heritage items displayed in Switchyard and treat accordingly	Damage to collection objects, loss of provenance	<ul style="list-style-type: none"> Ensure all removed objects are documented and catalogued as required Objects to be removed and managed under curatorial supervision 	Requires development of Waddamana storage strategy
	34	Identify displayed and stored heritage items for potential inclusion in the interpretation of the Great Lake Scheme, Workshop and Construction of the Waddamana Power Stations			
	35	Conserve steel framework in Switchyard	Visual impacts Loss of/obscuring surviving evidence Damage to gantries and footings during dismantling for off-site treatment and reinstallation	<ul style="list-style-type: none"> Surface treatments, finishes and final configurations to be based on evidence (i.e. photographic and fabric) Photographic documentation and numbering of individual elements prior to dismantling and re-installation in correct order Repairs of structural footings to match original detail 	Switchyard gantries corrosion assessment and technical specification (SICC 2021) Supported by archaeological investigations and recording Requires approval of off-site treatment methodology and addendum to HIA if this option is pursued
	36	Assess whether appropriate or possible to reinstall insulators on a small part of the steel framework to better suggest original use	Conjectural reconstruction.		
Toilets	37	Reconfigure the existing toilets to allow for all ability access and relocation of intrusive wastewater and sewage pipes.	Visual impacts, damage to heritage fabric	<ul style="list-style-type: none"> New services to be designed to reduce visual and physical impacts as part of broader toilet facilities upgrade 	Requires development of toilets and internal access reconfiguration plan

HSEF0F0912.1 – Heritage Impact Assessment Long Form**Approved by:** WHS & HSE Systems Manager**Revision:** 4**Date:** June 2018**Page** 30 of 6

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1.8 General recommendations

Specific recommendations for mitigating potential impacts of individual works items on heritage values are given in Table 4. The following general recommendations also apply (table 5).

Table 1.5

No.	General recommendation	Responsibility
1.	All works shall be carried out in accordance with the policies contained in the 2006 Waddamana CMP, Waddamana SMP 2016 (including Masterplan), and subsidiary detailed plans.	All
2.	Works involving changes to heritage fabric are subject to final approval by Hydro Tasmania Cultural Heritage Program staff prior to engagement of contractors.	CHP
3.	Movable cultural heritage affected by the proposed works shall be managed in accordance with the HT MCH Guidelines, SMP Collection Policy/Waddamana Collections Procedures Manual and catalogued in the Waddamana/HT collections database.	All
4.	Development of a Waddamana Storage Strategy is recommended prior to undertaking activities involving movable cultural heritage objects.	CHP
5.	Works not fully detailed in existing plans, such as car parking/roadworks, all ability access, toilet reconfiguration, and Switchyard conservation and access upgrade, require separate assessment or an addendum to this HIA and any associated heritage and/or planning approvals.	CHP

Responsibility

CHP (Hydro Tasmania Cultural Heritage Program Coordinator)

BSO (Hydro Tasmania Building Services Officer)

WC (Works Contractor)

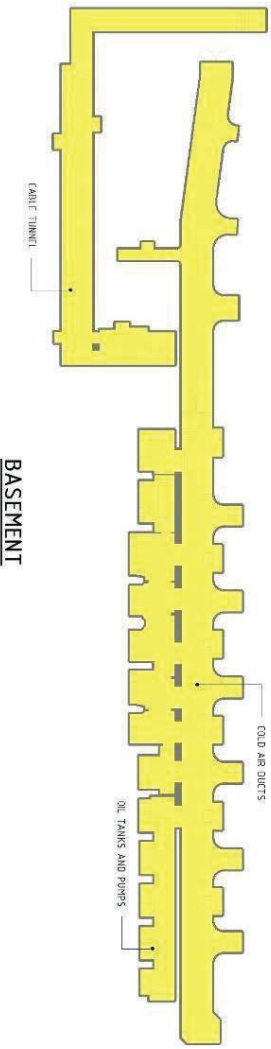
1.9 Relevant drawings & photographs/attachments etc. (For information only)



FIRST FLOOR



GROUND FLOOR



BASEMENT

AREA ZONING:

- Interpretation (P1)
- Interpretation (P2)
- Interpretation (P1+P2)
- Interpretation (P3)
- Collections management
- Site operations + Collections management
- Site operations
- Temporary display

SCALE:

1" = 10' 0"

1" = 10' 0"

1" = 10' 0"

WADDAMANA HERITAGE SITE

A' STATION FLOOR PLAN

Hydro Tasmania

Heritage Impact Assessment

Waddamana A Power Station floor plan, showing spaces referred to in this HIA



THR PLACE NO: 11943
HYDRO REF NO: THC 020 GLS
DATE: 14/09/2021

CERTIFICATE OF EXEMPTION

(Historic Cultural Heritage Act 1995)

The Place: Great Lake Scheme (Waddamana Power Station)
Waddamana Rd, Waddamana 7030

The following works to the above place, entered in the Tasmanian Heritage Register, have been approved under the delegation from the Tasmanian Heritage Council (THC) of its powers under section 42(3), (4), (5) & (6) of the *Historic Cultural Heritage Act 1995* to approve or refuse an exemption certificate application.

Works: The proposed works relate to implementation of Stages 4-6 of the Waddamana Interpretation Upgrade Project, which involves upgrading car parking, external directional and interpretation signage in the A & B Stations curtilage, refreshing the presentation and curating new displays in the Control Room, Bus Bar area, Workshop, Store Room, Sling Room, A/B Covered Way and A Station Switchyard. The works include upgrades of visitor access and amenities, including safety barriers, all ability access and toilets.

The proposed works are outlined in the Draft Waddamana Site Management Plan 2016 and will be guided by detailed plans and specifications for individual stages/elements. The works will be subject to ongoing assessment of potential heritage impacts and external heritage oversight of works during the course of the project as outlined in the Stages 4-6 Heritage Impact Assessment.

Documents: HSEF0912.1 Waddamana A SMP Implementation Stages 4-6 HIA HSEF0912.1_FINAL.pdf

Comments: The proposed works must be undertaken in accordance with policies and strategies contained in the Waddamana Conservation Management Plan (2006) draft Site Management Plan (2016) and subsidiary detailed plans, and subject to additional specific controls outlined in the Stages 4-6 Heritage Impact Assessment.

This Certificate of Exemption applies to works where potential heritage impacts have been adequately assessed and the works do not require approval under the local planning scheme. It is noted that some elements of works that are not adequately detailed in existing plans, such as car parking/roadworks, installation of internal lift, wastewater plumbing, Switchyard dismantling etc. may require further assessment of potential heritage impacts and/or planning approvals, as outlined in the Stages 4-6 Heritage Impact Assessment.

This Certificate of Exemption applies to works that meet exemption eligibility criteria 1.8 Furnishings and fittings, 1.9 Painting and applied finishes, 1.10 Services, 2.6 Fencing, 3.2 Restoration, 3.3 Reconstruction, 3.4 Invasive investigation, 4.1 Interpretation signboards, 4.3 Audio-visual and lighting installations, 6.2 Partial demolition, 6.4 Moveable heritage, 9.1 internal partitions, 9.2 Alterations to significant structures, 9.4 Internal alterations (generally), 9.5 Additions or extensions, 10.1 Providing

access– (generally), 10.2 Equal access toilet facilities, 10.3 Ramp and walkway access, 10.4 Internal circulation and use, 10.6 Parking and external circulation, 11.1 New services within Heritage Tasmania's Works Guidelines (2015).

In accordance with condition 2 of the delegation, it has been confirmed that no approval for the exempted works is required under the local planning scheme.

A copy of this certificate of exemption has been forwarded to both Heritage Tasmania and the local planning authority for their information.

Please contact the undersigned on 0402 822 265 if you require further clarification of any details contained in this certificate.

A handwritten signature in black ink, appearing to read 'Ian Jones', with a stylized, flowing script.

Ian Jones

Enviro Planning & Policy Specialist

Hydro Tasmania

Under delegation of the Tasmanian Heritage Council



THR PLACE NO: 11943
HYDRO REF NO: THC 020 GLS
DATE: 14/04/2022

CERTIFICATE OF EXEMPTION

(*Historic Cultural Heritage Act 1995*)

The Place: Great Lake Scheme (Waddamana Power Station)
Waddamana Rd, Waddamana 7030

The following works to the above place, entered in the Tasmanian Heritage Register, have been approved under the delegation from the Tasmanian Heritage Council (THC) of its powers under section 42(3), (4), (5) & (6) of the *Historic Cultural Heritage Act 1995* to approve or refuse an exemption certificate application.

Works: The proposed works form part of the staged implementation the Waddamana Interpretation Upgrade Project that deals with external access arrangements but is not fully detailed or covered under the Stages 4-6 HIA and associated Certificate of Exemption (THC 021 GLS), These works include establishing a new car park with an EV charging bay in front of the B Station switchyard, upgrading and standardising non-significant fencing in the A Station bridge and tailrace area for aesthetic improvement, installing a new FRP pedestrian access ramp and concrete paths to the A Station entry, installing disabled access parking facilities in the A Switchyard entry area, expanding the existing picnic/bbq facility and sealing/line marking an adjacent area currently used for informal car parking. The works will involve installing a new electrical service to the B Station carpark EV charging bay and new directional signage and circulation markers.

The proposed works are outlined in the External Access Master Plan 2021 and supported by the Waddamana Site Management Plan 2016 which schedules a staged 5+ year upgrade of heritage interpretation and visitor facilities at the Waddamana Power Stations heritage site. The works proposed in the current stage will be guided by detailed plans and specifications for individual stages/elements and will be subject to ongoing assessment of potential heritage impacts and external heritage oversight of works during the course of the project.

Documents: HSEF0912.1 Waddamana A SMP Implementation External Access Master Plan HIA.pdf

Comments: This Certificate of Exemption applies to works where potential heritage impacts have been adequately assessed and the works do not require approval under the local planning scheme.

This Certificate of Exemption applies to the aforementioned works on the basis that they meet the following exemption eligibility criteria outlined in Heritage Tasmania's Works Guidelines (2015). 1.10 Services, 2.6 Fencing, 4.1 Interpretation signboards, 6.2 Partial demolition, 9.2 Alterations to significant structures, 9.5 Additions or extensions, 10.1 Providing access (generally), 10.3 Ramp and walkway access, 10.6 Parking and external circulation, 11.1 New services, 12.6 New fences and gates, 12.6 Maintaining, repairing and replacing fences and gates that are of no significance, 13.1 Changing significant landforms, 13.7 Hard landscaping, 13.9 Retaining walls, 13.12 Car parking, 14.3 New signs and 14.4 Old signs.

It is understood that the proposed works will be undertaken in accordance with policies and strategies contained in the Waddamana Conservation Management Plan (2006) Site Management Plan (2016) and subsidiary detailed plans, and subject to additional specific controls outlined in the Stage 6 External Access Master Plan Implementation Heritage Impact Assessment.

In accordance with condition 2 of the delegation, it has been confirmed that no approval for the exempted works is required under the local planning scheme.

A copy of this certificate of exemption has been forwarded to both Heritage Tasmania and the local planning authority for their information.

Please contact the undersigned on 0402 822 265 if you require further clarification of any details contained in this certificate.

A handwritten signature in black ink, appearing to read 'Ian Jones', with a stylized flourish at the end.

Ian Jones
Enviro Planning & Policy Specialist
Hydro Tasmania
Under delegation of the Tasmanian Heritage Council